Argent St George, LCR and Exel

King's Cross Central

Heritage Baseline Study
Part 1
Historic Buildings

April 2004
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<th>Page nos.</th>
</tr>
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</tr>
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<td>STANLEY BUILDINGS</td>
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<tr>
<td>GASHOLDER NO. 8</td>
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<tr>
<td>‘SIAMESE TRIPLET’ GASHOLDER GUIDE FRAMES (DISMANTLED)</td>
<td>1-11</td>
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<td>COAL AND FISH OFFICES</td>
<td>1-7</td>
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<td>WESTERN GOODS SHED, LOWER LEVEL</td>
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<td>WESTERN GOODS SHED, NORTHERN EXTENSION</td>
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<td>WESTERN COAL DROPS</td>
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<tr>
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<td>EASTERN GOODS OFFICES FLANKING THE GRANARY</td>
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<td>1-6</td>
</tr>
<tr>
<td>SITE OF FORMER POTATO MARKET</td>
<td>1-5</td>
</tr>
</tbody>
</table>

Figures to accompany these building baseline reports are in Part 2.
1. **INTRODUCTION**

1.1 **The Scope of the Building Baseline Evaluation**

The above-ground heritage resources within the King's Cross Central development site comprise the historic buildings and the contemporary ground surfaces and fixtures around them. Together they form a robust industrial landscape substantially dating to the mid-late 19th century. Most of the historic elements surviving today relate to the railway and gas industries, and to the Regent's Canal. The importance of the resources is confirmed by many buildings being listed and all of them being found within the King's Cross and Regent's Canal Conservation Areas.

The building baseline evaluation is one of the three elements of the historic resources study of the site, and comprises two volumes - Parts 1 and 2. Part 1 describes and evaluates the buildings. Part 2 contains accompanying figures - historical site plans and building drawings - and is bound separately to assist reference to these alongside the text in Part 1. Part 3 evaluates the historic landscape surfaces, and Part 4 evaluates local views of the buildings and their immediate landscape settings.

The on-site inspections for the building baseline evaluation took place between 2001 and 2004. Significant changes have taken place during this period, particularly in the area south of the Regent's Canal. These are a result of demolition and other enabling works for the construction of the Channel Tunnel Rail Link (CTRL) into the enlarged St Pancras Station, and also for the redevelopment of King's Cross Underground Station by London Underground Limited (LUL). The building reports describe and evaluate the buildings as found during the inspections, noting significant changes during the study period, such as partial demolition.

This building baseline study excludes a consideration of archaeology, elements of the site’s heritage that are lightly buried and cannot be seen.

1.2 **The Roles of the Building Baseline Evaluation**

The building baseline evaluation has been a comprehensive undertaking, more so than is commonly seen in the early stages of most scheme designs, given the high value that consultees and the developer place on the heritage resources.

The baseline study has been used to:

- Guide the Master Plan
- Inform the environmental impact assessment of the proposed development scheme
- Provide essential information for Conservation Plans
- Support planning application proposals, including those for Listed Building and Conservation Area Consents
- Inform the applicants’ Code of Construction Practice.

1.3 **The Study Area**

The study area and King's Cross Central 'Red Line' planning application boundaries (Main Site and Triangle Site) are both shown on the location plan at the beginning of Part 2.
The study area is based on that investigated in the 1988 English Heritage study of the King’s Cross Development Site, which resulted in the publication of an inventory (Duckworth and Jones, 1988). This area does not identically coincide with the area of the King’s Cross Central site. Some parts of it lie outside the planning application area (see 2.3.3), and accordingly have been excluded from the study; and some parts now have no heritage buildings, as detailed in Table 2.1.

Overall, the planning application area extends from Euston Road in the south, between King’s Cross and St Pancras Stations, northwards across the Regent’s Canal, and through the Goods Yard and former locomotive depot. The northern boundary of the Main Site is against the embankment of the CTRL lines into St Pancras, which will form a new backcloth to the planning application area in 2006/7.
2. BACKGROUND

2.1 Factors Taken into Account in the Building Baseline Evaluation Study

The building baseline evaluation within the site takes into account:

- The heritage buildings as found today: many are listed, and they are all within the King’s Cross and Regent’s Canal Conservation Areas
- A review of the historical context related to the functioning of the buildings and their related surroundings
- Identification of related but non-physical heritage assets, principally primary source documents, and their matching to the extant site resources
- A predictive determination of the baseline condition in 2006/7.

2.2 The Buildings

The buildings are highly varied and include:

- Buildings and other structures of many types and functions and spanning many years, principally of 19th and 20th century age and of a commercial or industrial character. They mainly comprise an assemblage related to the former Great Northern Railway Company and Imperial Gas Light and Coke Company. Most of the historic buildings are now within the Goods Yard north of the Regent’s Canal, but south of it are Gasholder No. 8, the German Gymnasium, and the Great Northern Hotel.
- 19th century residential buildings - Culross and Stanley Buildings, south of the Regent’s Canal.
- Though not strictly a building, the canalside wall and towpath between Maiden Lane Bridge and the Coal and Fish Offices has an intimate and long-term relationship with the development of the canal and the Goods Yard, and is included here. It is described as a ‘feature’ rather than a ‘building’.
- Similarly, the former Potato Market site between the East Handyside Canopy and York Way has been cleared, and now has no buildings (apart from brick ventilation shafts for one of the Gasworks tunnels below). However, it is considered here (again being described as a ‘feature’ rather than ‘building’) on account of its historical significance and its relationship with the adjoining buildings.

King’s Cross and St Pancras Stations are key historical buildings giving great heritage value to this part of London. They are both immediately outside the planning application boundary, and accordingly are not considered or evaluated here. However, both stations are listed Grade I and are clearly of international heritage value; as magnificent pieces of architecture they have been fully taken into account during the master planning of the King’s Cross Central scheme.

2.3 Assumptions

For the building baseline evaluation the following assumptions have been made.
2.3.1 Completion of CTRL and LUL Works

The CTRL and LUL permanent works throughout the St Pancras and King’s Cross area are due to be completed by 2006/7 (notwithstanding the present review of the LUL Phase 2 works including the Northern Ticket Hall to the west of King’s Cross mainline station). The temporary and permanent construction impacts of these developments are having many effects on the physical cultural heritage resources within the site, but these are substantially known, and can be taken into account. The major permanent impacts are in two areas, one south of the Regent’s Canal and the other throughout the north end of the site, beyond the Goods Yard. (This has had a particular effect on the settings of the remaining heritage buildings south of the canal, as is noted in the reports on these.)

2.3.2 Assumptions on Retention of Existing Buildings

It is assumed that between April 2004 and 2006/7 there will be no more removal of heritage buildings as part of the CTRL and LUL construction works. In regard to their effect on these buildings, from south to north the following major works for these schemes are mostly occurring in the period 2001 to 2004, and some have indeed been completed at April 2004:

- Insertion of the LUL Tube Ticket Hall
- Insertion of the LUL Northern Ticket Hall
- LUL ground remodelling of the Milk Dock
- Dismantling and storage of the Triplet gasholder guide frames
- CTRL general restructuring of roads, underground services, and parts of the western facades of Stanley Buildings and the German Gymnasium
- CTRL ground remodelling north of Culross Buildings up to Goods Way, and including a temporary haulage road
- CTRL remodelling of the gas governor site
- CTRL area ground reduction west of Camley Street (the former location of the now-stored Triplet gasholders guide frames)
- CTRL ground remodelling east of Camley Street Natural Park and north of Goods Way to the canalside, including the resiting of the two-storey Water Point from the viaduct north of St Pancras Station to a canalside site
- CTRL construction of haulage roads across the Regent’s Canal, around the front of Regeneration House and northwards parallel to York Way through the former Potato Market site
- CTRL very large-scale ground remodelling to the north of the Goods Yard, including the construction of a major rail embankment.

2.3.3 Buildings and Structures already Removed or otherwise Excluded from Evaluation

Table 2.1 lists heritage buildings and structures identified in the 1988 English Heritage Inventory (Duckworth and Jones) that will not be present in 2006/7, or are assumed to be consented for removal by this time. As such, they have not been included in this baseline evaluation. The Table adopts the alphabetical sequence of area identification used in the English Heritage Inventory.
<table>
<thead>
<tr>
<th>English Heritage Inventory Area</th>
<th>Removed buildings and structures</th>
</tr>
</thead>
<tbody>
<tr>
<td>A North-west corner of the site</td>
<td>Former stables and smithy (later warehouse); Locomotive Superintendent’s House</td>
</tr>
<tr>
<td>B Concrete depot and sidings</td>
<td>Long shed; inclined railway viaduct</td>
</tr>
<tr>
<td>C Site of GNR locomotive depot</td>
<td>Water softening plant</td>
</tr>
<tr>
<td>D Freightliner depot and Goods Yard sidings</td>
<td>Shunters’ huts; Maiden Lane Bridge; offices on Wharf Road</td>
</tr>
<tr>
<td>G The Granary and Transit Shed complex</td>
<td>Overhead offices above western side of Train Assembly Shed (G4) severely damaged by fire in 2001; subsequently demolished</td>
</tr>
<tr>
<td>I The Potato Market</td>
<td>Cast iron columns and spandrel beams (removed before 2001); York Way retaining wall</td>
</tr>
<tr>
<td>K Regent’s Canal</td>
<td>Section of cast iron beam over infilled canal entrance to Granary Basin; some retaining wall brickwork</td>
</tr>
<tr>
<td>M Goods Way</td>
<td>GNR stables; Gasworks walls, part south of Goods Way and all north of Goods Way; Midland Railway retaining wall</td>
</tr>
<tr>
<td>N Gasholders</td>
<td>All gasholders, except Gasholder No. 8 (still standing) and ‘Siamese Triplet’ gasholder guide frames and some other components (dismantled and in store next to No. 8)</td>
</tr>
<tr>
<td>O Stables, Battle Bridge Road</td>
<td>All buildings cleared</td>
</tr>
<tr>
<td>P Motor maintenance depot</td>
<td>All buildings cleared</td>
</tr>
<tr>
<td>Q Site of engine depot</td>
<td>All buildings cleared</td>
</tr>
<tr>
<td>S Battle Bridge Road, Culross Buildings and vehicle depot</td>
<td>Former Midland Railway road vehicle repair shop; blacksmith’s forge at eastern end of Culross Buildings</td>
</tr>
<tr>
<td>T King’s Cross Suburban Station sidings (now generally known as the Milk Dock site)</td>
<td>All buildings and structures except for vestigial brickwork at ground level, and Hotel Curve Tunnel (now houses gas main - tunnel portal and flanking walls remain)</td>
</tr>
<tr>
<td>U Cheney Road</td>
<td>Had no buildings</td>
</tr>
<tr>
<td>V Stanley Buildings</td>
<td>Westernmost block (two blocks remain)</td>
</tr>
<tr>
<td>W German Gymnasium and Pancras Road frontage</td>
<td>Pancras Road frontage and western parts of German Gymnasium (main hall retained)</td>
</tr>
<tr>
<td>X Weller’s Court and Car Parks</td>
<td>All buildings cleared</td>
</tr>
<tr>
<td>Y Pancras Road</td>
<td>Had no buildings</td>
</tr>
<tr>
<td>Z Western Forecourt of King’s Cross Station</td>
<td>Red Star parcels depot; note: porte-cochère to former King’s Cross Station booking office, part of northern canopy over station west yard, and part of Great Northern Hotel entrance porch - all currently dismantled and in store for reinstatement in LUL Phase 2 works</td>
</tr>
</tbody>
</table>
The area in its heyday exemplified some, although not all, key components of the Victorian industrial city. However, as Table 2.1 indicates, much has since been lost.

It may be noted that IHCM inspections of the site and its buildings began in 2001, so that it has accumulated records of those buildings and areas which have since been demolished or cleared. These records will be of use in future years to complement other documentation as a resource for research, publication, and educational purposes.

The following two areas identified in the English Heritage Inventory are outside the King’s Cross Central planning application boundary, and their buildings are accordingly not considered in this baseline evaluation:

- Area L: Camley Street and Natural Park
- Area R: York Road Station environs.

In addition, the southernmost tip of the planning application area was not included in the English Heritage Inventory. This is a small area bounded by the Great Northern Hotel, King’s Cross mainline station, the north side of Euston Road, and the east wall of St Pancras Station. This area is the site for the reconstruction and enlargement of the Underground station Tube Ticket Hall, and has been cleared. Accordingly, it is not considered further here.

2.3.4 Protection of Retained Buildings

It is assumed that the structure and fabric of the listed buildings and other notable heritage buildings will be maintained. Any repair work would be undertaken with agreements and consents conforming to national and local authority requirements. It is assumed that there will be no significant damage to the historic buildings to be retained in the period 2004-2006/7, and that there will be adequate protection of the historic resources prior to the King’s Cross Central development scheme.
3. BUILDING BASELINE EVALUATION METHODOLOGY

3.1 Approach

The buildings and the landscape of the Goods Yard are to a large extent integral to each other in terms of their functional relationship and significance as heritage resources. In practice, however, they are best evaluated using different approaches.

The approach adopted for the buildings has been a combination of documentary studies and on-site inspections, leading to the production of the building baseline reports. (The approach for the historic landscape surfaces study is described in Part 3.)

3.1.1 Documentary Studies

The building study has been greatly assisted by the historical investigations of the King’s Cross Goods Yard site, in particular, carried out over many years by a current member of the IHCM team. This has provided a rich resource of documentary information.

Two other members of the IHCM team have been extensively involved in archaeological and heritage aspects of the British Library site and the CTRL and LUL schemes at St Pancras and King’s Cross. As a result they have a thorough knowledge of the area between and around the two mainline stations.

A number of public and other archives have been visited, and material relevant to the King’s Cross Central site has been catalogued. Selected records and publications have been examined, complementing information already to hand, to an extent judged sufficient for the purposes of the baseline evaluation reports. Archives visited are listed in 7. below.

3.1.2 On-site Inspections

Initial inspections of the buildings were carried out in 2001-2. More recently, further inspections have been made to amplify or clarify understanding of the buildings, and also to record the effects of the major changes arising from the CTRL and LUL works. These works have involved substantial demolition and clearance over a large area south of the canal, along the easternmost part of the Goods Yard on the former Potato Market site, and north of the Goods Yard. The building baseline reports therefore record the position in early 2004, which can be taken to represent the baseline date for the King’s Cross Central project of 2006/7 (see 2.3.2).

It should be noted that building inspections have not included a formal detailed condition survey, although obvious defects such as water penetration have been noted in the reports where seen.

It has not been possible to access all areas in every building, although sufficient access has been available to describe construction and to evaluate each building.

3.1.3 Building Baseline Reports

The reports for building baseline evaluation on the King’s Cross Central site provide:

- A narrative account of the building’s history, function(s), and constructional features (aided by the historical site plans and building drawings in Part 2)
- An architectural analysis (where applicable)
- A phasing analysis
• A functional and relational analysis
• The listing citation for listed buildings
• References
• A summary which evaluates the heritage importance of each building to be evaluated in regard to:
  o Architecture and fabric
  o Setting
  o Significance related to type
  o Significance related to intangibles.

The layout and content of the reports are described in more detail immediately below.

### 3.2 Layout and Content of the Building Baseline Reports

The report layout and content, common for all buildings and features, is described here in more detail. The boxed headings are described in 3.2.1-3.2.5, while the narrative text sections are covered in 3.2.6-3.2.14. Figures and illustrations are noted in 3.2.15.

For simplicity, the term ‘building’ is used to include structures such as viaducts, and also what are described in the reports as ‘features’, of which there are two: the canalside wall and towpath, and the site of the former Potato Market.

#### 3.2.1 Building Name

This identifies the building.

#### 3.2.2 Location

The building location is given. Locations are shown on Figures BD1 and BD2 in Part 2 of this study; these respectively cover the site to the south and to the north of the canal.

#### 3.2.3 Building References

There are four boxes here. They are intended to provide helpful cross-referencing between the building and feature numbering used by Argent St George in *A Framework for Regeneration* (2002) - also adopted in the Environmental Statement, and in this building baseline evaluation - and the alphanumeric referencing used for the English Heritage Inventory (Duckworth and Jones, 1988). The former broadly moved from south to north across the site, while the latter proceeded in the opposite direction, so some form of cross-referencing is considered desirable.

To assist description and evaluation of historic landscape surfaces, it has been necessary to sub-divide areas in Part 3 of this IHCM study, and these sub-divisions are noted here for further cross-reference where they are closely related to the building.

Lastly, the relevant additional English Heritage references are given where the building has close links to its neighbours.

Table 3.1 lists the 28 buildings that are the subject of baseline evaluation reports, in the order of the numbering used in other documents submitted in support of the planning applications (noted as Client Ref.). To provide unique references for
complex buildings needing more than one report (such as the Western Goods Shed),
a letter has been added to the original client reference number, and it is this
alphanumeric that appears in the Tables below.

Table 3.1 Order of Building Reports and Cross-referencing

<table>
<thead>
<tr>
<th>Building</th>
<th>Client Ref.</th>
<th>EH Ref.</th>
<th>IHCM Ref.</th>
<th>EH Links</th>
</tr>
</thead>
<tbody>
<tr>
<td>Great Northern Hotel</td>
<td>9</td>
<td>Z</td>
<td>Z</td>
<td>-</td>
</tr>
<tr>
<td>German Gymnasium</td>
<td>13</td>
<td>W</td>
<td>W</td>
<td>-</td>
</tr>
<tr>
<td>Stanley Buildings</td>
<td>14</td>
<td>V</td>
<td>V</td>
<td>-</td>
</tr>
<tr>
<td>Culross Buildings (including Culross Hall)</td>
<td>15</td>
<td>S1</td>
<td>S1</td>
<td>-</td>
</tr>
<tr>
<td>Gasholder No. 8</td>
<td>16</td>
<td>N2</td>
<td>N2</td>
<td>M</td>
</tr>
<tr>
<td>‘Siamese Triplet’ Gasholder Guide Frames (dismantled)</td>
<td>17</td>
<td>N1</td>
<td>N1, N2</td>
<td>N2</td>
</tr>
<tr>
<td>Coal and Fish Offices</td>
<td>20</td>
<td>J1</td>
<td>JF, KF</td>
<td>J2, K</td>
</tr>
<tr>
<td>Wharf Road Viaduct</td>
<td>21A</td>
<td>J2</td>
<td>JB-JF, KB-KF</td>
<td>E, F3, J1, K</td>
</tr>
<tr>
<td>Canalside Wall and Towpath</td>
<td>21B</td>
<td>K</td>
<td>JG-GG, KG-KJ</td>
<td>J1, J2</td>
</tr>
<tr>
<td>Western Goods Shed, Lower Level</td>
<td>24A</td>
<td>E</td>
<td>E</td>
<td>F2, F3</td>
</tr>
<tr>
<td>Western Goods Shed, Upper Level</td>
<td>24B</td>
<td>E</td>
<td>E</td>
<td>F2, F3</td>
</tr>
<tr>
<td>Western Goods Shed, Northern Extension</td>
<td>24C</td>
<td>E</td>
<td>E</td>
<td>F2</td>
</tr>
<tr>
<td>Western Coal Drops</td>
<td>25A</td>
<td>F2</td>
<td>F2/1, F2/2</td>
<td>E, F3</td>
</tr>
<tr>
<td>Western Coal Drops Viaduct</td>
<td>25B</td>
<td>F3</td>
<td>F6, JD</td>
<td>E, F2</td>
</tr>
<tr>
<td>Plimsoll Viaduct</td>
<td>26</td>
<td>F3</td>
<td>F7</td>
<td>J2</td>
</tr>
<tr>
<td>Eastern Coal Drops Viaduct</td>
<td>27A</td>
<td>F3</td>
<td>F8</td>
<td>F1</td>
</tr>
<tr>
<td>Eastern Coal Drops</td>
<td>27B</td>
<td>F1</td>
<td>F1/1, F1/2, F5</td>
<td>F3</td>
</tr>
<tr>
<td>Western Transit Shed</td>
<td>28</td>
<td>G2</td>
<td>G2</td>
<td>G1, G3, G4</td>
</tr>
<tr>
<td>The Granary</td>
<td>29A</td>
<td>G1</td>
<td>G1</td>
<td>G2, G3, G4</td>
</tr>
<tr>
<td>Western Goods Offices flanking the Granary</td>
<td>29B</td>
<td>G2</td>
<td>G2</td>
<td>G1, G3</td>
</tr>
<tr>
<td>Eastern Goods Offices flanking the Granary</td>
<td>29C</td>
<td>G3</td>
<td>G3</td>
<td>G1, G2</td>
</tr>
<tr>
<td>Train Assembly Shed</td>
<td>30</td>
<td>G4</td>
<td>G4</td>
<td>G1, G2, G3</td>
</tr>
<tr>
<td>Eastern Transit Shed</td>
<td>31</td>
<td>G3</td>
<td>G3</td>
<td>G1, G2, G4</td>
</tr>
<tr>
<td>West Handyside Canopy</td>
<td>32</td>
<td>H1</td>
<td>H1/2, H5</td>
<td>G3, H2, H3</td>
</tr>
<tr>
<td>Regeneration House</td>
<td>33</td>
<td>H1</td>
<td>H1/1</td>
<td>-</td>
</tr>
<tr>
<td>Midland Goods Shed</td>
<td>34</td>
<td>H2</td>
<td>H2</td>
<td>H1, H3</td>
</tr>
<tr>
<td>East Handyside Canopy (Potato Market Extension Roof)</td>
<td>35A</td>
<td>H3</td>
<td>H3</td>
<td>H1, H2, I</td>
</tr>
<tr>
<td>Site of former Potato Market</td>
<td>35B</td>
<td>I</td>
<td>H4, 11-14</td>
<td>H3</td>
</tr>
</tbody>
</table>
Alongside these in Table 3.1 are given the corresponding English Heritage Inventory reference numbers (EH Ref.), the IHCM landscape references (IHCM), and the English Heritage references for linked buildings (EH Links).

A reverse cross-referencing, from the English Heritage Inventory reference numbering to the Client Reference, is provided in Table 3.2.

**Table 3.2 English Heritage Inventory Cross-referencing**

<table>
<thead>
<tr>
<th>English Heritage Inventory Building Name</th>
<th>EH Ref.</th>
<th>Client Ref.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Western Goods Shed</td>
<td>E</td>
<td>24A, 24B, 24C</td>
</tr>
<tr>
<td>Eastern Coal Drops</td>
<td>F1</td>
<td>27</td>
</tr>
<tr>
<td>Western Coal Drops</td>
<td>F2</td>
<td>25</td>
</tr>
<tr>
<td>Western Coal Drops Viaduct</td>
<td>F3</td>
<td>25</td>
</tr>
<tr>
<td>Plimsoll Viaduct</td>
<td>F3</td>
<td>26</td>
</tr>
<tr>
<td>Eastern Coal Drops Viaduct</td>
<td>F3</td>
<td>27</td>
</tr>
<tr>
<td>The Granary</td>
<td>G1</td>
<td>29</td>
</tr>
<tr>
<td>Western Transit Shed</td>
<td>G2</td>
<td>28</td>
</tr>
<tr>
<td>Western Goods Offices flanking the Granary</td>
<td>G2</td>
<td>29B</td>
</tr>
<tr>
<td>Eastern Goods Offices flanking the Granary</td>
<td>G3</td>
<td>29C</td>
</tr>
<tr>
<td>Eastern Transit Shed</td>
<td>G3</td>
<td>31</td>
</tr>
<tr>
<td>Train Assembly Shed</td>
<td>G4</td>
<td>30</td>
</tr>
<tr>
<td>West Handyside Canopy</td>
<td>H1</td>
<td>32</td>
</tr>
<tr>
<td>Regeneration House</td>
<td>H1</td>
<td>33</td>
</tr>
<tr>
<td>Midland Goods Shed</td>
<td>H2</td>
<td>34</td>
</tr>
<tr>
<td>East Handyside Canopy (Potato Market Extension Roof)</td>
<td>H3</td>
<td>35A</td>
</tr>
<tr>
<td>Site of former Potato Market</td>
<td>I</td>
<td>35B</td>
</tr>
<tr>
<td>Coal and Fish Offices</td>
<td>J1</td>
<td>20</td>
</tr>
<tr>
<td>Wharf Road Viaduct</td>
<td>J2</td>
<td>21A</td>
</tr>
<tr>
<td>Canalside Wall and Towpath</td>
<td>K</td>
<td>21B</td>
</tr>
<tr>
<td>‘Siamese Triplet’ Gasholder Guide Frames (dismantled)</td>
<td>N1</td>
<td>17</td>
</tr>
<tr>
<td>Gasholder No. 8</td>
<td>N2</td>
<td>16</td>
</tr>
<tr>
<td>Culross Buildings (including Culross Hall)</td>
<td>S1</td>
<td>15</td>
</tr>
<tr>
<td>Stanley Buildings</td>
<td>V</td>
<td>14</td>
</tr>
<tr>
<td>German Gymnasium</td>
<td>W</td>
<td>13</td>
</tr>
<tr>
<td>Great Northern Hotel</td>
<td>Z</td>
<td>9</td>
</tr>
</tbody>
</table>
3.2.4 National Grid Reference

National Grid reference is related to the Ordnance Survey grid within square TQ, and is quoted to an accuracy of 4 digits for both eastings and northings, or 10 m on the ground. The reference point is taken as the centre of the building.

3.2.5 Listing and Conservation Area Status

The listing grade is given, or the building is noted as not listed. (The citation for a listed building is quoted later in the report.)

All buildings in this study are located within either the King’s Cross Conservation Area or the Regent’s Canal Conservation Area. The applicable Area is noted here.

3.2.6 Descriptive Summary

This summary provides a succinct description of the building, its function and form, with key dates and features noted.

3.2.7 Historical and Functional Summary

This summary highlights key historical and functional information on the building, drawing from the more detailed analyses of its phasing and of its function(s) and relationship with adjoining buildings and areas, described in 3.2.10 and 3.2.11 below.

3.2.8 Description

This is invariably the longest section in the report, recording detailed on-site inspections. Combined with evidence from documentary sources, the description provides source material for analysis of architecture (if appropriate), phasing, history, and function in the following sections.

3.2.9 Architectural Analysis

An architectural analysis is provided where the building has clearly been designed with architectural intent, or exemplifies it in its functional character and style.

3.2.10 Phasing Analysis

All the buildings have undergone change during their life, for various reasons. These include:

- Enlargement or modification to cope with increased demand
- Alteration to accommodate new methods of working or processes
- Alteration to accommodate a change of use
- Repairs following wartime bombing, fire damage, and the like

Study of documentary material - especially maps and plans - has been indispensable in helping to understand and explain the phasing of each building, although this has necessarily been accompanied by, and related to, close inspection of the buildings. The process has been iterative, involving cycles of documentary study, inspection, and review.

3.2.11 Functional and Relational Analysis

An analysis of the building’s function(s) assists in understanding not only how they were used and how they functioned, but also the significance of the surviving features of its construction. This is of particular importance for the buildings in the Goods Yard north of the canal. The handling of general freight in goods sheds and the unloading...
of coal in the coal drops are major examples of functions which demanded suitable provision both in terms of building fabric and the associated fixtures and fittings.

The siting of individual buildings was often determined by their relationship with other buildings or activities (see also 4. below). For example, the Great Northern Hotel clearly had to be close to King's Cross Station, for whose passengers it was primarily intended to cater (which also explains why its main entrance is located on the station side of the hotel, which appears to 'turn its back' on Pancras Road). Perhaps less obviously, the handling of freight in the Goods Yard generated much paperwork, which in turn required office accommodation for the numerous clerks. The traffic also created a substantial administrative workload, requiring large numbers of managers and supervisors who likewise needed offices. This office accommodation was, ideally, located as close as possible to the freight in question. The original principal Goods Yard office building (now Regeneration House), and the early phases of what are now the Coal and Fish Offices, were sited close to the Granary and the Transit Sheds and the Eastern Coal Drops which they respectively served. But they were soon found inadequate to cope with the paperwork demands of the expanding freight trade, so that office blocks were added either side of the Granary and on the south side of the Midland Goods Shed.

3.2.12 Listing Citation
The citation is quoted for listed buildings. This is taken from the 53rd list for the London Borough of Camden, dated 11 January 1999.

3.2.13 References
Documentary sources specifically relevant to the particular building are referenced in the individual report.

A comprehensive Bibliography for all parts of this IHCM heritage study is given in 6. below.

3.2.14 Evaluation: Summary of Heritage Importance
The heritage importance of the resource in its present state is concisely stated under four headings:

- Architecture and fabric: the important features of the building and its fabric
- Setting: group value in its widest sense, including physical location, interaction with other buildings and landscapes, and visual impact
- Significance related to type: importance in relation to building type and function, noting whether it is innovatory, typical, or unusual
- Significance related to intangibles: associational, social, environmental, and broader historical importance.

3.2.15 Figures and Illustrations
Historical site plans and building drawings to be read with the narrative reports are listed and included in Part 2.

The plan diagrams in this publication are reproduced from the Ordnance Survey mapping by permission of Ordnance Survey on behalf of The Controller of Her Majesty's Stationery Office. Crown Copyright. All rights reserved. Licence No AL100036259.
Each building report is prefaced by a title page with a representative photograph of the building.
4. THE BUILDINGS IN RELATION TO THE HISTORY OF THE SITE

This section summarises the heritage buildings in the context of the history of the site. The buildings themselves are each described fully in the individual reports.

4.1 The Regent’s Canal

The earliest surviving feature in the King’s Cross Central area is the Regent’s Canal, completed in 1820 as a major freight carrier before the effective development of the railways. As such, it attracted the Imperial Gas Light and Coke Company, which opened the largest and finest gasworks in the world in 1824 on the southern bank of the canal. Coal was brought to the gasworks by canal barge. Today, only the disused Gasholder No. 8 (from a later period in the life of the gasworks) remains in place as evidence of gas-making on the site. However, the dismantled guide frames of the unique ‘Siamese Triplet’ gasholder group - from the north side of Goods Way, now occupied by the St Pancras Station extension - are in store alongside it for possible re-erection.

4.2 The Great Northern Railway at King’s Cross

The canal’s presence, running east-west, also strongly influenced the design of the London terminus of the Great Northern Railway at King’s Cross, as it posed a barrier to the north-south main railway line. The solution here was to take the railway under the canal and the gasworks (which gave its name to the tunnel), requiring a steeply-falling gradient from the passenger terminus. The GNR had acquired a large plot of land immediately north of the canal here for its goods station and, further north, its steam locomotive depot.

The GNR line to London opened to passengers in August 1850, more than two years before the imposing King’s Cross Station, with its two 30 m barrel-vaulted laminated-timber roofs, was ready to open. So a temporary passenger station was used in the Goods Yard, immediately to the east of the East Handyside Canopy and west of Maiden Lane (now York Way).

The Great Northern Hotel opened in 1854, two years after the station. Its main entrance focused towards the entrance to what was then the Booking Office on the western, departure, side of King’s Cross Station, for whose patrons the hotel was intended to cater.

The architect of King’s Cross Station, the Great Northern Hotel, the Granary, and other buildings was Lewis Cubitt. His austere and functional use of plain brickwork was to provide a strong contrast with the later exuberance of George Gilbert Scott’s St Pancras Station and the Midland Grand Hotel (now St Pancras Chambers) when these were finally completed two decades later.

4.3 The Goods Yard

When Cubitt’s King’s Cross Station opened, the erstwhile temporary passenger station in the Goods Yard closed, and became part of the wholesale Potato Market - the GNR regarding the carriage of this staple vegetable, brought from East Anglia and environs by trainloads, as a valuable part of its business.

Grain from this part of England was also seen as a staple commodity, for which the imposing six-storey brick Granary was built for its reception and storage, before it was loaded into carts or canal barges for local distribution.
More important than either potatoes or grain, though, was coal brought by the GNR from the East Midlands, Yorkshire, and the north-east of England. It formed a major part of the goods rail traffic into King’s Cross. The railway superseded the canal, and competed effectively with the older-established coastal vessel, for the economical and large-scale transport of coal southwards from the collieries, at a time when coal was needed in London in huge quantities. Coal then served many purposes: as the fuel for steam engines that were the dominant and ubiquitous sources of power at that time; for making gas for lighting, and later for cooking; and for burning to provide heating in buildings. The Eastern Coal Drops opened in 1851 to receive trains of coal wagons, which entered the building at high level, and were then unloaded through bottom doors into hoppers located above the ground-level bays into which coal-merchants' horses and carts could be backed for loading. Gravity was efficiently exploited in both stages.

The canal was still an important freight carrier when the Goods Yard was built, and two inlets were built to connect with the railway. From the Granary Basin, south of the Granary, were four underground docks that led under this building and the two flanking Transit Sheds, allowing interchange of freight from the railway down into barges for local distribution. To the west, where the Western Goods Shed now stands, the Coal and Stone Basin was an open-air small dock with railway sidings alongside.

To enter either basin, canal barges passed under the raised towpath and Wharf Road, which was upheld by a brick retaining wall, necessitated by the general raising of ground level at this southern end of the Goods Yard. The lower yard between the Western and Eastern Coal Drops probably remains at or near what was then the original ground level here.

On the south side of Wharf Road, to the west of Somers Bridge which gave access into the Goods Yard, the Coal and Fish Offices were built to provide accommodation for clerical and administrative staff in several phases from c.1851 to the early 1860s. The original principal Goods Yard offices, built in 1850, are now known as Regeneration House.

A further aid to efficient handling of coal came with the construction of the Eastern Coal Drops Viaduct in the early 1860s (later rebuilt in the 1920s or 1930s), and the insertion of a traverser into the southern end of the Coal Drops building. These allowed coal wagons to be moved southwards after emptying, thence sideways onto the Viaduct, and then to be taken northwards for return to the colliery on a 'merry-go-round' system.

A year or two earlier, the Western Coal Drops had been built. Their viaduct, originally on the west side of the Drops building, was of timber; it was rebuilt in iron, and later dismantled and re-erected on the east side of the Drops when the Western Goods Shed was built in 1897-9.

The Plimsoll Viaduct was built in 1865-6 to carry coal wagons south, via a bridge - since demolished - over the canal, into the coal drops patented and owned by Sir Samuel Plimsoll (inventor of the Plimsoll line for ships). These occupied what is now the site of the Camley Street Natural Park.

Further evidence of the importance of coal traffic here was provided by the viaduct (since demolished) that climbed southwards along the east side of the Eastern Coal Drops, and passed at high level over Wharf Road and the canal, to feed loaded coal trucks directly into the gasworks on the south bank of the canal.

The King’s Cross Goods Yard was entered off the main line from the north-east, so that the railway sidings fanned out to the south-west. This dictated the layout and
orientation of the Goods Yard buildings, with rail access being gained from the north-east and road access from the south or south-west, or from one or both sides.

The efficient unloading, loading, and handling of trains was an important consideration. As noted, railway tracks ran into the coal drops buildings. Similarly, tracks ran into the Granary and the three large sheds to its north - the Eastern and Western Transit Sheds, which flanked the eponymous Train Assembly Shed. Interchange between the tracks, within and between the buildings, was achieved by wagon turntables; individual wagons could readily be moved around - using horse-power, but also making use of hydraulic power, developed by Armstrong in the late 1840s.

Initially the Eastern Transit Shed dealt with unloading incoming goods vehicles, while outward-bound vehicles were loaded in the Western Transit Shed. Platforms inside the buildings, set at or near the level of wagon and cart floors, assisted the loading and unloading of goods. The loaded or unloaded vehicles were then moved into the central Train Assembly Shed and formed into trains for departure northwards.

Offices on either side of the Granary, abutting the Transit Sheds, were added probably in the late 1860s, augmenting clerical workspace as goods traffic continued to increase.

The Midland Goods Shed, or at least its lower part, was probably built in 1850 by the GNR as a single-storey carriage shed. It was adapted for use as a goods shed by the Midland Railway in 1857 - that company had no London station until the Bedford-London extension was built to St Pancras. It then went through numerous subsequent changes of use and layout, including the addition of an office block to its southern end.

In 1888, the two previously open areas either side of the Midland Goods Shed were roofed over with wrought iron canopies on cast iron columns, fabricated and supplied by Andrew Handyside & Co. of Derby. These provided improved all-weather protection to the operation of the Potato Market. Fish traffic also used the tracks under the West Canopy.

A major expansion of the Goods Yard was undertaken by the GNR between 1897 and 1899, led by its Chief Engineer, Alexander Ross. A new Western Goods Shed (an early example of the use of structural steel in buildings) was built on the site of the Coal and Stone Basin in the west of the Goods Yard. The canal basin, like the Granary Basin later, was infilled. The Western Goods Shed was on two levels, road access being from Wharf Road at upper level and from the lower yard below. Rail access was provided also to both levels. The adjoining Western Coal Drops were adapted for general goods handling, and the two buildings together now dealt with outward-bound rail traffic, while the Granary group was adapted to deal solely with incoming rail traffic.

The existing concrete bridge across the canal was built in 1920, replacing the nearby Somers Bridge. It was still a private bridge leading into the Goods Yard, with access controlled from the small brick gate-house on the south side, adjoining Goods Way.

Numerous and significant changes took place during the 20th century, both to the fabric of the buildings and in the operation of the Goods Yard. Buildings such as the Transit Sheds and Train Assembly Shed were re-roofed. The road vehicle gradually took more and more goods traffic away from the railways.

Buildings such as the Eastern Coal Drops had already been partially converted for warehousing and the like before 1900, but major changes did not really affect the buildings generally until the 1960s, when individual rail wagon-loads were abandoned.
as recommended in the 1963 Beeching report. Some rail use continued until c.1980, but the buildings were being adapted for other uses, as is the case today.

World War II bombing, and recent fires, have affected several buildings. Most have been repaired, although the fire-damaged Coal and Fish Offices have had only new internal structures and roofs installed, but lack replacement internal finishes. The northern end of the Eastern Coal Drops remains with scaffold shoring after being gutted by fire; while, within the period of IHCM inspections, the later single-storey high-level offices over the west side of the Train Assembly Shed were gutted by fire in late 2001. They were subsequently demolished, together with fire-weakened sections of the adjacent Shed roofing that has now been rebuilt.

### 4.4 South of the Canal

Gasholder No. 8 and the dismantled guide frames of the ‘Siamese Triplet’ group have already been mentioned above. So too has the Great Northern Hotel. The other buildings south of the canal are the German Gymnasium, two blocks of Stanley Buildings, and Culross Buildings and Culross Hall.

The German Gymnasium was built in 1864-5 to the design of the architect Edward Grüning for the German Gymnastic Society, which promoted exercise and fitness. Only the main hall remains after demolitions for the CTRL works. This has a notable roof carried on bolt-laminated timber arches. The hall was originally a single space, but this was broken up by the insertion of an overall first floor at gallery level, and later additions, when the building was adapted for use as offices when acquired by the GNR, and later by mixed tenants.

Stanley Buildings were built in the same years for the Improved Industrial Dwellings Company, a philanthropic predecessor of the housing association, at a time when concern about public health and housing conditions was very vocal. Although the flats were small - originally four to a floor, later reduced to two - the buildings offered above-average accommodation for working people. Only two of the original five blocks remain: of the three others, one was lost in wartime bombing, another was demolished for proposed road-widening, and the third was demolished recently for the CTRL works.

Culross Buildings of 1891-2 were also built to provide residential accommodation. In this case they were built by the GNR, and offered flats for some of those displaced by the company’s recent expansion within the present-day Milk Dock site, which had formerly been occupied by housing. Some railway workers and their families were also housed here. A mission hall was provided for the moral welfare of residents and neighbours.
5. BUILDING MATERIALS

The heritage buildings both north and south of the canal are built with a simple palette of basic materials, typical of their day: brick, timber, cast iron, wrought iron, and - more recently - steel. The individual building reports describe particular instances of their use, and comment on them in relation to function and architecture, but a short general summary note on each material is provided here. In addition, a note is provided about the brick fabric types referred to in the reports. (These are now recognised as an important archaeological aid to dating and origin.)

5.1 Bricks and Mortar

Most of the buildings are constructed with walls of yellow or red stock bricks, types very commonly used in the 19th century. The later Western Goods Shed is faced with grey-cream gault bricks from East Anglia. Stronger and more durable Staffordshire Blue (actually dark grey-black) or dark red engineering bricks were used where particular strength or impact resistance was needed, for example under beam bearings or at doorways.

Mortar for most masonry would generally have been lime-based until towards the end of the 19th century. Portland cement was in use and available from the 1860s, but would have been limited to the more heavily-engineered structures such as retaining walls and bridge piers, as opposed to the walls of buildings.

5.2 Brick Fabric Types

A brick fabric number is often referred to in the building baseline reports when describing the brickwork. This classification refers to the system of ceramic building material classification used in archaeological work in Greater London. Examples of the fabrics can be found in the archives of the Museum of London and Pre-Construct Archaeology Ltd.

Bricks with and without frogs were manufactured in all of these fabrics. However, those used in the buildings in the study area were mostly frogged. The bricks of the fabrics listed below that appear within the buildings studied are almost all hand-made.

Colour was not entirely dependent on the minerals in the source clay, but was also affected by the conditions and temperature during firing.

The fabric classifications referred to in this study and their descriptions are as follows:

3032

The bricks of this fabric are usually red to purple, with large areas of their surfaces coloured with fine yellow speckling (when viewed at x20 magnification). They often have reduced cores. Yellow or white calcium carbonate specks and iron show throughout the fabric, as well as voids left by the combustion during firing of organic matter, rubbish, and ashes. They are stock-moulded, and are commonly known as multicoloured bricks.
3034
This fabric is similar to 3032, except that the core of the brick is permeated with distinctive yellowish-white lensing. Bricks of this fabric, like 3032, are also stock-moulded, and are commonly known as multicoloured bricks.

3035
The bricks of this fabric are yellow to off-white in colour both on the surface and within the brick. Some show greyish or pinkish orange tinges. The yellow colouring results from their high lime content. They include small ash and charcoal inclusions and, as with 3032 and 3034, contain voids and inclusions from the combustion of rubbish and other material within the clay. They are stock-moulded, and are commonly known as yellow stock bricks.

Other brick types
These are referred to in the text by name.
The above classifications are used in this study as there is often considerable confusion when classifying such bricks by name; the term ‘London stock brick’, often used, is imprecise on its own as it actually covers all three types.

5.3 Stone
Stone, usually sandstone but also limestone, has been widely used in the planning application area for window-sills, lintels, plinths, and other building features requiring strength and/or durability.

5.4 Timber
By the mid 19th century, timber for ordinary building construction was softwood, imported from the Baltic or North America, and this is what is found in buildings on the site, used for boarding, floor joists, rafters, purlins and general carpentry and joinery.
Timber beams were used in the Eastern Coal Drops, but the large sections were expensive. Cast iron, and later wrought iron, offered economical and practical alternatives.
The bolt-laminated arches of the German Gymnasium are a neat way of forming larger structural sections from smaller planks, which would probably have been shaped to the required curve profile by steam-bending.
The weatherboarding to the northern extension of the Western Goods Shed is an economical form of cladding, and introduces a rural note to an industrial building.

5.5 Cast Iron
Cast iron is used for both columns and beams in the 1850s and some of the 1860s buildings - notably in the Granary, with highly decorative profiles, and in both Coal Drops buildings. The material is strong in compression and is hence suited for use in columns. It is readily formed to irregular shapes when poured molten into moulds. But it is relatively weak in tension, and so when wrought iron became widely available from the 1850s it was common to substitute riveted wrought iron plate girders in place of cast iron beams.
Cast iron columns were used as late as the last years of the 1890s for the columns at the lower level of the Western Goods Shed (combined with early steel plate girders).
Cast iron is also widely found in ornamental brackets (such as those on the Western Coal Drops canopy) and many other functional but decorative building components.

### 5.6 Wrought Iron

Wrought iron was stronger in tension than cast iron, and was also readily worked when hot. It could be rolled into various shapes such as rods and angles.

As such, it has been widely used in the Goods Yard, particularly in the several related types of roof truss to be found in various buildings. Some, such as those in the Western Coal Drops, are ‘hybrid’ or composite structures, combining timber principal rafters and collars with cast iron struts and wrought iron tie-rods in an efficient and elegant use of the various materials. Others, such as those in the later Handside Canopies, are entirely of wrought iron, some members appearing remarkably slender but clearly functioning well after more than a century.

However, wrought iron was equally adaptable for heavy loads, as can be seen in the beams of the Western Coal Drops Viaduct and the long-span lattice girders of the West Handyside Canopy.

### 5.7 Concrete

Lime-based concrete is present in some parts of the floors in Stanley Buildings, and was reportedly used throughout the Great Northern Hotel. In both buildings, it was the non-combustibility of concrete compared with timber that was exploited to produce a ‘fireproof’ floor. The hotel floor appears to be of unreinforced concrete arches, whereas in Stanley Buildings the concrete floor slabs are lightly reinforced with wrought iron strip - an early example of reinforced concrete, not much used in the UK before the late 1890s.

Limecrete was also used as a cheaper substitute for stone, for example in window lintels and sills in Stanley Buildings.

20th century reinforced concrete, made with Portland cement, was used in the beams of the Plimsoll Viaduct, in the bridge across the canal leading to Goods Way, and in the replaced deck of the Eastern Coal Drops Viaduct.

### 5.8 Steel

Structural steel was first used in the later 1890s. The chronology of steel ‘firsts’ for this period is unclear, but it is clear that the steel stanchions, beams, trusses, and girders of the 1897-9 Western Goods Shed are certainly among the first structural steel members to be used in a large London building.

After 1900, steel rapidly displaced wrought iron, followed by cast iron columns. It is an irony, noting the early use of steel just mentioned, that the cast iron columns in the Western Goods Shed are almost certainly among the last to be used in a large London building.
6. **BIBLIOGRAPHY**

**Note**

This bibliography lists sources that have been used or acknowledged in preparing this heritage baseline study. Specific references for particular buildings are included in the individual building reports that follow.


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


King’s Cross Conservation Area Advisory Committee. Conservation Objectives for the King’s Cross Railway Lands. 1990.


Ordnance Survey, 5 feet to 1 mile series:
- First edition surveyed 1871, published 1874
- Second edition revised 1894, published 1895
- London County Council revised edition, 1938 (without amendment)


7. ARCHIVES CONSULTED

As noted in 3.1.1, a number of public and other archives have been visited, and material relevant to the history, buildings and landscape features of the King’s Cross Central site has been catalogued. Selected records and publications have been examined, complementing information already to hand, to an extent judged sufficient for the purposes of the baseline evaluation reports. These archives, together with those of Network Rail, are historical documentary resources that will assist in the development of schemes for the existing buildings.

The archives visited, listed alphabetically, are:

- British Library
- Exel archives in Regeneration House, King’s Cross
- Institution of Civil Engineers Library and Archives
- London Borough of Camden Local Studies and Archives Centre
- London Borough of Islington Local Studies Archives
- London Metropolitan Archives
- National Railway Museum, York
- Public Record Office (The National Archives) at Kew

In addition, an index to articles and illustrations for the period 1856-1959 in an authoritative periodical, *The Engineer*, was published by Morgan Brothers in 1964. This has been consulted.
9 GREAT NORTHERN HOTEL

(1989)
1 DESCRIPTIVE SUMMARY

1.1 Early purpose-built large railway hotel constructed in 1853-4 to serve the adjacent Great Northern Railway terminus, both designed by the company’s architect Lewis Cubitt in Italianate neo-Classical styles. A relatively tall and slender building of five storeys plus attic and basement, the latter surrounded by a perimeter lightwell with subterranean vaults beyond. Yellow stock brick with much decorative use of stucco. Double-pile hipped slated roof. (See Figures BD3-BD5 in Part 2.)

1.2 Built on a curved plan, responding to the former alignment of Old St Pancras Road on its long, convex south-west elevation. The concave north-east elevation, incorporating the main hotel entrance, faces towards the original station booking office in the Western Range buildings. Approximately 55 m by 15 m on plan. Later two-storey additions on the south-west elevation and at the north-west corner.

1.3 Closed in 2001 in advance of work on new Northern Ticket Hall as part of King’s Cross Underground Station Redevelopment. Currently disused.

2 HISTORICAL AND FUNCTIONAL SUMMARY

2.1 The construction of the major London rail termini in the mid-19th century was accompanied by the development of hotels for use by the railway companies’ patrons. These were built on a larger scale than existing hotels, and indeed were the
forerunners of the many large and often luxurious hotels built in London later in the century. The first two purpose-built railway hotels were at Euston (1839). They were designed by the company’s architect Philip Hardwick, and stood either side of his Doric Propylaeum, commonly known as the Euston Arch. One, the Euston, catered for the first-class trade, while the Victoria was rather more of a superior lodging-house. These hotel buildings, the Arch, and the original Euston station were all demolished in the 1960s.

2.2 Two railway hotels were opened in 1854, heralding the second generation of railway termini in London: the Great Northern Hotel at King’s Cross, and the Great Western Royal at Paddington. The latter was designed by P C Hardwick, a son of Philip, in an extravagant French chateau style, and stood in front of the train shed (as did Scott’s later Midland Grand Hotel at St Pancras). In contrast, the Great Northern Hotel was sited separately from its terminus as a consequence of existing road alignments. The concave north-east hotel elevation focussed on the station’s Booking Office, which was clearly visible from the hotel’s main entrance. This arguably emphasised the importance of the station more dramatically to the traveller, while better preserving the hotel’s distinct function. The hotel and station entrance were originally enclosed from the surrounding streets within a gated precinct that incorporated ornamental gardens.

2.3 The Great Northern Hotel offered superior facilities for guests. Its 160 rooms included about 100 bedrooms and attached sitting rooms, and 20 public rooms including a large coffee room. A hydraulic lift was introduced in the 1880s. Pressure on toilet and washing facilities, as a result of growing sleeping-car traffic at the station, resulted in the hotel’s footprint being expanded rather uncomfortably at the beginning of the 20th century. The road alignment west of the hotel had been altered with the completion of St Pancras Station in the early 1870s, and this allowed the construction of a two-storey extension of the basement and ground floors over part of the south-west elevation. This was a polygonal block, superimposed on the area and vaults here, containing baths, toilets, dressing rooms, and a barber’s shop (but all since converted to use as toilets, kitchens, and offices). A smaller two-storey extension, at the north-west corner of the hotel, provided additional ladies’ toilets at ground floor level and storage space in the basement below.

2.4 Of these two earliest surviving London railway hotels, the Great Western Royal at Paddington has been altered, both externally and internally, more drastically than has the Great Northern Hotel.

3 DESCRIPTION

3.1 The hotel is curved on plan, and is approximately 55 m long on its central curved axis by some 15 m wide. The longer, convex, south-west elevation reflects the original curving alignment of Old St Pancras Road immediately to the west. A range of houses across the road, called Weston Place, was demolished when Pancras Road was realigned in the early 1870s. As a result, the Great Northern Hotel could appear, mistakenly, to have been designed arbitrarily in both siting and plan form, as if to shield the station’s Booking Office from the adjacent Pancras Road and the competing Midland Railway.

3.2 In fact, the building footprint responded to the existing street plan - now lost - but was clearly related to its role as an adjunct to the station itself. The shorter, concave, north-east elevation faces directly towards the original station Booking Office in the Western Range Buildings. Indeed, the now-blocked central doorway of the Booking Office would appear from plans to be the very geometric focus of the curved hotel elevation,
although this has not been verified by survey.

3.3 The hotel and station entrance were originally enclosed from the surrounding streets within a gated precinct that incorporated ornamental gardens.

3.4 The hotel has seven floors, including a basement and an attic floor within the double-pile hipped slated roof of moderate pitch.

3.5 The internal plan form is reflected in the external elevations. Public rooms at ground floor level and bedrooms on upper floors are naturally lit by windows on the long elevations. These rooms open off a central longitudinal corridor at each floor level, lit at its ends by windows on the north-west and south-east elevations.

3.6 Elevations are of yellow stock brick, decorated with stucco in the form of string courses, pilasters, window mouldings, and a large cornice at eaves level with dentils. The elevational treatment echoes the tall residential terrace style adopted by Cubitt in his design for the south side of Lowndes Square in Knightsbridge. His use of Italianate style in both the hotel and the station also drew on his previous experience in designing the passenger station at Bricklayers’ Arms in south-east London, opened in 1844.

3.7 The concave north-east elevation is virtually symmetrical, with six bays of windows centrally. These are flanked by wider stuccoed bays, marking the location of the two staircases on the opposite elevation, beyond which are six further bays of windows. Only in the central section of this elevation between the stuccoed bays is the brickwork actually curved on plan. The main entrance to the hotel is within the southern ‘staircase’ bay, on the left as seen from the station. This has a short flight of encaustic-tiled steps up to the reception area, sheltered by a small glazed canopy and enclosed porch of cast and wrought iron and timber. (The canopy and porch have been partially dismantled to enable work on the Underground Station Redevelopment; the dismantled components are in store pending reinstatement.) The doorway here is spanned by a round-headed stuccoed arch, as is the window in the other staircase bay symmetrical with it. The other ground floor windows have rounded arches in plain brickwork, with stucco keystones. All upper floor windows are framed by rectangular openings.

3.8 The staircase bays project slightly forward of the general line of the elevation. Their first and second floor windows have three lights framed with pilasters and pedimented heads, while the third and fourth floor windows are similar but with plainer heads. Other windows have stuccoed surrounds on first, second, and third floor levels, and the elevation corners are formed in stucco as pilaster strips decorated with rustication. The stucco treatment around windows and of the string courses at intermediate floors has been simplified since the hotel was built.

3.9 The hotel’s name is displayed prominently on this elevation between the third floor window head and the fourth floor window sills, in crisp sans-serif lettering (which already appears in an early 20th century photograph).

3.10 The convex south-west elevation is longer than the concave north-east elevation, but resembles it. There are seven bays of windows in the central section. These are flanked by the staircase bays, which project beyond the general line of the elevation with their corners formed in stucco as pilaster strips decorated with rustication. The projections incorporate the three-light stair windows similar to those on the north-east elevation, but include also a single bay of windows from adjacent rooms on either side. Five further bays of windows extend to the ends of the elevation, whose corners
are again formed with stucco pilaster strips.

3.11 The later supplementary toilet facilities have been added to this elevation at basement and ground floor levels, centred on the southern staircase bay. Their external walls are of brick with plain rectangular window openings and stucco mouldings, topped by a flat roof. An external steel fire escape stair is located in this bay.

3.12 The north-west end elevation is pierced by only the single line of central corridor windows which, at first floor level, enlarges into a small glazed and louvred ‘conservatory’. A small two-storey block along its eastern half was added to provide supplementary ladies’ facilities. Like the larger extension on the south-west elevation, this block is walled in brick with plain rectangular window openings and stucco mouldings, topped by a flat roof. A later short steel staircase leads out of the ground floor central corridor here, and currently forms the only means of access into the building, as the main entrance is temporarily closed off by the hoardings of a work site for the Underground Station Redevelopment.

3.13 The south-east end elevation has two bays of windows either side of the central corridor windows, which are themselves contained within a projecting bay formed and flanked by large pilasters containing chimney flues. These windows are treated at ground, first, and second floor levels similarly to the windows of the staircase bays on the north-east elevation, as described above. Here again, a later steel fire escape stair leads out of the ground floor, which at this end of the hotel comprises the full-width dining room (originally the coffee room).

3.14 Some vertical cracking is visible in the pilasters of the projecting bay of this elevation. This is surmised to be a result of cyclic thermal movements across changes in thickness of the brickwork, which here encloses chimney flues. The cracking is made more conspicuous by mortar pointing that follows the lines of the cracks.

3.15 Within the roof space, the attic (fifth) floor has fewer windows than the lower floors, in the form of dormers with plain rectangular openings beneath shallow gables.

3.16 The hipped slated roof resembles a double-pile construction in that it has twin ridges, with a central valley section now covered by duckboards. A substantial number of large brick chimney stacks remain, reflecting the many fireplaces burning coal that were originally provided to heat every bedroom, sitting room, and public room, as well as the kitchens. Some stacks have been modified, impairing the symmetry of the roofline which has been further marred by the addition of items of plant.

3.17 Numerous rainwater, soil, and vent pipes are present on the external elevations. They detract from the appearance of the building.

3.18 Door and window joinery is generally of timber, in need of some local repair or replacement. Windows are generally vertical sliding sashes.

3.19 The internal layout of the hotel essentially comprises a single long, curved, corridor at each floor level, serving rooms on either side. The upper floors, comprising mainly bedrooms, sitting rooms, and toilets, have crosswalls at fairly close and regular spacings. The cellular pattern of this structural layout is largely continued down through ground floor and basement level except where larger rooms here have required the use of beams to pick up walls from the upper floors.

3.20 The main entrance into the hotel is up a short flight of steps in the southern staircase bay. This leads into a small lobby from where the hotel reception desk and the
southern staircase can be reached. Public rooms on this ground floor level originally included a smoking room and reading room, as well as lounges and the coffee room (later known as the dining room). This latter room was the largest in the hotel, occupying four bays and the full width of the southern end of the building - a space of some 9 m by 14 m. It reportedly “rivalled that of the Great Western Royal Hotel as the finest in London” (quoted in Hunter and Thorne). It has a higher ceiling than other ground floor rooms, which resulted in the first floor rooms above having reduced ceiling heights and being approached up a short flight of steps in the central corridor.

3.21 Two staircases were originally provided within the building. A hydraulic lift was inserted in the well of the northern staircase in the 1880s.

3.22 Bedrooms on upper floors were originally not provided with integral private toilets but, as this became expected of superior hotel accommodation, en suite facilities were introduced in some bedrooms by adding private facilities inside an enclosing partition. This has inevitably impaired the original simple room proportions.

3.23 The north-west, convex, elevation of the hotel is longer than the south-west elevation, and advantage was taken of this in the original design to provide toilets in the additional space available.

3.24 Services for the hotel were concentrated in the basement. The main kitchen was sited under the coffee (dining) room with a dumb waiter linking the two. The basement rooms to the north of this included a servants’ hall, staff rooms, storage for groceries, wine, linen, and plate, and a large linen drying room. Further storage was provided in cellars entered off the basement level area around the hotel.

3.25 The internal construction was noted at the time by the Great Northern Railway as being ‘fireproof’, with stair landings and treads of stone (rather than timber), and masonry walls between rooms, rather than timber studding. These masonry walls also offered superior sound insulation and privacy.

3.26 Floors have been reported to be of brick arching below timber boarding, supported on iron girders, although it is unclear whether this construction was applied throughout (including in bedrooms), or only in the corridors, so that these and the staircases provided incombustible escape routes in the event of fire. The latter approach was commonly adopted: it is, for example, to be found in the nearby Stanley Buildings, where the kitchens and bedrooms within the dwellings have conventional, ‘non-fireproof’, timber floors. The use of iron girders is to be expected in a building of this period, particularly for the longer span beams over the public rooms at ground floor level and elsewhere, which were obliged to support the weight of walls and floors above. The girders could be either cast iron beams or, possibly, early riveted wrought iron plate girders. In the absence to date of any original drawings or investigation records, the floor construction cannot be described with confidence, but it appears to include timber joists and floorboarding, brick vaulting at least in the corridors, and iron beams or girders.

3.27 No original or investigatory information on foundation construction is to hand, but it is probable that the building was founded on spread brick strip footings, similar to those adopted for the main line station.

3.28 Internal finishes today are typically of plaster and wallpaper with painted joinery. It seems evident that original finishes have been removed or affected in the course of later works, such as the installation of private bathrooms within bedrooms. Accounts suggest that the original decoration of the public rooms was more ostentatious than.
can be seen today.

3.29 The later extensions at basement and ground floor levels on the south-west and north-west elevations provided additional baths, dressing rooms, toilets, a barber’s saloon, and storage. As noted, these extensions were provided for the benefit of passengers arriving at King’s Cross on sleeping-car services.

3.30 The hotel is enclosed by a basement area, with external brick vaults serving as cellars. These were extensively used for storage of coal, beer, foodstuffs, and other essential supplies. Some of these vaults have recently been removed or infilled with concrete as part of the Underground works for the construction of the new Northern Ticket Hall.

3.31 An underground ice-house to the north of the hotel, known from plans of the hotel, was linked by a short alley into the hotel cellars. The ice-house and part of the alley, and the incomplete remains of a previously-unknown second ice-house (described below), have now been removed during excavations for the new Underground Station Northern Ticket Hall. Previously, there was speculation that the known ice-house had been originally associated with the Smallpox Hospital or Fever Hospital that had previously occupied the site. However, observations and recording by the Museum of London Archaeology Service (MoLAS) during its removal indicate that the ice-house was built with, or shortly after, the hotel. At this time, before refrigeration was developed, ice would be brought in bulk during the winter from Scandinavia, Canada, or elsewhere, and stored for use in the kitchens over the next months in underground structures such as this ice-house.

3.32 The ice-house comprised a circular, roughly cylindrical, brick structure about 8 m deep and 4 m in diameter, with a hemispherical roof. The crown of this roof was just below ground level, and had a covered opening (later sealed) through which ice could be delivered.

3.33 At a later period in its life, presumably when the availability of refrigeration eliminated the need to store ice, the ice-house was filled with rubble up to the floor level of the alley that linked to the hotel cellars, and apparently used for storage. Subsequently, the ice-house was abandoned completely, and the hotel end of the alley was sealed off by a concrete blockwork wall.

3.34 The incomplete remains of a second ice-house, not previously known to exist, were discovered during excavations for the Northern Ticket Hall. It also was built of brick with a circular plan. It lay closer to the hotel, and immediately above the Hotel Curve Tunnel. It is dated at about the time of the hotel’s construction or shortly after, but almost certainly pre-dates the ice-house described above, as the alley leading to the latter was curved on plan to pass around the second ice-house. It is unclear whether this incomplete ice-house was built before the tunnel (which opened in 1863, nine years after the hotel was opened), or was abandoned to allow construction of the tunnel.

3.35 A MoLAS report on the two ice-houses was issued in September 2003.

3.36 The edge of the area around the hotel is protected by cast iron railings of simple pattern. On the north-east elevation the railings are in the form of rectangular open panels similar to those at the southern end of the Western Range of the station buildings. Some of these have recently been temporarily dismantled, together with part of the hotel entrance porch, and taken into storage to protect them during the execution of the Underground works. On the west side of the hotel, along Pancras
Road, the railings are of the ‘spear’ type, with heraldic emblems (three lions passant and a larger lion rampant) moulded onto the bosses of the principal uprights.

3.37 A distinctive adjunct to the hotel that has been totally lost is the gardens that were laid out to the north of the hotel. These were grubbed out in the late 1930s and replaced by the parcels (later Red Star) depot, itself recently demolished for the construction of the Underground Northern Ticket Hall. The eastern edge of the gardens flanked the porte-cochère sheltering those arriving in front of the original Booking Office. The gardens formed an integral part of the design of the space to the west of the Booking Office. This was a triangular area defined on its south side by the line of Old St Pancras Road and the curved hotel, on its east side by the station, and on its west side by Upper Edmund Street (later Cheney Road). This space was enclosed by walls and railings - it all being railway property, and therefore private land - as is shown on the 1871 Ordnance Survey 1:1056 plan. Gates provided vehicle access immediately to the north and immediately to the south-east of the hotel, with a third access further north beyond the gardens. One brick gate pier remains beside the footpath at the northern end of the north-east elevation.

3.38 A further railway-related feature here in the early days of the station and hotel was the Great Northern Railway stables building shown on the north side of Upper Edmund Street, opposite the hotel gardens, in Stanford’s plan of 1862. The stables had gone by 1871, when the OS plan shows a “cartridge and percussion cap manufactory” occupying the site.

3.39 The destruction of the gardens, and the removal of the railway precinct boundaries north and east of the hotel, has unfortunately removed evidence of what was originally a carefully-integrated urban design on a very tightly-defined site.

4 ARCHITECTURAL ANALYSIS

4.1 23 bays long on its outer, north-west, elevation (18 bays on its inner elevation), with five-and-a-half storey high façades rising above street level, this building was on a new scale for a hotel, and larger than the first purpose-built office blocks of the period. The architect Lewis Cubitt deployed his skills, developed among the imposing residential terraces designed for his developer brother Thomas in Belgravia, so as to articulate what could otherwise have been repetitive and bland façades. The result is more ornate than his adjacent passenger station, as befitted the more personal function of a hotel, but far from the fussiness of much subsequent Victorian work.

4.2 The main façades are broken into three by expressing the two bays of wider, three-light windows that mark the internal staircase locations, picked out in stucco. These, and stucco pilaster strips at the corners - plus additional pilaster strips in the longer convex north-west elevation - support a bold classical cornice beneath the roof line. Across the heads of the ground floor windows, a stucco string course marks a classical division into plinth and piano nobile, the former in sober brickwork, the latter with the newly fashionable stucco architraves to the necessarily closely-packed window openings, graduated through several storeys. The cornice crowns these tiers of windows. With its bold dentils, the cornice simulates an eaves line for the roof. This roof, terminated laterally by hips, has a relatively shallow pitch in sympathy with the neighbouring station building, but tall chimney stacks provide a vertical termination proportionate to the building’s height. In keeping with the functional Italianate styling of King’s Cross Station, the architecture shuns the classical “orders”, except in the pilasters of the three-light windows (where, incidentally, the usual progression from Doric upwards to Corinthian is deliberately inverted to avoid pomposity).
4.3 Some details of the stucco architraves and the gradated depths of successive string courses have been emasculated in twentieth-century renovation works, and soil and rainwater stacks have proliferated unattractively, but the general principles of this composition have remained unscathed.

4.4 The asymmetry of the north-east elevation, with the main hotel entrance placed ‘off-centre’ in the southern of the two staircase bays, can be seen, in part at least, as a response to the asymmetry of the Western Range of the station. This in turn is weighted towards the Euston Road - the principal road serving the station - and reflects the concentration of passenger facilities towards the southern end of the range, while the more mundane facilities such as the Parcel Office were sited further north in the range.

4.5 More practically, the siting of the hotel entrance made it immediately visible from the Booking Office entrance (and vice versa), whereas this clear line of sight would have been obscured by the trees and shrubbery in the hotel gardens had the entrance been sited in the centre of the hotel elevation.

4.6 A further practical aspect of the hotel entrance location was that it lay at the intersection of the roads within the enclosed railway property, allowing carriages to manoeuvre easily when setting down and picking up.

4.7 Not least, the gardens, sited as they were, helped to screen the less salubrious terraced streets to the north from the hotel. Together with the siting of the hotel - enfolding this gated and secure area - this helped to create an impression of privacy that would have been familiar to, and welcomed by, the more wealthy patrons of the railway and the hotel.

5 PHASING ANALYSIS

5.1 Until its closure in 2001, in advance of work on the new Northern Ticket Hall as part of King’s Cross Underground Station Redevelopment, the hotel had been in continuous operation for its original purpose for nearly 150 years - itself a matter of note.

5.2 During this period, several evident changes have taken place. These include the installation of a hydraulic lift in the 1880s, itself replaced subsequently. The provision of additional toilet facilities to cater for sleeping-car customers has necessitated the two two-storey extensions described above.

5.3 More recent changes have seen private bathrooms squeezed into bedrooms, with some inevitable loss of original finishes as well as the unfortunate effect on the original simple room proportions.

5.4 External repairs have removed or simplified some of the decorative stucco work.

5.5 Overall, however, the hotel appears to be essentially the original building of 1854, affected by remarkably few alterations or developments.

6 FUNCTIONAL AND RELATIONAL ANALYSIS

6.1 The Great Northern Hotel was built to provide accommodation and refreshments for the passengers and their companions arriving at and departing from King’s Cross Station. In this respect it might be said to be exploiting a captive market, although
doubtless many inexperienced visitors to London would have felt reassured to be
offered accommodation by a reputable railway company, rather than seeking it in a
large and unknown city. Similarly, those catching an early morning train from the
station could be assured of a service geared to their needs.

6.2 Its location, standing separately from the main line terminus, was relatively unusual,
being dictated by the existing street layout. Cubitt exploited this to produce a building
that focussed directly onto the Booking Office. Together with his design of the gardens
to the north (now lost), the result was a composition that related very closely to King's
Cross Station.

6.3 Later two-storey extensions of the hotel, on the south-west elevation and the north-
west corner, provided extra toilet facilities in response to demand from the growing
overnight sleeping-car traffic, which was bringing travel-weary travellers into London
early in the morning. The hotel was thereby able to offer all the required facilities as
well as breakfast, although at the expense of compromising its original clear and
simple footprint.

6.4 Although no longer owned by a railway operator, the hotel remained in use until closed
recently to facilitate construction of the Underground works.

7 LISTING CITATION

7.1 “Hotel. 1854, by Lewis Cubitt. Yellow stock brick with stucco dressings. Slate roof with
pedimented dormers. Crescent shaped building. Concave main façade towards King's
Cross Station, Euston Road (qv).

7.2 “EXTERIOR: 5 storeys, attic and basement. 18 windows wide; southern return 5
windows with slightly advanced central bay. Sixth and thirteenth bays slightly
advanced with tripartite windows and stucco dressings; 1st and 2nd floors, triangular
pediments and segmental pediments respectively. Below that to left hand side, the
main entrance with cast-iron and wood portico; round-arched glazing. Round-arched
ground floor openings with stucco keystones and impost bands. Plain stucco bands at
1st, 2nd, and 3rd floor levels. Other windows square-headed, 1st to 3rd floor with
stucco architraves. Modillion cornice. Prominent slab chimney-stacks. Road façade
similar.

7.3 “INTERIOR: not inspected.

7.4 “SUBSIDIARY FEATURES: attached cast-iron railings of geometric design to areas.

7.5 “HISTORICAL NOTE: curved plan reflects the original alignment of Pancras Place,
now Pancras Road. The hotel was one of the first to include rooms on the “continental
system” with bedrooms en suite with sitting rooms. The company prided itself on the
fireproof construction of the hotel, with thick walls dividing every room and with the
corridors constructed of brick arches supported by iron girders.

7.6 “(Hunter M and Thorne R (eds.): Change at King’s Cross: London: -1990: 77-79).”

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Barker, A. The Great Northern Hotel, Report No. 20 for the London Regeneration Consortium
Plc. Rothermel Thomas with Ashley Barker, 1989. [For factual material only.]


SUMMARY: THE HERITAGE IMPORTANCE OF THE GREAT NORTHERN HOTEL

ARCHITECTURE AND FABRIC

The Great Northern Hotel is an early surviving example of a purpose-built railway hotel. Italianate in its design in yellow stock brick and stucco, and only slightly altered, it resonates with other designs by its architect, Lewis Cubitt - the nearby King’s Cross terminus, and his large-scale residential elevations in Belgravia.

The building was on a new scale for a hotel in both length and height, but Cubitt successfully articulated what could otherwise have been repetitive and bland façades, through the restrained but considered use of stucco for string courses, pilaster strips, and as mouldings around door and window openings.

The result, although more ornate than his adjacent station, has none of the fussiness of much subsequent Victorian work. As such, it is a well-balanced and original composition.

The pronounced asymmetry of the building, with its off-centre main entrance, is a response to the asymmetry of the Western Range Buildings, both weighted towards the Euston Road and the passenger facilities at the southern end of the station. It also provides a direct line of sight between the hotel entrance and the Booking Office entrance, which would have been obscured by the gardens had the hotel entrance been sited centrally.

Pressure on toilet and washing facilities in the station resulted in the hotel’s footprint being expanded rather uncomfortably at the beginning of the 20th century by the construction of two-storey extensions on both the south-west and north-west elevations. The prominent steel fire escape staircase on the south-west elevation is a further uncomfortable addition.

SETTING

The curved plan form and the orientation of the building offer the sole remaining evidence of the street pattern at the time of construction, before Pancras Road was realigned as a straight thoroughfare down the east side of St Pancras Station.

The north-east elevation of the hotel focuses onto the entrance of the former Station Booking Office - possibly a unique feature.

The enclosure of the triangular space to the west of the station, including the hotel together with gardens to the north (now lost), was originally a clearly integrated whole. It offered an efficient layout for road vehicles, and also a sense of privacy.

The setting of Cubitt’s relatively plain Italianate terminus and
hotel, immediately alongside the exuberant neo-Gothic St Pancras Station and its hotel by Scott and Barlow, is a juxtaposition possibly without comparison in early railway architecture.

The hotel makes an important contribution to the King’s Cross Conservation Area, particularly in its association with the main line station, both evoking 19th century railway development.

SIGNIFICANCE RELATED TO TYPE

The Great Northern Hotel is among the earliest surviving purpose-built railway hotels, contemporary with the Great Western Royal Hotel at Paddington but retaining more of its original character both externally and internally.

SIGNIFICANCE RELATED TO INTANGIBLES

The hotel retains a close relationship with King’s Cross terminus, particularly the former Station Booking Office, and effectively enfolds the space between this and the hotel.
13 GERMAN GYMNASIUM
BUILDING NAME
GERMAN GYMNASIUM

LOCATION
On east side of former route of Pancras Road south of Stanley Buildings with Cheney Road to north-east, between Clarence Passage to north and the former Wellers Court (now eradicated) to south

CLIENT REF. 13
EH INVENTORY REF. W
IHCM REF. W
LINKED EH REFS. -

NATIONAL GRID REF.
TQ 3012 8316
REPORT BY MNB, MTT
DATE April 2004

Listed Grade II
Within King's Cross Conservation Area

1 DESCRIPTIVE SUMMARY

1.1 Probably the first purpose-built public gymnasium in the United Kingdom, opened in 1865 by the German Gymnastic Society. Designed by E A Grüning in distinctly Germanic style. (See Figure BD6 in Part 2.)

1.2 Following recent demolitions for the construction of the Channel Tunnel Rail Link (CTRL), only the main hall remains - a rectangular block some 26 m by 23 m, originally a single volume with a gallery, but with later additions completely infilling the first floor and adding a partial second floor. Yellow-brown stock brick, with red brick used for decorative features. West gable wall - some exposed during demolitions - newly faced in yellow and red brickwork to resemble east gable wall.

1.3 Double-pitch gabled roof, originally slated, carried on notable 18 m span bolt-laminated timber arches on cast iron columns, with bolt-heads formed into hooks to support climbing ropes. (Arches similar to those originally in trainshed roofs of King’s Cross Station, since replaced by wrought iron.)

1.4 Currently boarded up and standing within CTRL construction site.
2 HISTORICAL AND FUNCTIONAL SUMMARY

2.1 The German Gymnastic Society was established in London in 1861 following a rise of interest in gymnastics in Germany, seen as a healthy activity promoting physical fitness with both social and military benefits. Money was raised for the building from the 1100 members of the society, many of whom were in fact English or of other non-Germanic nationalities. The building was designed by Edward A Grüning, architect, and constructed in 1864-5 by Piper and Wheeler at a cost of about £6,000. It was inaugurated on 28 January 1865. Arguably the first purpose-built gymnasium building in Britain, it was also the only example outside Germany of a gymnasium provided for the German form of gymnastics. The name Turnhalle was inscribed over the entrance at 26 Pancras Road, being the German for a gymnastics hall.

2.2 A contemporary account in The Builder notes that a club-room and reading-room were provided, in addition to the gymnasium hall itself. It therefore clearly served a social role as well as proving facilities for physical exercise.

2.3 The building found wider use as a sports centre, and was influential in the development of British athletics and other sports. Here were founded both the Amateur Gymnastic Association and the Amateur Swimming Association. The Society’s then President, Ernest Ravenstein, was instrumental in The National Olympian Association’s holding of its first Games here in 1866, shortly after the German Gymnasion was opened. These continued annually until the first modern Olympic Games were held at the White City in west London in 1908.

2.4 It may not be coincidence that, in that same year of 1908, a long lease of the building was bought by the Great Northern Railway to provide additional accommodation for its operations centred on King’s Cross Station. Spaces were partitioned to provide offices and other facilities, and after some years the main gymnasium hall, originally full-height, was altered by the insertion of a new floor at gallery level to provide further office space.

2.5 Some damage was caused during a Zeppelin bombing raid in 1917, although this is believed to have been confined to the now-demolished parts of the building nearer Pancras Road.

2.6 The building remained in use by the railways until 1974 at least, when Circle 33 Housing Trust took a lease on the upper floor within the main hall. A partial second floor was added on the south side of this hall to complement an existing partial floor on the west side (architect Anthony Richardson & Partners). Subsequent tenants of various parts of the building included W H Smith, a repairer and supplier of spare parts for audio equipment, and arts depot. This latter organisation adapted the upper part of the hall and adjacent rooms to provide an arts space for multiple uses such as music, dance, and art exhibitions.

2.7 The original entrance on Pancras Road, and the ancillary accommodation between this and the main hall, were demolished in 2001 to make way for the extended platforms and concourse being built at St Pancras Station as part of the CTRL works. Under the provisions of the CTRL Act the newly-exposed areas of the hall’s west wall have been re-faced with new brickwork to match the existing brickwork of the building, pending future use when the CTRL works are complete. Windows and doors are currently boarded up, and the building stands within a construction site.
3 DESCRIPTION

3.1 The building as it stands today is a single rectangular block with a symmetrical pitched roof rising to a full-length clerestorey running east-west. It is within a CTRL construction site, and all external door and window openings are currently boarded up.

3.2 The walls are of yellow-brown stock brickwork, weathered to brown or black by dirt in this location between two major railway stations where much soot and other grime was abundant. Red brickwork is used decoratively in heavy corbelling on the upper part of the north and south side walls and the east gable wall, in flush bands at plinth level and at first floor level, in dentils under the east gable coping, in arches over openings, and elsewhere.

3.3 The heavy corbelling, of a saw-tooth pattern in elevation and carried up the slopes of the gable end, is characteristic of Prussian vernacular building that can be seen widely in western Poland and Germany. However, the architecture is an eclectic mix of motifs including segmental two-centred pointed arches (quasi-Gothic), all in brick.

3.4 The north and south side walls each comprise seven basically similar bays having recessed panels at ground and first floors. Plain red-brick bands run along the panel bases. The wall heads incorporate horizontal saw-tooth bands of heavy corbelling, also in red brick.

3.5 It seems probable that each panel originally contained one or more windows, although it is clear that most windows and their openings have been altered during the building’s life. The original fenestration on the side walls would appear to be pairs of small windows having cast iron window frames and brick-on-edge sills, with their openings spanned by semi-circular red brick arches. Three such pairs of windows are still present, one at each level in the north wall and one at ground floor level in the south wall. A fourth pair, at ground floor level in the south wall, has been infilled with brick.

3.6 Later use of the building as offices inevitably led to window openings being enlarged to provide more natural light, and this has been achieved by forming rectangular openings spanned by either rolled steel I sections or by concrete, or concrete-cased steel, lintels. One infilled doorway near the west end of the north wall is spanned by a triangular red brick arch, below which a later steel lintel has been inserted. The westernmost panel in the south wall is occupied by a double-leaf loading door, with windows above divided by a central mullion, and spanned by a steel lintel.

3.7 Windows in the north and south walls variously have timber, cast iron, and steel frames. Some are vertical sashes, others are fixed or casements. Steel security grilles have been added outside ground floor windows.

3.8 The east gable wall, some 16 m high, is dominated by the saw-tooth band of heavy corbelling following the slope of the gable. Immediately under the substantial coping of the parapet is a course of small red brick dentils. Below the corbelling, the external wall is plane, apart from a step on plan which sets back the northern edge of the wall, and a projecting stair tower at the south-east corner of the building.

3.9 At ground floor level this wall has no windows, but near the southern corner is a small brick porch with a double-leaf door. This originally served a staircase up to the gallery, but later (after this stair had been removed) instead gave access to the northern part of the ground floor of the main hall. A small brick ‘drum’ abuts the porch on the north side. Its purpose is unclear. Double doors south of the porch give access to the southern part of the ground floor.
3.10 At the south-east corner of the building is a cylindrical brick tower enclosing a spiral stair that links the gallery level to the ground floor, with no direct external access. This has six lancet windows following the rise of the stair, although two of these have been bricked up. The brickwork here terminates in a corbelled parapet.

3.11 At first floor level in the east gable wall are five equally spaced windows, symmetrical about the centre-line of the hall and opposite five door openings in the west gable wall. These have brick-on-edge sills and are spanned by triangular red brick arches. Frames are of cast iron. Secondary glazing has been fitted to these windows, probably when the building was being used in recent years for filming and recording. Above these windows, and central in the gable, is a circular window framed by rings of red brick. Its fixed cast iron frame has a central hexagonal pane surrounded by six quadrilateral panes.

3.12 Until the demolitions of 2001, the main entrance to the building was from the west, through a classically pedimented doorway in the centre of a contemporaneous row of shops on Pancras Road. A corridor and stairs led to both levels of the main hall through a cross-wing, hidden from the street frontage, that had contained the reading room and ancillary accommodation.

3.13 The Gymnasium’s west gable wall was examined in some detail while the building was intact, and its construction can therefore be described here.

3.14 Internal faces of this wall were painted, but it can be surmised that it is built throughout in plain stock brickwork without use of the red brick seen elsewhere. Evidence of this comes from the ‘porthole’ window high up in the gable, matching that on the east gable wall, which is here ringed in stock brick rather than red brick. Also, after demolition of the building to the west, it was possible to see the horizontal saw-tooth band of heavy corbelling, which continued across this wall inside the building at the level of the corbelling on the adjacent side walls. Removal of the roof covering during demolition had exposed the corbels, which were of pale red or brown stock bricks.

3.15 Like the east gable wall, this wall varies in thickness, reducing up the height of the building by step-backs of half-brick thickness on the internal face.

3.16 At the ground floor level of the west gable wall there are five equally-spaced openings, spanned by semi-circular brick arches. Above these is a string course of simple rectangular dentils.

3.17 At first floor level there is evidence of six openings, five corresponding to the five symmetrical windows in the east gable wall, and a further one asymmetrically located to the north. All are spanned by pointed brick arches which are slightly corbelled forward from the jambs. Of these original openings, two have been infilled by brick, two have been partially infilled to leave smaller door openings, and two are of original width. The ‘extra’ opening to the north has a smaller door opening spanned by a pointed brick arch. The other five have fanlights inserted within the profile of the corbelled arches. At the southern corner of the wall at this level, two further small doorways led into a staircase in the now-demolished part of the building to the west of the hall.

3.18 The circular window near the top of the gable is generally similar to its counterpart in the east gable wall, except for the absence of red brick, as noted.

3.19 There is a simple corbelled course of brickwork along the eaves of this west gable wall, in contrast to the more decorative treatment on the east gable wall.
3.20 Following the demolitions, the west gable wall has recently been re-faced in yellow and red brickwork to resemble the east gable wall. This was carried out as a mitigation measure under the heritage provisions of the Channel Tunnel Rail Link Act 1996. Red brickwork is used to pick out the five round-headed central openings at ground floor level, the five pointed-arch window openings at first floor level, and the circular window above these. Red brickwork is also used to continue the plain band at first floor level, for a saw-tooth band of heavy corbelling following the slope of the gable, and for the substantial coping of the parapet and its course of small red brick dentils. The new coping on this wall is necessarily wider than that on the east gable wall, resulting from the presence of the additional facing brickwork.

3.21 The pitched roof was originally no doubt clad in slate, but at present is covered, as are the pitched roofs over the central clerestorey and the five dormer windows, with a silver-painted (solar-reflective) flexible membrane which bears numerous patches. There are three equally-spaced dormer windows on the south slope, with two on the north slope. (The third window on the north slope has been removed, and its opening in the roof slope has been infilled.) The dormers are glazed on three sides, and their pitched roofs are carried on twin brick piers that also support the pointed arch over the window and the small triangle of gable brickwork.

3.22 The central clerestorey is glazed along the full length of both sides.

3.23 Internally, the hall has been divided both by the insertion of the full first floor and by added walls and partitioning, particularly at ground floor level. Other alterations include the relocation of staircases.

3.24 However, at first floor level it is still possible to experience the original church-like spatial division into a wide central ‘nave’ flanked by two narrower ‘aisles’. The most distinctive original structural features are still clearly visible - the arched timber roof and its supporting cast iron columns, with arched brick walls spanning between the column heads at high level.

3.25 The pitched roof is carried on six bolt-laminated timber arches that span north-south about 18 m, and carried on six pairs of cast iron columns at 3.6 m spacings. These columns carry loads down to the foundations, picking up load from the original gallery en route. The external walls acting as a ‘box’ provide overall stability.

3.26 The horizontally-laminated timber arches comprise 12 thin timber slats on their sides, bent to shape and secured together at intervals by bolts. Some of these bolts also connect the arches to two separate iron castings that fill the space between each arch, the side wall, and the roof slope. The lower castings, with open webs, are also bolted into the side walls. These castings and the laminated timber arches echo the original structure of the King’s Cross Station trainshed roofs. The lower ends of some of the bolts on the arches are formed into hook ends, from which climbing ropes could be hung or gymnastic use.

3.27 The roof comprises diagonal timber boarding carried on a mixture of closely spaced purlins or rafters (indicating ad hoc repairs, possibly due to rot damage). The purlins span onto principal rafters that are then carried on the arches. These rafters continue upwards to meet in a cast iron shoe at their apex. The ridge above is supported on small four-way crown posts springing from the rafter intersections. Two raking timbers spring upwards and outwards from near the centre-point of each arch to support the rafters, while a central tie-rod dropping from the shoe is tied into the arch at midspan. Two further, lighter, tie-rods flank this central rod.
3.28 Pairs of long diagonal tie-rods on either slope brace the end bays of the roof to provide stability against racking.

3.29 A timber walkway reached by a steel cat ladder on the west gable wall gives access to the clerestorey level. This has a timber walkway on all four sides, with a timber handrail supported at midspan by twin raking timbers.

3.30 Some scaffolding has been installed at clerestorey level, presumably following concern over the strength of the construction - possibly affected by rot.

3.31 The timber arches spring from padstones corbelled from the base of the high-level brick side walls of the nave, and both are carried on hollow circular cast iron columns with decorative Composite heads. The wall sections between columns are carried on pointed arches, as are sections of high-level wall spanning north-south between the column heads and the outer side walls, balancing some of the thrust of the arches.

3.32 Investigations prior to adding the partial second floor on the south side in 1974 revealed that there is a horizontal cast iron truss in either aisle at eaves level, concealed above plaster ceilings. These trusses help to resist the arch thrusts (and wind loads) and carry these back to the end gable walls. This is an unusual example of such a structural feature in a building of the 1860s.

3.33 There is a part second floor on the west and south sides of the hall. The timber west side floor is also the ceiling over a room formed when the gymnasium was converted to clerical use. In the section of floor on the south side, added in 1974, timber boarding and joists span onto pairs of steel channels that are tied together. On the south side of the floor, these channels bear onto a ledge on either side of a squared stone that sits onto the cast iron column head. On the north side they are carried on a line of steel stanchions.

3.34 The later walls and partitions at first floor level are variously of masonry or partitioning.

3.35 The first floor cast iron columns bear down onto similar columns below the former gallery construction.

3.36 The original ground floor was of course open, serving as the gymnasium floor. Internal vertical structure was limited to six pairs of cast iron columns located below the columns on the level above, again circular and with decorative Composite heads. There are no east-west high-level walls corresponding to those at roof level, only north-south walls spanning onto the external walls. These north-south aisle wall sections are carried on semi-circular arches, in contrast to the corresponding walls above which are carried on pointed arches. Corbel stones projecting from these wall sections either side of the columns indicate what were probably seatings for east-west beams supporting the gallery.

3.37 The original gallery floor structure has not yet been recorded. It seems probable that stone slabs or timber joists and boarding spanned between the external walls and beams located along the column lines. The part of the gallery projecting inwards beyond the column lines was probably of timber, with edge beams supported by raking timber struts from corbel stones still visible in the brick walls that sit on the ground floor level columns. These corbels and struts are shown in an engraving in The Builder in 1866.

3.38 The saw-tooth bands of heavy corbelling to be seen on the external wall elevations are also present on the internal elevations.
3.39 Conversion of the hall for railway clerical use involved the division of the ground floor into offices, and the infilling of the first floor void. Structural work involved the use of timber floor boarding and joists, steel beams, steel stanchions, brick walls, and pad footings. A drawing makes reference to a “gallery girder” running north-south on the west side of the hall, which appears to be a later insertion, needed to carry a one-brick-thick wall at first floor level that remains and supports the part second floor here. This girder is still to be seen, a deep haunched steel truss spanning between the north and south walls.

3.40 In its most recent use the ground floor was divided into two occupancies by an east-west brick wall. Much of the ground floor has timber boarding over what is presumably a concrete slab.

3.41 Original and later foundations are indicated on railway company drawings to be strip footings under walls, with pad footings under columns. There is no basement in this part of the building (although there was a small brick-vaulted cellar immediately to the west, under the southern half of the recently-demolished adjacent block).

4 PHASING ANALYSIS

4.1 The original construction of 1864-5 created a single-volume gymnasium hall, with a first floor gallery and with climbing ropes hung from the bolt-laminated timber roof arches.

4.2 Following purchase of the building by the Great Northern Railway in 1908, its original use ceased, and successive alterations were made to increase the usable floor area for clerical and general offices. According to a 1919 drawing seen in 1974, a part of the gallery was partitioned for use by a Divisional Superintendent and the Advertising Department. Then the gallery level was infilled with a timber floor and new free-standing offices, all supported on new steel stanchions and brick walls taken onto new foundations (drawing dated 1927). Further office accommodation was provided on the first floor, involving the removal of a hoist and the infilling of its floor opening (drawing dated 1951).

4.3 Circle 33 Housing Trust leased the first floor as offices in 1974. To provide yet further floor space, a new partial second floor was constructed along the south side of the hall, and linked to a further, higher section of second floor along the west side of the hall, which had been formed over the partitioned spaces below.

4.4 The original entrance on Pancras Road, and the ancillary accommodation between this and the main hall, were demolished in 2001 to provide space for the construction of the St Pancras Station deck extension. Some elements of their construction were salvaged before demolition, and put into store for possible re-use. The west gable wall has recently been faced in yellow and red brickwork to resemble the east gable wall.

5 FUNCTIONAL AND RELATIONAL ANALYSIS

5.1 The choice of location for the gymnasium appears to have no direct relation to railway developments in the area, but might have been influenced by society members being resident in north London and seeing Pancras Road as convenient and accessible via the Great Northern Railway suburban services.

5.2 The gymnasium and its ancillary buildings were originally conceived and constructed
as an entity. The entrance to the gymnasium and other society rooms was via a corridor leading from the entrance at 26 Pancras Road, flanked on either side by flights of stairs leading up the gallery. Either side of this route, the frontage on Pancras Road was developed to provide shops with residential accommodation over (nos. 22, 24, 28, and 30 Pancras Road, now all demolished). Rental from these helped to offset the cost of building and maintaining the gymnasium.

5.3 The purchase of the gymnasium by the Great Northern Railway in 1908 divorced these shop units from the main building, and the subsequent several alterations made within the hall to increase office floor space inevitably destroyed the spacious single-volume space originally created.

5.4 It is of interest that the Prussian vernacular style of the German Gymnasia elevations was later adopted for the new GNR boundary wall built along the opposite, northern side of Cheney Road when the Milk Dock site was expanded in the 1890s. This has all been recently demolished as part of the CTRL enabling works.

6 LISTING CITATION


6.2 “EXTERIOR: frontage 3 storeys 1 window. Stucco door surround of pilasters supporting a dentil entablature with segmental pediment. Round-arched doorway pilaster jambs supporting an architrave with keystone; fanlight and C20 panelled doors with small lights. 1st floor, recessed 4-pane sash with stuccoed lintel with mask; 2nd floor, round-arched 4-pane sash with stuccoed head. Moulded brick cornice and blocking course. North and south elevations with brick pilasters dividing bays (rectangular windows), 1st floor brick bands and deep Lombard frieze at eaves level; brick gables. Hipped roof with continuous lantern along the ridge. Gabled east elevation with gabled brick porch, 5 pointed arch windows above which an oculus, very deep Lombard frieze and enriched brick cornice. To the left, a staircase tower with narrow lights (those at base bricked up) and Lombard frieze.

6.3 “INTERIOR: narrow entrance hall with Imperial stair (2 flights then 1) the entire width of the hall. Gymnasium a single cell divided into nave and aisles by 2 storeys of cast-iron piers with lush early English foliage capitals. The piers support arched, laminated wood roof trusses some 20m wide, as experimented with but replaced at King’s Cross Station, Euston Road (qv). A second floor has been inserted at gallery level providing office accommodation.

6.4 “An important early example of the use of laminated timber to give broad spans.”

[Note for information: this describes the building before its recent partial demolition.]
REFERENCES


DEGW. King’s Cross Development: The re-use of existing buildings: the German Gymnasium, 1987.


In addition, the following records are known to IHCM, but are not listed in detail here:

• Various drawings of the building made by Rail Link Engineering for the CTRL scheme
• Various drawings of the building made for the London Regeneration Consortium PLC as part of its scheme for the King’s Cross Lands
• Sources describing the recent use of the building and proposals for future use
• German sources on the history and development of the gymnastic movement there and in London (identified by Mr Julian Burcher)
### SUMMARY: THE HERITAGE IMPORTANCE OF THE GERMAN GYMNASIUM

#### ARCHITECTURE AND FABRIC

The surviving part of the German Gymnasium is the original sports hall, opened in 1865. Ancillary spaces and buildings west of this have been demolished to accommodate the extension of St Pancras Station for the Channel Tunnel Rail Link.

The external brickwork design of this building is in a ‘Prussian vernacular’ style, still to be seen widely in western Poland and Germany, but understandably rare in this country. The use of saw-tooth bands of heavy corbelling on elevations results in a highly distinctive treatment of the main walls at eaves level and elsewhere. A very similar treatment was later adopted by the Great Northern Railway for the wall to the Milk Dock site on the opposite side of Cheney Road, which has now been demolished.

Internally, the hall originally had a gallery level. This was subsequently extended when the building was taken over by the Great Northern Railway, so that the building now has an overall first floor although the original gallery structure may survive.

The most notable features internally are the six bolt-laminated timber arches each spanning about 18 m to carry the double-pitched roof with its raised clerestorey. These, predecessors of the modern glue-laminated structural member, were relatively uncommon when built, and survivors are scarce today. The earlier twin barrel-vaulted trainshed roofs of King’s Cross Station were originally carried on similar timber arches, but these were replaced with the present wrought iron arches later in the 19th century after concern over their condition.

The arches are carried on elegant circular cast iron columns with decorative Composite heads. The bolts linking the timber slats in the arches project downwards and are bent into hooks to support climbing ropes for gymnastic use.

#### SETTING

The clearance of most of the surrounding buildings for the CTRL works has significantly altered the setting and context of the surviving part of the German Gymnasium, although the stations and hotels of King’s Cross and St Pancras will remain as major townscape features alongside it.

#### SIGNIFICANCE RELATED TO TYPE

The German Gymnasium was probably the first purpose-built gymnasium in the United Kingdom for public use, i.e. other than in military and educational institutions. It was also one of very few purpose-designed gymasia built for the German gymnastic approach outside Germany.
SIGNIFICANCE RELATED TO INTANGIBLES

The building has early and unique associations with the development of British athletics and swimming, and the modern Olympic movement. The National Olympian Association held annual Games here from 1866, shortly after the German Gymnasium was opened, until the first modern Olympic Games were held at the White City in west London in 1908.
14 STANLEY BUILDINGS
STANLEY BUILDINGS APRIL 2004.DOC

STANLEY BUILDINGS

LOCATION
On east side of former route of Pancras Road north of German Gymnasium with Cheney Road to north-east, between Stanley Passage to north and Clarence Passage to south

CLIENT REF. | EH INVENTORY REF. | IHCM REF. | LINKED EH REFS.
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NATIONAL GRID REF.
TQ 3009 8319

REPORT BY
MNB, MTT

DATE
April 2004

Listed Grade II
Within King’s Cross Conservation Area

1 DESCRIPTIVE SUMMARY

1.1 Constructed 1864-5 as purpose-built low-rental ‘philanthropic’ housing by the Improved Industrial Dwellings Company. Two five-storey blocks remaining from the original five blocks. Yellow stock brick with early use of concrete for lintels and other features. Flat roofs provided for clothes-drying and children’s play area. (See Figure BD7 in Part 2.)

1.2 Each block symmetrical about central party wall. Originally four dwellings on each floor, entered by central staircase and balconies on front elevation. Pairs of dwellings later combined. Kitchens and toilet facilities in back extensions of blocks, overall dwelling layout designed to provide natural lighting and through ventilation to each room. Stairs, balconies, and floors of corridors and some rooms built of early reinforced concrete.

1.3 Currently boarded up and standing within Channel Tunnel Rail Link (CTRL) construction site.

2 HISTORICAL AND FUNCTIONAL SUMMARY

2.1 The Improved Industrial Dwellings Company was founded in 1863 at the inspiration of Sydney Waterlow, a City printing magnate, later to receive a knighthood and to be Lord Mayor of London, and a future campaigner in Parliament on housing matters.
The company's foundation was a philanthropic response to the problems of the industrial artisans and their families, who were often living in squalid conditions in overcrowded and filthy tenements. Waterlow funded the construction in 1863 of Langbourn Buildings in Mark Street, Finsbury (now demolished), which served as the prototype for Stanley Buildings and other housing schemes built by the company. The design was developed by Matthew Allen, a builder, from that for model cottages designed by Henry Roberts and constructed for the Great Exhibition of 1851, or from earlier flats in Birkenhead. Allen was also responsible for construction.

2.2 Stanley Buildings were named after Edward Henry Stanley (later 15th Earl of Derby, a politician and son of the Prime Minister of that name), who was a Director of the Improved Industrial Dwellings Company.

2.3 Stanley Buildings, constructed in 1864-4, were among the earliest of the company's projects, and its largest to date. They provided completely self-contained accommodation, unlike other philanthropic housing which often provided communal washing, toilet, and/or cooking facilities. They comprised five similar brick-built blocks housing a total of 104 families, with four self-contained dwellings on each floor comprising a living room, one or two bedrooms, a wash-house with sink and a copper for clothes-washing, and a w.c. Access was via an external open staircase and balconies. The flat roof provided drying space for washing and secure play space for children.

2.4 Subsequently, the four dwellings on each floor were merged into two, and ownership of the blocks passed to the local authority, the London Borough of Camden.

2.5 Of the five original blocks, the more westerly of the two blocks facing onto Clarence Passage was destroyed by bombing during World War II. The block facing onto Pancras Road was demolished for proposed road improvements c.1960. The more westerly of the two blocks facing onto Stanley Passage was demolished in 2001 to make way for the extended platforms and concourse being built at St Pancras Station as part of the CTRL works. The two surviving blocks (Nos. 11-20, facing onto Stanley Passage, and 21-30, facing onto Clarence Passage) are currently boarded up and standing within a CTRL construction site.

3 DESCRIPTION

3.1 The Stanley Buildings site was originally rectangular, with Pancras Road to the west. The street to the east at the time was then a narrow alley (Pancras Walk), renamed Cheney Street when King's Cross Station was extended into the Milk Dock site in the late 19th century, and finally became Cheney Road. To the north was Red Lion Passage (later renamed Stanley Passage), and to the south Clarence Passage.

3.2 On Pancras Road, the south-west corner was occupied by a three-storey brick building, originally a public house (demolished 2001), with a four-storey shop and dwelling next to it, while at the north-west corner was the westernmost of the five original blocks of Stanley Buildings. This block and the four-storey building were demolished for proposed road improvements c.1960.

3.3 At right-angles to these buildings, fronting onto the two passages and with an enclosed yard (later garden) between them, were the remaining four blocks of Stanley Buildings, grouped as semi-detached pairs. These are now reduced to two blocks, as noted in 2.5.

3.4 The two surviving blocks are of five storeys, built probably in “white” Gault brickwork
(now heavily soot-stained) in Flemish bond, with a flat roof. Each floor now contains two flats (originally four) laid out on a plan reflected symmetrically about the central party wall. The living rooms and bedrooms are located in the body of the blocks, with a rear extension to each original flat, housing a scullery and w.c. This layout allows each room to have a window, careful thought being given in the design to natural lighting and through ventilation, particularly for the facilities in the rear extensions. The provision of separate toilet facilities to each flat was progressive at this time.

3.5 The front elevation of each block consists of central balconies recessed between solid end bays. The end bays each contain a single line of windows for the front rooms of the outermost two of the four original dwellings. The ground floor of these bays is faced with painted stucco, moulded with deep dummy joints to simulate ashlar masonry. Painted stucco is also used to frame the upper windows in these bays, plainly on the top floor but with triangular pedimented heads on the first to third floors. Windows, here as on the rear elevations, are timber-framed and of an uncommon arrangement, with twin opening casements each with two panes (some now replaced by single panes), above a lower fixed light with two panes. These lower lights were originally of ornamental ground glass, eliminating the need for blinds, and were fixed to prevent young children falling out. Sills are of cast stone, that is selected-aggregate concrete carefully compacted and finished. At roof level is a corbelled brick cornice.

3.6 From ground floor level, an enclosed spiral cast stone staircase centred on a party wall rises to serve the central balconies on each floor. These are supported by a central circular cast iron column and wrought iron beams, with light and elegant wrought iron lattice grilles providing the balustrades. The columns are restrained laterally by twin tie-rods just below each balcony soffit, anchored by bolting into a cast iron plate in the back of the central stairwell wall.

3.7 A relatively recent addition has been the provision of a lockable door and grilles at ground floor level, to improve security.

3.8 Painted stucco is extensively used to form pilasters and other features behind the balconies. The pilasters have decorated capitals with an oval emblem and inverted Ionic scrolls. A more practical feature is a vertical chute, originally provided for disposal of ash and dust, sited within the stairwell. This has small cast iron doors at each level.

3.9 From either end of each balcony originally led a short passage which in turn led to the two entrance doors of the four dwellings on each floor. This passage now leads to the front door of the enlarged single dwelling formed from two original, smaller, flats.

3.10 Behind the balcony, one on either side the central staircase, single windows light the front rooms of the innermost two of the original four flats. These are of different design from the windows on the front wall elevation of the outermost two flats, being narrower but with eight panes and segmental-arched heads.

3.11 The rear elevations are plainer, although the shallow-arched window lintels have twin recessed panels. Like the window sills, these are believed to be of cast stone (concrete). The window frames are similar to those on the front wall elevation, although in some the lower fixed lights have been replaced with timber infill.

3.12 The original east end elevation differs on the two surviving blocks. On the northern block it is plain, while on the southern block there are two windows at each floor, of similar style to those on the rear elevations.

3.13 The west elevations as seen today are in fact the exposed party walls between
surviving and demolished blocks. That on the southern block, exposed during or after
World War II, has been refaced with render, retaining the projecting chimney breasts
of the lost block. A steel cat ladder has been installed between these breasts from roof
level to ground, providing an alternative means of escape in the event of fire. The
more westerly of the two northern blocks was demolished in late 2001, briefly
exposing the plastered party wall and chimney breasts before these were clad with
sheeting to provide weather protection. This exposed elevation has recently been
refaced with yellow stock bricks.

3.14 Large chimney stacks rising above the flat roofs are a distinctive feature of the
buildings, with pairs of stacks being located on each end elevation and above the
party wall. They have numerous chimney pots. Every room was originally provided
with a fireplace for a coal fire. There was a cooking range in the living room, and the
wash-houses at the rear had a ‘copper’ for boiling clothes, both also being coal-fired.

3.15 The staircase in each block leads up to the asphalted flat roof, culminating in a brick
stair housing, itself with a flat roof. The roof is enclosed by a parapet, mainly of brick
with recessed panels each having a central ‘+’ opening, but repeating the latticed grille
balustrading on the front elevation over the balconies.

3.16 The structure of the blocks is of some interest. Matthew Allen adopted an early form of
reinforced concrete, motivated partly by cost but also it would seem by the wish to
reduce the risk of fire which in multi-storey buildings could spread rapidly from one
dwelling to its neighbours through combustible timber floors.

3.17 A saving of some twenty-five per cent over ‘ordinary’ materials was claimed from the
use of concrete. It was described, accurately, as “light artificial stone” in an account of
the slightly earlier Langbourn Buildings, on which the design and construction of
Stanley Buildings appears to be very closely based. Clinker, coke, or similar material
was mixed with Portland cement in the proportions 1:4. Strips of wrought iron were
placed between the front and back walls, with transverse iron rods. The concrete was
typically 4 inches (102 mm) thick, with floorboards laid above it on battens. Such
construction was indeed ‘fireproof’; it more effectively resisted the effects and spread
of fire than did timber floors. It was certainly used for the staircase, balconies,
entrance passages, and adjoining front rooms either side of these passages, which
would safeguard the escape routes out of the block in the event of fire. It was also
used for the rear wash-houses, although whether this was to guard against fire from
the coal-fired washing-copper or against rotting of timber from spilled water is unclear.
Other floors within each flat were of traditional timber boarding and joists.

3.18 A further advantage claimed for this material was its lightness, which led to savings in
the size and cost of walls and foundations. Although not lighter than timber when used
in floors, it was certainly lighter than, and cheaper than, the brick or orthodox lime
concrete arches generally used in fireproof construction. It was also clearly cheaper
than natural stone or brickwork when used for window sills and lintels.

3.19 Internal inspection of several dwellings suggests that the interiors of the blocks have
been relatively little altered since construction, although modern cookers and other
fittings may be expected to have replaced the original ranges in some at least of the
dwellings.

4 PHASING ANALYSIS

4.1 The five original blocks were built in one campaign in 1864-5, during which time the
German Gymnasium was also being constructed immediately to the south. Since then, three blocks have been destroyed or demolished. The surviving two blocks show little evidence of external alteration since construction, apart from the security doors and grilles provided at ground floor level.

4.2 Internally, the original four dwellings on each floor have been reduced to two by combining each pair either side of the central staircase, providing more rooms in each but without other major alterations. Internal fittings such as ranges may be expected to have been modernised, although some early surviving items were noted in inspections made relatively recently.

5 FUNCTIONAL AND RELATIONAL ANALYSIS

5.1 Stanley Buildings were a relatively early contribution to the provision of affordable low-rental accommodation for the working man and his family, which was and continues to be a social need in cities such as London. The Improved Industrial Dwellings Company was one of the leading philanthropic organisations attempting to meet this need.

5.2 The planned construction of the Midland Railway's London extension, terminating at St Pancras, necessitated extensive demolition and clearance of the densely-packed streets on the west side of what was then called Old St Pancras Road. The siting of Stanley Buildings was therefore entirely logical as a contribution towards rehousing those displaced by these works.

5.3 The longer sides of the plot for the dwellings were along the two alleyways to north and south, and so it made good sense to organise the block layout so that they were entered off these rather than off the shorter roadway frontages to east and west. The design made full use of the available footprint, so there was minimal space for gardens. However, the flat roofs offered areas for clothes-drying and play space for children.

5.4 The design of each dwelling gave careful attention to natural lighting and ventilation, each room having an opening window and the overall layout providing a through flow of air. This reflected concern over the health hazards in typical slum dwellings, where overcrowding and unhygienic conditions were endemic. Attention was also paid to propriety and convenience, each dwelling having its own scullery and w.c. in a somewhat cramped rear extension.

5.5 At the same time, economy of construction was an essential consideration, and this was doubtless why Matthew Allen enthusiastically adopted cast stone, that is to say concrete, for structural use in floors, stairs, and lintels, and in window cills. Lightly reinforced, the concrete staircases, balconies, and passages provided a fireproof escape route from the dwellings.

6 LISTING CITATION

6.1 The citations for the two blocks differ slightly in wording. Both are given below.

6.2 11-20 (facing onto Stanley Passage):

6.3 “Philanthropic flats. 1865. By Matthew Allen. For the Improved Industrial Dwellings Company under the guidance of Sydney Waterlow. Painted stucco to ground floor where it is treated as rustication, and to the full-height, balconied recesses and..."
window architraves. Brick in Flemish bond to projecting ranges; moulded brick to cornice; roof parapeted.

6.4 “EXTERIOR: 5 storeys. Brick ranges of 2 [sic] windows each, alternate with 2-bay balcony ranges to produce a bay rhythm of A:B:A:B:A. Balconies supported by cast-iron columns and enclosed by railings in a lattice pattern; the rear walls of the recesses with segmental-arched openings and pilasters with stylised Ionic capitals; the balcony fascia composed of a simple metal beam. All windows to brick ranges flat arched. Utilitarian style to rear elevation dominated by ablution and scullery towers. Returns unfenestrated.

6.5 “INTERIORS: not inspected.

6.6 “Forms a group with flats Nos 21-30 Clarence Passage (qv) to the south, and with the King’s Cross Gasholders, Goods Way (qqv) and Barlow’s great shed to St Pancras Station, Euston Road (qv). Among the earliest blocks built by Waterlow’s influential and prolific IIDC, Stanley Buildings are in addition an integral part of a dramatic Victorian industrial landscape.”

6.7 21-30 (facing onto Clarence Passage):

6.8 “Philanthropic flats. 1865. By Matthew Allen for the Improved Industrial Dwellings Company under the guidance of Sydney Waterlow. Materials and treatment of architectural elements identical to flats 1-20 in Stanley Passage to the north (qv) with which this block forms a group. 5 storeys. One window to end ranges flanking 2-bay balcony stair-recess; balconies enclosed by cast-iron railings and supported by cast-iron columns and lintels. 2-window range to right return with segmental-arched windows, the lintels cast from concrete and panelled. Left-return rendered to all but top storey. Ablution and scullery towers to rear.

6.9 “INTERIORS: not inspected.

6.10 “Stanley Buildings form a group with the King’s Cross Gasholders, Goods Way (qqv) and Barlow’s great shed to St Pancras Station, Euston Road (qv). Among the earliest blocks built by Waterlow’s influential and prolific IIDC, Stanley Buildings are in addition an important part of a dramatic Victorian industrial landscape.”

REFERENCES

Mays, J. A. Ground plan and elevation of Langbourn Buildings, Mark Street, Paul Street, Finsbury Square, designed and erected for Mr. Alderman Waterlow by Mr. Matthew Allen: with descriptive notes and an appendix. Robert Hardwicke, 1863. (Langbourn Buildings, since demolished, were the prototype scheme on which Stanley Buildings were very closely based.)


SUMMARY: THE HERITAGE IMPORTANCE OF STANLEY BUILDINGS

ARCHITECTURE AND FABRIC

The surviving two of the originally five blocks of Stanley Buildings are an early example of philanthropic workers’ housing development by the Improved Industrial Dwellings Company. They exhibit economical but durable multi-storey construction and high density usage of the site.

The symmetry of the front elevations, in particular, is both logical and aesthetically satisfying. The mid-Victorian use of stucco to simulate ashlar masonry at ground floor level, in decorated pilasters, and around window frames complements the plain brickwork elsewhere.

The rear extensions provide washing and toilet facilities for the exclusive use of each dwelling. The overall design of the dwelling plans gave particular attention to natural lighting and through ventilation, with each room having a window.

The early use of lightly-reinforced concrete in floors, balconies, and staircases is a notable innovation in such buildings as a means of providing ‘fireproof’ construction, but was also recognised at this early time as an economical and practical alternative to more traditional forms of construction.

The flat roofs are relatively uncommon in buildings of this period (the 1860s) and afforded space for clothes-drying and children’s play on a compact urban site.

SETTING

At the time that Stanley Buildings were erected, the surrounding area was already a well-established industrial landscape, with the gasworks to the north and King’s Cross Station to the east and south, soon to be joined by the substantial massing of St Pancras Station trainshed to the west. The immediately surrounding small streets and passages were paved with setts, now safeguarded in store.

The buildings provided much-needed ‘affordable housing’ in this densely-developed area, and in recent years have become a distinctive residential feature in a largely ‘gritty’ urban area.

However, recent demolitions in preparation for the CTRL works have resulted in the loss of much of the cohesion of this area. Stanley Buildings and the new deck extension to St Pancras Station stand in awkward juxtaposition, exacerbated by the realignment of Pancras Road.
SIGNIFICANCE RELATED TO TYPE

The surviving blocks are among the earliest examples of purpose-built philanthropic workers’ housing, many of which have since been lost to wartime bombing, so-called ‘slum’ clearance, or general urban redevelopment.

Although pairs of the original dwellings have subsequently been merged to form larger flats, the buildings remain externally and internally very much as originally built.

SIGNIFICANCE RELATED TO INTANGIBLES

As the listing citation states, Stanley Buildings were an important part of a dramatic Victorian industrial landscape. This made it a particularly sought-after location for filming and advertising photography.
15 CULROSS BUILDINGS (INCLUDING CULROSS HALL)
CULROSS BUILDINGS (INCLUDING CULROSS HALL)

1 DESCRIPTIVE SUMMARY

1.1 Culross Buildings constructed 1891-2 by the Great Northern Railway (GNR) as rented accommodation for its workers and others displaced by the enlargement of King’s Cross Station into the Milk Dock area immediately to the south. Long range, of four storeys over a non-residential basement. 40 dwellings in five sections, each with walk-up open-fronted central staircase. Yellow stock brick with red brick bands, pilaster strips, and other decorative features. Flat roofs for clothes-drying and children’s play area.

1.2 Two-storey Culross Hall at the eastern end of the range served as a mission hall, with pitched slated roof. Smaller two-storey block on corner of Battle Bridge Road and Cheney Road, at one time also used as Mission Hall, now with flat roof but possibly originally pitched.

1.3 Basement storey, accessible only from Milk Dock site, housed workshops under Culross Buildings and boiler room under Culross Hall.

1.4 Dwellings in the three easternmost sections were larger than in the two westernmost sections, accommodation being provided for families of different sizes.

1.5 Currently boarded up and standing between Battle Bridge Road to north with Channel Tunnel Rail Link (CTRL) construction site beyond, and the King’s Cross Milk Dock site (currently in use as site offices and depot for King’s Cross Station Underground Concourse).
2 HISTORICAL AND FUNCTIONAL SUMMARY

2.1 The site of these buildings was previously occupied by Suffolk Street West and a row of houses on the north side of this road. The Imperial Gas Works site was immediately to the north of the back garden walls. Battle Bridge Road was built along the line of the back gardens of the now-demolished houses in Suffolk Street West, and then swung to the east to cross the throat of King’s Cross Station on a bridge (since removed) to an intersection with Wharfdale Road and what is now York Way.

2.2 The area to the south comprised several streets of housing, which were cleared by the GNR in the early 1890s to permit expansion of King’s Cross Station.

2.3 Culross Buildings were constructed 1891-2 on the south side of Battle Bridge Road to provide accommodation for railway workers and - as required by recent legislation - for some of those displaced by the clearances for railway expansion in this area. The buildings were named after Lord Colville of Culross KT, a long-serving Director of the GNR from 1863 until 1895, and from 1880 its Chairman.

2.4 The GNR constructed additional sidings and platforms as part of the westward expansion of King’s Cross Station. This area handled milk (as well as horses and other traffic) and has become known as the Milk Dock site. Rail traffic ceased c.1979, and the site became derelict. Most railway remains were cleared from this site in preparation for its use by the King’s Cross Underground Station Redevelopment.

2.5 A Goad insurance plan of 1942 describes the building at the western end of the range as “Mission Hall” with the original Culross Hall noted as “L. & N. E. Rly Stores Mission 2nd” (i.e. on the first floor above Battle Bridge Road). A small single-storey building on the east side of Culross Hall (demolished 2001) was noted as “Mess”.

2.6 Culross Buildings continued as rented accommodation until 2001 when they were evacuated, with windows being boarded up, for the duration of work on the Channel Tunnel Rail Link into St Pancras Station and the related King’s Cross Underground Station Redevelopment.

3 DESCRIPTION

3.1 The main range comprises five sections of four storeys on their frontage, providing 40 flats. Each section steps up a very gentle slope eastwards. The eastern sections are longer, reflecting the larger flats at that end. On the western end is a smaller curved block of two storeys, while Culross Hall at the eastern end is also of two storeys. All are built of yellow stock bricks, with red brick embellishments. The main range has a flat roof, as does the smaller western block (although this may be a later alteration from a pitched roof). Culross Hall retains a pitched roof. The King’s Cross Station Milk Dock site, at the rear of the buildings, is at a lower level. This allowed provision of a further storey, entered only from the back, which provided space for workshops, mess-rooms, and other facilities for railway workers under Culross Buildings, and a boiler room under Culross Hall.

3.2 The flats were designed in two sizes, with two on each floor of each section. Flats in the three eastern sections (nos. 1-24) each had five rooms and a w.c. Those in the two western sections (nos. 25-40) were smaller, each with three rooms and a w.c. They were presumably intended for couples without extensive families, with the larger
flats being for large families. This variation in dwelling size is reflected in the front and rear elevations, the larger flats having an extra window bay.

3.3 On the north-facing front elevation, the three eastern sections with larger dwellings have two windows either side of the central stair, while the two smaller western sections have only one window to either side of the stair. The ground floor brickwork has been cleaned to expose the original yellow colour, while above remains soot-darkened. There is a dark blue brick plinth at ground level, with red brick bands at first, second, and third floor levels. At roof level, a line of simple moulded bricks forms a frieze below a Portland stone cornice and a brick parapet. Red brick pilaster strips frame the stair shafts, terminating in an arch and a raised section of parapet. The corners and the party walls between sections are also expressed by bands of red brick pilaster strips.

3.4 The windows are timber sashes, with Portland stone sills and shallow red brick arches.

3.5 The provision of an open-front central stair to each section is the same principle as at the earlier Stanley Buildings (qv). Here however there are two straight half-flights instead of the half-elliptical spiral stair adopted there, and the main landings, each serving two flats, are internal. The Stanley Buildings stairs were formed in concrete, a more readily mouldable material than natural stone, which the Goad insurance plan notes is used here. (Straight rectangular treads would be easier and cheaper to form in stone than curved treads.) Balustrading to the external half-landings is of plain but daintily curved wrought iron bars. The staircases are faced with white glazed bricks.

3.6 The rear elevations of the sections vary, again depending on the size of the flats. In the three eastern sections with larger dwellings, each flat has three large and one smaller w.c. window either side of the central party wall, whereas in the two smaller western sections each flat has only two large windows and the smaller w.c. window. Some of the small windows have been bricked up, indicating internal replanning. The rear elevation has horizontal red brick bands at upper floors, as on the front, but also at roof level in place of the stone cornice. The rear also lacks the vertical red brick bands visible on the front.

3.7 Windows on the rear elevation at ground floor level and above are similar to those at the front, while the basement level windows and doorways are spanned by broad, semi-circular brick arches.

3.8 Down-pipes on this elevation drain the flat roof. Others take foul waste. This external plumbing dominates the rear façade. There is widespread staining around these pipes, together with some luxuriant plant growth, indicating leakage.

3.9 The end elevations of the main range are plain brickwork. The western side wall has been rendered, presumably to counter rain ingress on this elevation exposed to the prevailing wind.

3.10 The flat roof is asphalted, with the brick parapet already noted. Iron or steel railings have been added above the parapet, to provide a barrier around the edge. Numerous chimney stacks serve the fireplaces provided in every habitable room. Each staircase leading up to the roof is covered by a small brick housing, itself with a flat roof.

3.11 The roof slabs, like the floors, are likely to be of fire-resisting construction.

3.12 The smaller block to the west of the main range is of two storeys with a plain stock brick front elevation that curves to follow the corner of the junction here between
Cheney Road and Battle Bridge Road. This elevation has a red brick dentil course at eaves level. The surrounds of the sash window frames, including the segmental arches over, are picked out in white paint. The rear elevation is of plain brickwork and is cranked on plan, with sash windows in the eastern part only. The flat roof is asphalted, but there is evidence of repointing of brickwork at roof level. Together with the minimal parapet, and the rendering of the adjacent side wall of the main range, this is suggestive that the roof might originally have been pitched.

3.13 Culross Hall to the east of the main range has a plain front elevation of six bays with a central brick pilaster and a plain string course at eaves level. The three eastern ground floor bays house double-leaf doors with fanlights over. The remaining three bays here, and five of the six first floor bays, house sash windows. These and the doors are spanned by segmental red brick arches as on the main range. The name “Culross Hall” appears on a stucco panel over the central door.

3.14 The rear and side elevations of Culross Hall are of plain stock brickwork, with sash windows spanned by segmental stock brick arches. The outline of the recently demolished small building immediately to the east is visible as a whitewashed profile showing that the building was a single storey in height, at basement level, with a brick-arched doorway leading into the Culross Hall basement. This small building might have been the one noted in the English Heritage survey as containing a blacksmith’s cast iron forge hearth, although this was not to be seen when the building was visited in the late 1990s. The double-pitched roof of Culross Hall is slated.

3.15 The internal walls are of brick with timber or possibly concrete floors, and timber roof structure. There is a chute next to each staircase in the flats, into which ash and dust could be dropped through a hatch on each landing.

3.16 Culross Hall was heated by a furnace in the basement from which hot air was distributed by galvanised iron ducts and grilles.

3.17 Basement rooms are cobbled, with the large space under Culross Hall being spanned by iron girders.

4 PHASING ANALYSIS

4.1 The buildings were constructed in one campaign in 1891-2, linked to the westward expansion of King’s Cross Station and following the laying-out of Battle Bridge Road.

4.2 The evidence of the Goad 1942 insurance plan shows that Culross Hall at the eastern end of the range had been taken into railway use, with its role as a mission hall being taken up by the smaller building at the western end of the range.

5 FUNCTIONAL AND RELATIONAL ANALYSIS

5.1 The construction of Culross Buildings was a direct consequence of the expansion of King’s Cross Station in the 1890s, to provide additional accommodation for passengers and perishable milk traffic. This necessitated demolition of the closely-packed terrace housing formerly on the expansion site south of Battle Bridge Road. Culross Buildings provided dwellings for railway workers and also for some of those displaced by these demolition works, as required by recent legislation.

5.2 The buildings were located at the northern extremity of the site for expansion, facing northwards onto Battle Bridge Road. Four storeys at and above the level of this road
provided reasonably dense residential accommodation. The ground level of the existing station was lower than that of Battle Bridge Road, which originally continued eastwards towards York Way on a bridge over the station throat. The expansion of the station towards the site of Culross Buildings made it possible to insert workshops and other facilities in a basement storey below the ground floor of the buildings, with no direct connection to the dwellings above.

5.3 The dwellings are substantially constructed and roomily laid out, responding to the best public health standards of the time. They moderate the strictly functional approach with a restrained but well-balanced use of coloured brick, stone, and wrought ironwork. They are a good example of high-density artisan housing developments of the later 19th century, before the participation of local authorities in erecting such housing which followed the 1890 Housing of the Working Classes Act.

6 LISTING CITATION

6.1 Not listed.

REFERENCES


SUMMARY: THE HERITAGE IMPORTANCE OF CULROSS BUILDINGS AND CULROSS HALL

ARCHITECTURE AND FABRIC

Culross Buildings were built in the late 19th century as artisan dwellings by the Great Northern Railway. This was to some extent an obligation imposed by recent legislation, requiring the provision of new affordable accommodation when existing housing was cleared for development. This was the case here, with the GNR seeking to expand its facilities at King’s Cross Station to the available limit into what is now the Milk Dock site.

The relatively plain building style was at once both practical and economical, and also echoed the functional approach, tempered with an eye to good proportions, previously adopted for King’s Cross Station and related buildings over previous decades. The considered use of red and blue bricks in bands and pilaster strips, and of stone for the cornice on the front elevation, provided an appropriate degree of modelling and a softening of the harshness of high-density accommodation, at relatively low cost.

The dwellings are simply arranged around five open-fronted staircases.

The flats were of two sizes, offering accommodation for both large families and couples.

Culross Hall to the east was built at the same time by the GNR as a mission hall for communal use, one of three formerly on this railway, reflecting the concern of many leading companies of the period for the spiritual welfare of their employees.

SETTING

Culross Buildings are sited to the north-west of the main line station.

Ground level rises to the north here, while the railway was set at as low a level as practical to enable it to pass in tunnel under the Regent’s Canal just to the north. As a result, it was possible to plan Culross Buildings to have four residential floors entered off Battle Bridge Road, while a basement level - accessible only from the Milk Dock site to the south-east - provided useful accommodation for railway-related uses such as workshops and mess-rooms.

Almost incidentally, the siting of the buildings was such that rooms on the south (rear) elevation had views across the mouths of the trainsheds of both King’s Cross and St Pancras. To the north was the St Pancras gasworks, with the canal beyond but not visible.

The demolition of most of the surrounding buildings and features for the CTRL works has significantly altered the...
setting and context of Culross Buildings. In particular, the clearance of the Milk Dock site immediately to the south, formerly an integral part of King’s Cross Station, has broken the link with railway usage that had exploited the basement of Culross Buildings.

**SIGNIFICANCE RELATED TO TYPE**

Culross Buildings were a commercial and necessary development by the GNR as part of its expansion of King’s Cross Station, in which respect they can be contrasted with the nearby Stanley Buildings - early examples of purpose-built philanthropic workers’ housing. At the same time, they were not purely ‘company’ housing, as was provided by railway companies and other industrial employers to house workers in locations where existing accommodation was either unavailable or unaffordable. Some at least of the dwellings were to house those displaced by the railway’s development. Such mixed-use dwellings were relatively uncommon.

Many blocks of this type were built by private and philanthropic companies in the inner city in the late 19th century, but they have been much reduced in number, and their appearance has often been altered by modernisation.

**SIGNIFICANCE RELATED TO INTANGIBLES**

Culross Buildings, like Stanley Buildings, provided much-needed ‘affordable housing’ in this densely-developed area, and - particularly in recent years - has been a distinctive residential feature in a largely ‘gritty’ urban area. However, recent demolitions and clearance in preparation for the CTRL works have resulted in the loss of much of the cohesion of this area.

The Great Northern Railway built Culross Buildings, and many of its employees were resident in them.
16  GASHOLDER NO.8
1 DESCRIPTIVE SUMMARY

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

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

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

2 HISTORICAL AND FUNCTIONAL SUMMARY

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

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

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

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

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

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

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

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

3 DESCRIPTION

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

4 ARCHITECTURAL ANALYSIS

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

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

5 PHASING ANALYSIS

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

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

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

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

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

7 LISTING CITATION

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

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

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


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


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

### ARCHITECTURE AND FABRIC

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

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

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

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

### SETTING

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

Some nearby features continue to identify its distinctive industrial past.

### SIGNIFICANCE RELATED TO TYPE

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

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

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

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

17

**EH INVENTORY REF.**

N1

**IHCM REF.**

N1, N2

**LINKED EH REFS.**

N2

**NATIONAL GRID REF.**

TQ 3006 8332 (present location of frames)

**REPORT BY**

MTT, MNB

**DATE**

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 faceted 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 subcontracted 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 frame 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.]

REFERENCES


(Fitzgerald, R. S.) Report on Nos. 10, 11 and 12 Gasholders at the Agar Town holder station

Miele, C. Gasholders Nos. 8, 10, 11, and 12, St Pancras Station, Battle Bridge Road and Goods Way, London Borough of Camden. English Heritage Historical Analysis and Recording Team, 1996. (Unpublished report.)


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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.
20 COAL AND FISH OFFICES
1 DESCRIPTIVE SUMMARY

1.1 Offices built as a range in several phases between c.1851 and the early 1860s, massed in five units of considerably varying length and height (one-three storeys above Wharf Road Viaduct). Austere but well-composed multicoloured stock brick elevations on curved plan form provide strong character along north side of Regent’s Canal. The four larger units have double-pitched roofs, while the smallest and westernmost unit has a flat roof. The two easternmost units have an integral basement at towpath level, while the other three units to the west are built over the stable vaults under the Wharf Road Viaduct (qv). (See Figures BD8 and BD11 in Part 2.)

1.2 Earliest unit probably second from east end of range, with tallest chimney stacks and tallest windows. Lower buildings are progressively longer. This succession, punctuated by chimneys along ridges, produces strikingly picturesque townscape effect.

1.3 Interiors largely gutted by fire in early 1980s; subsequently, floors and roofs rebuilt where necessary but finishes stripped.

1.4 Currently disused and boarded-up.
2 HISTORICAL AND FUNCTIONAL SUMMARY

2.1 The offices were built in phases from c.1851 to the early 1860s to administer the growing trade in incoming coal and fish. The initial phase was part of Lewis Cubitt’s design for the Goods Yard complex.

2.2 The Coal and Fish Offices provided accommodation for the clerical staff needed to handle the paperwork generated by the incoming traffic in coal and fish. Traffic in both commodities grew rapidly in the early years of the goods yard, and continued to expand throughout the second half of the 19th century and well into the 20th century.

2.3 The offices were consequently extended in phases of consistent style but differing height and length, and varying window proportions, in the narrow space between the southern access road (now Wharf Road) and the Regent's Canal towpath to the immediate south. A precise chronology for the phasing is unclear, as yet, but the range appears complete on the plan published in the 1865-6 paper by William Humber.

2.4 A legal judgement in 1860 forced the Great Northern Railway to cease trading in coal on its own account, while other coal yards were subsequently developed by the company for the use of coal merchants elsewhere in London. Probably for these reasons, the original imposing Coal Offices - the second unit from the east end of the range - are shown as “The Horse Department” on a 1906 site plan.

2.5 The offices served throughout the working life of the railway goods yard. They were disused by the early 1980s, when they were gutted by fire. They were repaired structurally and made weatherproof in the late 1990s, but the internal finishes were stripped. The offices are currently disused.

3 DESCRIPTION

3.1 The range, of total length about 100 m, follows a curved plan form on the south side of the Wharf Road Viaduct, with its south (rear) elevation rising sheer from the canal towpath on this site boundary wall. The viaduct here is necessarily some 3-4 metres above the level of the canal, in order to allow boats to gain access into the Granary Basin to the east and the Coal and Stone Basin to the west.

3.2 The range is in five units, all in a similar austere sub-Classical style in multicoloured stock brick with door and window openings spanned by segmental brick arches. Brick chimney stacks mark the location of fireplaces, some of which remain within the range. Window openings are at present boarded up, sealed with timber panels, while doors are likewise of plain timber with modern locks. The windows were originally vertical sash windows in timber frames. Sills are of stone. The buildings are unoccupied.

3.3 For descriptive purposes the units are here identified as A-E, with A being the easternmost and E the westernmost units. Units A and B are essentially rectangular on plan, although tapering in depth towards the west, while the distinctive curved plan form appears in Units C, D, and E. The taper on plan continues westward.

3.4 On its north elevation facing onto Wharf Road, Unit A - set back from the main frontage line of the offices - has five bays and two storeys above road level. Its brickwork is laid in Flemish bond. Unit B, the largest, has six bays and three very tall
storeys, and its brickwork too is in Flemish bond, as befits its imposing character. A straight joint separates Unit B from the English bond brickwork of Units C and D, which are both of six somewhat broad bays and match each other in their details, although C is of three storeys while D is of only one. A further straight joint separates Unit D from Unit E, which has brickwork in Flemish bond, and is of eight unequal bays and one storey in height.

3.5 Units A and B each have a basement, although that of Unit A is not now accessible. Units C, D, and E stand above a series of basement vaults, formerly used as stables, which extend also under the Wharf Road Viaduct (qv). They are accessed from the roadway leading down westwards from Wharf Road towards the lower levels of the Western Goods Shed and Western Coal Drops. There is no connection between these basement vaults and Units C, D, and E. However, the window openings for these vaults are noted here, as they arguably form part of the south elevation of the offices. These window openings at basement level are set within relieving arches that express the profile of the vaults behind.

3.6 **Unit A** rises two storeys above the Wharf Road Viaduct. Its basement is not currently accessible. Storey heights are quite low. The north (front) elevation is of five bays with entrance doors in the first and third bays from the eastern end, the other bays having windows. The narrow sash windows formerly had small panes grouped three by four.

3.7 There are two window openings at each floor level on the south (rear) elevation, which are not aligned consistently on the bay spacing of the front elevation. The eastern window at ground floor level here has been infilled with brick.

3.8 The blank east gable wall of Unit A, at right angles to the front elevation, has been rebuilt, although representing a return to the original plan form. Humber's plan of 1865 shows the end wall as it is now, whereas the 1871 Ordnance Survey 1:1056 plan shows an extension of the unit, triangular on plan, with a splayed gable end and the rear elevation now reaching the nearer abutment of Somers Bridge. This bridge carried a road entrance into the goods yard from Wharf Road (later renamed Goods Way). It was removed when the new reinforced concrete bridge to the east was built c.1920. The triangular extension to Unit A had been removed by 1970, and the new gable wall to Unit A was then rendered. This wall was subsequently rebuilt in the late 1990s, at the same time that the rest of the range was being repaired after fire damage. Straight jointing can be seen at the junction between the gable wall and the front elevation.

3.9 Unit A was not directly affected by the 1980s fire, but it became semi-derelict and its symmetrical-pitched roof has since been renewed with thin slates on battens and gangnailed timber trusses. There is one chimney stack on the east gable wall. Roof drainage is by eaves gutters.

3.10 The replaced first floor is of chipboard on timber joists. Surviving skirting boards and mouldings are of plaster.

3.11 **Unit B** rises three tall storeys above the Wharf Road Viaduct, and it has a basement at towpath level. The north elevation is of six bays with entrance doors in the two central bays, other bays having windows. Window openings are of uniform spacing and very generous height, although reduced on the second floor. The sash windows formerly had panes grouped three by five at ground and first floor levels, three by four at second floor level.

3.12 The south elevation side has one ‘blind’ bay at ground floor level and above, the bay
second in from the east end of the unit, although there is an arched window opening here for the basement.

3.13 The east gable wall projects forward from Unit A with an entrance door in it. There is a blue enamelled BR ‘Drive slowly’ sign above it, and the fading remains of the lettering ‘Coal Office’ painted onto the brickwork above this sign.

3.14 The modern replacement of the burnt-out gabled double-pitched roof of Unit B comprises thin slates on battens and gangnailed timber trusses. The north elevation has a parapet with recessed panels. This, and the upper section of the gable walls, has clearly been rebuilt as part of the repair work after the serious damage caused to this unit by the 1980s fire. The decorative brickwork in the north and south parapets was previously more boldly exposed, standing forward like a cornice on brick corbels. This is the only office building in the goods yard with a parapet rather than eaves guttering. The two chimney stacks, one on either gable wall, are broader than these walls and project beyond them.

3.15 The replaced upper floors in Unit B are of chipboard on timber joists on steel beams flanking and supporting original cast iron beams that span parallel to the front elevation. One such beam has a conspicuous crack near its bearing onto a wall, possibly as a result of the fire. The replaced ground floor is of precast concrete joists and hollow concrete blocks. The basement floor generally retains stone flags, with the remains of some toilets. The central stone staircase has heavily worn treads. Cast iron beams span the stairwell. There were apparently supports for a large water tank, now removed.

3.16 Unit C rises three relatively lower storeys above the Wharf Road Viaduct. The north elevation has six bays, generally wider than those of Unit B except for the easternmost bay whose windows are closer against the party wall with Unit B, making this elevation asymmetrical. At road level are entrance doors in the second, fourth, and fifth bays from the east, the other bays having windows. The window openings are of lesser height than in Unit B, and decrease in height storey by storey upwards, in a Classical pattern. The windows in this unit were sash windows with larger panes grouped two by two. There are conspicuous string courses at three levels over the windows, which might suggest a phased raising of the building upwards.

3.17 The south elevation has six bays likewise; the differing window levels on the second and fifth bays from the east show that these light the two staircases in the building. There are string courses at four levels, and three wider arched window openings at towpath level. Some of the window openings on this elevation have been infilled with brick. The west elevation rising above Unit D appears to have been largely rebuilt.

3.18 The replaced roof of Unit C is of similar construction to those in Units A and B, with thin slates on gangnailed timber trusses. However, the roof of Unit C is hipped at its western end rather than gabled. There are two chimney stacks, one midway along the unit and one on the west wall, while the stack on the party wall between Units B and C served both buildings. Roof drainage is by eaves gutters.

3.19 The interior structure of Unit C has been renewed similarly to Unit B.

3.20 Unit D comprises only one storey. The north elevation has six bays with entrance doors in both end bays, the other bays having windows. The westernmost three bays here are narrower than the others. The brickwork at the western end of this unit has been locally rebuilt, presumably during the late 1990s repairs. There are three cast iron boot-scrappers set into the brickwork just above pavement level. Vestiges of white-
painting numbers survive over several windows, of which “10” is most legible.

3.21 The south elevation has windows in five bays and one ‘blind’ bay at ground floor level, with two arched window openings at towpath level.

3.22 The door and window dimensions in Unit D match those of Unit C in both front and rear elevations.

3.23 The west gable wall has been rendered where it projects above Unit E.

3.24 The replaced roof of Unit D is of similar construction to those in Units A, B, and C, with thin slates on gangnailed timber trusses. As part of the repair works after the fire, two ‘flying’ chimney stacks at about third points along the building have been supported by steel beams within the roof; the chimney breasts are missing. Roof drainage is by eaves gutters, with a pronounced slope on the rear gutter as the building tapers westwards.

3.25 The ground floor of Unit D has a screeded finish.

3.26 The westernmost Unit E, like Unit D, comprises only one storey plus a basement at towpath level. The north elevation has eight bays with entrance doors in the first, fourth, and sixth bays from the east, the lattermost door being of double width. Other bays have windows, also considerably wider than the windows in the other units. The bays accommodating the double-width door and the windows are wider than the bays housing the single-width doors. The windows here were very wide with two rows of four tall panes and two mullions dividing the panes in a 1:2:1 pattern.

3.27 The south elevation is ‘blind’ at Wharf Road level, above three narrow arched window openings at towpath level.

3.28 The west wall of the range has been rebuilt in stock brick with a rounded corner at the front elevation.

3.29 Before the 1980s fire, the front parapet of Unit E aligned with the eaves of Unit D, and it may originally have had a pitched roof. The replacement roof is flat, on timber joists. The present parapet extends round the roof, with the coping lowered along the front elevation, but stepping up over the west wall to gain its original level along the rear elevation. Two chimney stacks rise from the rear wall.

3.30 The ground floor of Unit E has a screeded finish.

3.31 A series of regularly-spaced iron or steel semi-circular open brackets are to be seen above the ground floor window heads, along the frontage of Units A, B, C, and the part of D that has not been recently locally rebuilt. These presumably supported cables, now removed, carrying electric power and/or telephone lines into the offices.

4 PHASING ANALYSIS

4.1 As noted above, the offices were built in phases from c.1851 to the early 1860s, the additions presumably responding to the growth in both coal and fish traffic. It would appear that the additions were piecemeal rather than the implementation of a planned end-product, as each unit differs in scale and elevational treatment, although similar in overall style.

4.2 Repairs in the late 1990s, partly to remedy the effects of the 1980s fire, have
introduced replacement floor and roof structures, and also renewed sections of brickwork. These include the easternmost gable wall, which has been rebuilt to its original alignment, at right-angles to the front elevation.

5  FUNCTIONAL AND RELATIONAL ANALYSIS

5.1 The buildings were erected for office use, and continued to serve the same function throughout their life.

5.2 The siting of the offices was logical and convenient for the coal trade, in particular. Initially, coal traffic was handled by the nearby Eastern Coal Drops, and later by the adjacent Western Coal Drops and by the Plimsoll Coal Drops built on the western side of the canal, although the latter were under separate management. And just to the east of the offices was the bridge carrying coal wagons over the canal into the retort houses of Pancras Gasworks.

5.3 Although the fish trade came to be centred under the West Handyside Roof between the Granary group and the Midland Goods Shed, this too was reasonably close to the offices.

5.4 The siting of the offices was dramatic, their curved plan form dictated by the bend of the canal here, and their raised elevation at the level of the Wharf Road Viaduct increasing their visual impact.

6  LISTING CITATION

6.1 Not listed.

REFERENCES


NFC Property Service. King’s Cross Fish and Coal Offices Refurbishment Scheme. 1997.

### SUMMARY: THE HERITAGE IMPORTANCE OF THE COAL AND FISH OFFICES

**ARCHITECTURE AND FABRIC**

The range comprises five units of varying height and size, built to a consistent overall sub-Classical, even Georgian, style, although apparently designed and built piecemeal in response to demand for increased office space. The range is well-composed if austere.

Fire damage and subsequent repair has removed most of the internal structure and finishes, but the stock brick elevations appear to be little altered since construction. Features such as the reduction in height of window openings up the building are visually pleasing.

**SETTING**

The massing of the five units in the range, their variations in height and size generally, changes in level along their frontage, and their raised elevation alongside the canal all combine to achieve a strong visual impact when seen from within the goods yard, from the canalside towpath, and from south of the canal.

The strong curve of the canalside elevation is also striking.

The offices are enhanced by the backdrop of the front elevation of Cubitt's Granary building, particularly when seen from south of the canal.

**SIGNIFICANCE RELATED TO TYPE**

The offices as a group form a relatively scarce surviving example of the very necessary facilities provided for the clerical administration of freight traffic in railway goods depots.

Despite internal fire damage and subsequent repair, the offices externally are little-altered since being built a century and a half ago.

Stylistically, the office elevations are an excellent example of the functional tradition in industrial buildings.

**SIGNIFICANCE RELATED TO INTANGIBLES**

The dramatic siting, alongside the canal and backed by the Granary, conveys a very strong image of a ‘gritty’ mid-Victorian industrial scene.
21A WHARF ROAD VIADUCT
1 DESCRIPTIVE SUMMARY

1.1 Road viaduct that carried Wharf Road over former Coal and Stone Basin, and linked north and south ends of the railway yard. Brick-built, runs approximately north-west to south-east alongside adjacent canal towpath. Bays below viaduct used over long period for stabling of railway horses. (See Figures BD8 and BD11 in Part 2.)

1.2 North-west end of viaduct retains higher ground of Goods Yard beyond. South-west retaining wall bounds canal towpath, while north-east retaining wall is also south-west wall of Western Goods Shed (qv, and formerly also of Coal and Stone Basin). These retaining walls linked with wrought iron ties and cast iron wall-plates.

1.3 Immediately south, viaduct is cast iron bridge spanning now-infilled entrance to Coal and Stone Basin from Regent’s Canal, with rusticated stone dressings to brick abutments.

1.4 Next south-east of this is large room within viaduct, and beyond this an office, with window and door in north-west wall. Corners of office and room both emphasised by external pilasters topped with stone cornices.

1.5 Remaining section of viaduct to south-east is 24 arches carrying road, and an additional bay, not accessible but probably also roofed by arches (Goad plan of 1921 refers to 26 vaults) and apparently converted to garage. The four arches to south-east of office have cast iron brackets on their north-west side, from widening of road.
c.1860. Southern end of Western Coal Drops Viaduct (qv) abuts office and four adjacent viaduct bays.

1.6 In 1865-6, Plimsoll Viaduct (qv) was built onto Wharf Road Viaduct at the two arches next to these four bays. Plimsoll Viaduct railway tracks ran south-west across Wharf Road. Within these two arches, brick walls (curved on plan) provided additional support to arches under tracks. To south of these arches, Wharf Road Viaduct further widened (possibly c.1899, see below, using gault brick), with original arches extended sideways.

1.7 Evidence remains of two phases of pavement along north-east side of viaduct, first consisting of stubs of sawn-off steel joists, and surviving second phase of concrete supported on steel posts set into concrete plinths. Gault brickwork strengthened with blue brick where it supported Plimsoll Viaduct. This may have occurred when it was first built (1899 or soon after) or later, to accommodate rebuilding of Plimsoll Viaduct between 1921 and 1942.

1.8 Original arches and office linked longitudinally by openings in arch piers. Arches originally blocked with brickwork on canal frontage. Most windows have been altered.

1.9 Roof rings relating to horse stabling survive in each arch. Southern arches now converted into a nightclub; some other arches now small office and garage units.

2 HISTORICAL AND FUNCTIONAL SUMMARY

2.1 Wharf Road Viaduct was probably built c.1850, with a bridge section spanning over the canal access to the Coal and Stone Basin. The viaduct provided road access between the southern part of the Goods Yard and the sheds to the north. It also provided a barrier and boundary between the Goods Yard and the canal towpath. The north end retained the embanked ground between the canal towpath and the Coal and Stone Basin. The arches under the main southern part of the viaduct provided stabling for the horses that worked in the Goods Yard; there were also other stables elsewhere in the yard. The Goad insurance plan of 1921 shows that the viaduct arches remained in use for stabling at that date. There was a storage room in the angle between the southern abutment to the bridge and the vaulted part of the structure to the south, and an office that related to the work of the Coal and Stone Basin and may at times have administered the stables beneath the arches. The viaduct also supported the western part of the Coal and Fish Offices (qv).

2.2 The road was widened c.1860 to accommodate a pavement on the Goods Yard side of the roadway, with the pavement supported on cast iron brackets (as shown on Humber's 1865 plan). The flight of stairs at the south-east end of the northern pavement may date from this period, although it may be earlier.

2.3 In 1865-6 the Plimsoll Viaduct was built, abutting the Wharf Road Viaduct, with some internal strengthening being added within the Wharf Road Viaduct to support the railway tracks now provided. These tracks crossed the Wharf Road Viaduct heading south-west; a bridge spanned the canal, and led to the Plimsoll Coal Drops on the opposite bank, which were built to the revolutionary design of Samuel Plimsoll, more famous for the introduction of the Plimsoll line on shipping.

2.4 In 1897-9 the Western Goods Shed was built onto the brickwork on the north-east side of the viaduct at its north end. The Western Coal Drops Viaduct was built at the same time, and was attached to the Wharf Road Viaduct that now became the main access
route into the upper level of the outward-bound goods station.

2.5 At the end of the 19th century or the beginning of the 20th, most probably soon after the Western Goods Shed and Western Coal Drops were converted into the outward-bound goods station, the viaduct was widened in brick on the Goods Yard side. This happened before the Plimsoll Viaduct was rebuilt in blue brick. The 1906 plan shows that the Wharf Road Viaduct had already been widened by that date. The widened roadway had two phases of pavement.

2.6 In the late 20th century, the arches under the south-east end of the viaduct were converted into a nightclub. Some of the arches to the north of the nightclub became small offices and garages, and some remained empty. The bay to the south-east of the nightclub has a late 20th century garage opening.

3 DESCRIPTION

3.1 Wharf Road Viaduct runs from south-east to north-west in a curve along the south-western edge of the Goods Yard. The viaduct is arched towards its south end, with solid brick retaining walls at its north end. The two sections are linked by a cast iron bridge spanning the now-blocked entrance to the Coal and Stone Basin, with brick abutments. The viaduct incorporates elements of the early phase of the Plimsoll Viaduct, as well as an abutment and track of the late 1890s or early 20th century surviving part of the Plimsoll Viaduct.

3.2 The plan form of the viaduct resembles a hockey stick, with the handle pointing north-west, and the blade pointing south-east. Its construction is described from north-west to south-east. For simplicity in description, the orientation of the viaduct will be taken here as north-south, with the canal side wall taken as the west wall, and the wall facing onto the Goods Yard being taken as the east wall.

3.3 The northern end of the viaduct forms the canal towpath wall and the Western Goods Shed’s internal south-west wall (previously the Coal and Stone Basin’s south-west wall). The two faces are tied with wrought iron tie-rods anchored by circular cast iron wall-plates. The internal structure at this end is not known; it may be earth-filled.

3.4 There is a brick string course in the Western Goods Shed’s inner wall that originally faced the Coal and Stone Basin, approximately at or above the road level of Wharf Road. Within the Western Goods Shed, the string course and some of the viaduct walling is truncated by the Goods Shed’s windows. Vestiges of a 20th century flinton brick building survive against the towpath wall within the Goods Yard, just beyond the northern end of the viaduct, on the embanked ground to the north. Its west wall survives in the towpath wall, just above the level of its ground floor window sills.

3.5 Next southwards is the now-blocked canal access into the Coal and Stone Basin. The opening is spanned by a bridge of cast iron beams supported on brick abutments, which are skewed on plan relative to the axis of the viaduct. The abutments have rusticated stone dressings. The space beneath the bridge is now a room accessed from the Western Goods Shed’s ground floor through a steel door. Either side of the door, the opening facing the Western Goods Shed is blocked with brickwork. This included a raised opening or ‘window’ (now blocked). The flooring of the room is of concrete, and includes a raised step along the west, canal, side of the room, preventing the ingress of water. On this step is a thick brick wall, which is recessed at its head inside the room.

3.6 The bridge carrying the roadway over this opening retains its original cast iron beams.
Because the former canal entrance and its abutments are skewed on plan relative to
the side walls of the viaduct, while the beams span at right-angles to the abutments,
the support conditions for the beams consequently vary across the width of the bridge.

3.7 On the western side of the viaduct, the northern ends of the two beams nearest the
canal are supported on the lower flange of a cast iron edge beam spanning parallel to
the canalside wall flanking the towpath. Their southern ends are supported on the
abutment brickwork. Conversely, on the eastern side of the viaduct, the two beams
here are supported at their northern end by the abutment brickwork, while their
southern ends are supported on the lower flange of another cast iron beam spanning
along the edge of the viaduct. Three further cast iron beams under the centre of the
viaduct are supported on abutment brickwork at both ends.

3.8 There is some corrosion on these beams towards either side of the bridge, although
this appears to be minor. The modern chipboard ceiling between the beams is sagging
from the lower flanges of the beams. The bridge’s road surface is supported on iron
plates. The brickwork of the towpath wall is supported by a segmental brick arch
spanning the canal opening.

3.9 The angle between the skewed bridge abutment on the south side of the bridge, and
the regular vaulting of the viaduct bays further south, houses a room spanned by a
spine brick arch running along the line of Wharf Road, and a further arch towards its
western side. The wall facing the Western Goods Shed has a blocked window opening
near the north corner of the room, and a doorway providing access from the goods
shed, sited south of the window. The walls and the spine arch support sandstone
slabs set beneath the road surface. The western corner of the room has an arched
recess formed in the southern abutment of the bridge. Although damp, the brickwork is
generally in good condition.

3.10 The bay immediately to the south of this consists of a single brick vault containing an
office. It projects beyond the vaulting of the main part of the viaduct to the south-east.
It has decorative external stone cornices above the external pilasters on its north and
east corners. There is a pilaster with similar decorative treatment on the external wall
of the bay described above, immediately to the north of the office. Between the two
pilasters of the office, the wall has a segmental-headed door and a 24-light window.
Between the stone pilaster cornices there is a brick string course with a laminated
sandstone coping. Access to the interior was not possible. The office’s northern wall
returns to the south, to meet the northern wall of the southern section of the viaduct.
The c.1850 roadway would therefore have widened above and to the north of the
office. The girders supporting the 1897-9 Western Coal Drops Viaduct are built into
the roof of the office and the adjacent arches to the south. There are two external
pairs of steel brackets. There is an external rainwater pipe on the south wall in the
corner formed by that wall and the viaduct arch to the south. The office has a timber
plank door.

3.11 Between the arches to the south of the office, there is an opening set centrally within
each arch pier that provides access longitudinally between the bays. The arching
along the west wall of the viaduct was never open to the canal, as the abutments of
the arches are not visible in the lower part of the arch blockings. There were, however,
probably small windows in these walls set high beneath the arch soffits. Only one of
these windows survives on the west side of the office discussed above. (The bricks
used in its window surround are identical to those in the towpath wall and arches; the
brickwork has closers near to the opening and the arch above respects the window
head, together forming evidence to suggest that it is original.) Elsewhere, the
openings have been enlarged or rebuilt since the initial construction of the viaduct.
Some of the openings have contrasting brickwork surrounds, indicating a later date, while others have no closers against their openings. Each arch has four rings set into timber fixings (two on either side of the arch’s soffit); these date from use as stabling.

3.12 In the four bays of the viaduct immediately to the south of the office, the eastern wall face is set back from the line of the office and the bays to their south. These four bays retain their original width (the east sides of the bays to the south originally continued on the same alignment). Between each bay, on its east side, is a cast iron cantilever bracket of c.1860 that supported - and still supports - the pavement above. Although confined to these four bays, it is likely that this arrangement of brackets originally extended further south than these four bays. There is a timber door between the two southernmost bays.

3.13 To the south of the four bays discussed above, the viaduct was widened between 1897 and the early 20th century by the addition of ‘gault’ brick arches built alongside those of the original structure. This widening was contemporary with, or later than, the construction of the Western Goods Shed, as the bricks used are similar to those in the Goods Shed, and the brickwork of the viaduct respects the south-east edge of the 1897-9 viaduct to the south of the Western Coal Drops. The brickwork of this addition displays evidence of horizontal cracking and some damage, although the original brickwork of the c.1850 phase of the viaduct behind appears sound. In the bays to the south, the brickwork steps out again to the east and incorporates a later concrete support to the earlier staircase leading from the viaduct pavement to the lower stable yard level. At the top of the stairs are cast iron bollards embossed ‘GNR’.

3.14 Comparison between the 1882 and the 1906 plans of the Goods Yard indicates that the surviving staircase was rebuilt between those dates, when the viaduct was widened. This is likely to have taken place between 1897 and 1906 (see 2.5). It is not certain whether the earlier staircase was moved or entirely replaced.

3.15 To the south of this is a timber doorway in the east side of the viaduct that leads beneath the east side of the lower, three-storied office building of the Coal and Fish Offices group. Much of the brickwork along the east side of the viaduct in the southern four bays, including some of the structure beneath the staircase, represents a late addition and incorporates much concrete. Beyond the timber doorway, the road from the lower level yard rises to meet the raised part of Wharf Road. The substructure of Wharf Road is therefore concealed at this point.

3.16 The two arches at the northern end of this part of the viaduct are strengthened internally (in the western corner of the northern arch and in the south corner of the adjacent bay) by curved brick walls. These would have provided extra support for the Plimsoll Viaduct that spanned the Regent’s Canal and crossed Wharf Road. These walls date to 1865-6. The northern two arches of the gault brick road widening act as the west abutment to the westernmost surviving span of the adjoining Plimsoll Viaduct (which elsewhere is built with blue brick piers), rebuilt between 1921 and 1942 (1921 Goad sheet 12/400). The gault brickwork of the Wharf Road Viaduct merges into blue brick at this point. It is not certain whether the northern two arches of the Wharf Road widening were contemporary with the rebuilding of the Plimsoll Viaduct, and that blue brick was used to match that in the adjoining viaduct, or whether the blue brick elements of the Wharf Road Viaduct were built to support the earlier timber Plimsoll Viaduct. There were vertical recesses in the Wharf Road Viaduct widening that housed the posts supporting the level crossing gates where the Plimsoll Viaduct met Wharf Road.

3.17 The current concrete pavement on the Goods Yard side of the viaduct is supported on
I section steel joists that are carried on a line of circular tubular steel columns set into cylindrical concrete plinths. Evidence of an earlier pavement attached to the gault brick road widening consists of pairs of severed steel joists which - where they survive to a greater length than elsewhere - support longitudinal joists set beneath the current pavement. The steel handrailing along the eastern side of the pavement (consisting of two rails supported on I section steel posts) is bolted to longitudinal sections of steel joist at the edge of the viaduct.

3.18 The viaduct gradually widens towards the south-east. The internal openings between the bays align longitudinally. They are blocked in the first, eighth, ninth, and 10th bays to the south of the Plimsoll Viaduct. The openings to the south of the 11th bay from the Plimsoll Viaduct do not align with those to the north. The viaduct widens to the extent that there are two openings between each arch to the south of the 14th bay south of the Plimsoll Viaduct. This arrangement of openings (some of which have doors, and most of which do not align exactly) extends as far south as the 19th bay to the south of the Plimsoll Viaduct. The bay beyond this is entered from the doors to the south-east of the pavement's staircase, but it has not been accessible for inspection. The 1921 Goad insurance plan indicates that this bay was also vaulted.

3.19 No access was possible to the first, eighth, and 10th arches to the south of the Plimsoll Viaduct. The 10th arch was brick-blocked on the north side. The other arches were seen to have retained their soffit stabling rings. Their locations were covered in the 12th-15th and 18th bays (occupied by The Cross nightclub), and some were obscured in the 16th, 17th and 19th bays south of the Plimsoll Viaduct. The longer southern bays probably originally had (and may still have) more than four rings per bay. The 16th bay to the south of the Plimsoll Viaduct housed toilets on its north side; the arch is blocked with brickwork on this side. The 11th bay also housed toilets, and is blocked on its north-east side. The 16th-19th bays are each divided into more than one room. The southern end of the 17th bay accommodates the kitchens of the nightclub. The bays occupied by the nightclub are well served with water, drainage, ventilation and air extraction ducts. Much of the nightclub area has recent flat ceilings inserted beneath the arches.

3.20 Cobbling survives locally beneath the viaduct in the two bays that align with the Plimsoll Viaduct, and in some of the bays to the south, including the southern side of 19th bay to the south of the Plimsoll Viaduct.

3.21 On the wall facing the canal there are wrought iron ties with small plates visible beneath the arches of the first, second, 18th, and 19th bays to the south of the Plimsoll Viaduct (these latter two bays being in relatively poor condition).

3.22 A single-storey 20th century brick toilet block has been built against the four recessed bays to the south of the office bay. There is a mid-to-late 20th century red-painted steel frame and wire mesh security gate on the canal towpath wall, attached to the brickwork of the arch to the north of the junction of the two single-storey buildings of the Coal and Fish Offices.

3.23 The viaduct's roadway has an asphalt road surface with local evidence of cobbling surviving beneath it. The pavement along the west side of the viaduct consists of cobbling with granite kerb stones, while that on the east side is mostly asphalt covered. The viaduct's surface is crossed by the two railway tracks of the Plimsoll Viaduct. These survive in good condition. The wall on the west side of the viaduct's roadway is brick-built. At its northern end, the wall's base is built using bricks of fabrics 3032 and 3034 (using the Greater London archaeological system of building material classification). The wall's top is generally built using fabric 3035. The line of the
Plimsoll Viaduct canal bridge is marked by a higher wall of fabric 3035, while the area of walling immediately to its south-west is built with fletton brick, as was the walling immediately to the north of the Coal and Fish Offices. The wall top is missing or damaged locally, and temporary mesh fencing has been erected to fill the gaps.

3.24 Cabling supported on steel brackets runs along the length of the towpath wall.

3.25 The original brickwork of the viaduct is in fairly good condition. The 1897 to early 20th century brickwork has cracked locally, and suffered some damage. The steel rails and concrete elements are in good condition. Timber fixtures are in varying condition. The arch soffit rings are in good condition where they survive. The track of the Plimsoll Viaduct and the bollards on at the top of the south-east steps are in good condition. Where there are windows, the timber frames and glazing are generally in poor condition.

4 PHASING ANALYSIS

4.1 The building of the viaduct would have been necessitated by the construction of the Goods Yard, and specifically by the need to span the roadway across the Coal and Stone Basin. It probably dates to c.1850.

4.2 The cast iron brackets in the bays immediately south of the office under the viaduct would have supported the pavement as shown on the 1865-6 plan. It is not certain whether this pavement represented an extension of the c.1850 viaduct, or whether it was initially designed to have a pavement supported on brackets.

4.3 The widening of the viaduct on its east side respects the Western Coal Drops Viaduct, built in 1897-9; the need to improve road access to the new Western Goods Shed and converted Western Coal Drops would have provided a good reason for widening the road. The brickwork of the extension is built with the same type of bricks as those used in the Western Goods Shed. It is likely, therefore that the widening of the viaduct took place at the same time as, or soon after, the construction of the Western Goods Shed. It definitely took place between the preparation of the 1882 and the 1906 maps.

4.4 The Plimsoll Viaduct (originally built mostly in timber) was rebuilt with blue brick piers between 1921 and 1942. It is likely that the blue brickwork on the part of the Wharf Road Viaduct’s extension, upon which the western end of the surviving Plimsoll Viaduct is built, was built with the rebuilt Plimsoll Viaduct. However, it is not known whether the blue brick arches of the Wharf Road Viaduct supported the earlier timber Plimsoll Viaduct. The earlier of the two phases of pavement supports on the widened viaduct may be contemporary with its initial construction.

4.5 The later phases of construction make use of concrete, fletton brick and yellow stock brick (of fabric type 3035) in their construction.

5 FUNCTIONAL AND RELATIONAL ANALYSIS

5.1 The Wharf Road Viaduct was, and remains, a versatile structure with many historic uses. Its main use is, and was at first, as an artery along the south-west edge of the Goods Yard, providing a route from the southern part of the Goods Yard and the road bridge across the canal (Somers Bridge) to the engine sheds and other buildings on the higher ground at the north end of the railway yard.

5.2 As well as a road to the northern part of the site, the viaduct served as a bridge over...
the entrance off the Regent’s Canal into the Coal and Stone Basin, and as a barrier and boundary between the Goods Yard and the canal. The northern end of the viaduct retained the embanked ground between the canal towpath and the Coal and Stone Basin. The arches of the main southern part of the viaduct provided stabling for some of the horses that worked in the Goods Yard (there were other stables elsewhere in the yard). There was a storage room in the angle between the southern abutment to the bridge and the vaulted part of the structure to the south, and an office that may either have related to the work of the Coal and Stone Basin, or administered the stabling beneath the arches. The viaduct also served as the foundations beneath the Coal and Fish Offices.

5.3 The construction of the Plimsoll Viaduct necessitated the introduction of a level crossing between the road and the new railway tracks, and the road became a conduit for coal transportation.

5.4 When the newly-built Western Goods Shed and the Western Coal Drops became the outward-bound goods station, the viaduct became the principal access route by road to the main upper level of the station. There were two access doors into the Western Goods Shed, one from the Western Coal Drops and one directly off Wharf Road. These two routes allowed traffic to pass easily in and out of the station. However, Wharf Road’s capacity would have changed little unless the road was widened. The pressure of increased traffic on the Wharf Road Viaduct explains the fact that its north-east side was extended or rebuilt two or three times after the 1860s.

5.5 Although the viaduct ceased to be a route for goods traffic when the Goods Yard closed, the fact that the Western Goods Shed and the Western Coal Drops’ upper levels became warehouses and workshops meant that goods continued to use the road until the beginning of the 21st century.

6 LISTING CITATION

6.1 Not listed.

REFERENCES

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


### SUMMARY: THE HERITAGE IMPORTANCE OF THE WHARF ROAD VIADUCT

#### ARCHITECTURE AND FABRIC

The Wharf Road Viaduct is a largely intact example of an integrated viaduct and horse stabling below.

It preserves evidence of the early use and subsequent development of the site. This includes the cast iron bridge spanning the canal basin entrance, stabling fixtures, offices serving either the canal traffic or the stabling, the later Plimsoll Viaduct and its railway track, and historic landscaping adjoining St Pancras Lock.

#### SETTING

The viaduct is an integral element of the area, combining with the canal towpath, the stable yard, and the Coal and Fish Offices.

Wharf Road Viaduct affords some of the best views of the site’s built and landscape heritage.

It provides a sense of enclosure to the lower yard level, and preserves the historic barrier between the canal and the Goods Yard.

As the traditional route along the western side of the site, the viaduct makes sense of the layout of many of the buildings, and has influenced the development of the site. The materials used in its construction and its arcading both harmonise with the Eastern Coal Drops and the Western Coal Drops that flank and enclose the lower level yard.

#### SIGNIFICANCE RELATED TO TYPE

The viaduct is a structure that has accommodated many and varied uses, in common with many railway viaducts whose arches provide economical space.

#### SIGNIFICANCE RELATED TO INTANGIBLES

The necessarily-raised level of the viaduct also created spaces for economical stabling accommodation in one of the major through routes of the Goods Yard.
21B  CANALSIDE WALL AND TOWPATH
FEATURE NAME

CANALSIDE WALL AND TOWPATH

LOCATION

Boundary wall along southern edge of Goods Yard, north of Regent’s Canal towpath

Note: only the easternmost section of this wall is described here, as the sections of wall further west and north are described in the baseline reports for the Coal and Fish Offices, the Wharf Road Viaduct, and the Western Goods Shed, Lower Level (all qv)

CLIENT REF.

21B

EH INVENTORY REF.

K

IHCM REF.

JG-JJ, KG-KJ

LINKED EH REFS.

J1, J2

NATIONAL GRID REF.

TQ 3020 8348

REPORT BY

KS, MNB, MTT

DATE

April 2004

Not listed

Within Regent's Canal Conservation Area

1 DESCRIPTIVE SUMMARY

1.1 Easternmost section of brick wall built c.1850 along southern edge of Goods Yard, on north side of towpath of Regent's Canal (opened 1820). Section between Coal and Fish Offices and west abutment of Maiden Lane Bridge, approximately 240 m in length.

1.2 Wall functions as ground-retaining structure, and also as parapet along south side of Wharf Road.

1.3 Surviving features of relevance to Goods Yard include, from west to east: evidence of abutments of former Somers Bridge immediately east of Coal and Fish Offices; remains of brick and cast iron arch over infilled entrance to former Granary Basin; reinforced concrete girder road bridge linking Goods Way to Wharf Road; and Maiden Lane Bridge carrying York Way.

1.4 Somers Bridge built 1820, altered 1850 and rebuilt later in 19th century. Removed after 1920 when replaced by concrete bridge to east. Bridge abutment integral with canalside wall, including brickwork and sandstone blocks that supported the bridge
beams, and display its phased development.

1.5 Former entrance from canal into Granary Basin infilled, but brick arch and 16 m long cast iron beam over entrance survived until 2001, when largely removed to accommodate temporary haul road bridge for use during Channel Tunnel Rail Link (CTRL) works.

1.6 Much of parapet brickwork dismantled and replaced by temporary barriers as part of CTRL works.

1.7 Concrete bridge currently disused. Retains granite setts, large corner piers of red brick with sandstone copings, and derelict gatehouse formerly controlling access from Goods Way into Goods Yard.

1.8 Maiden Lane Bridge, carrying main road, rebuilt in 1850 and again in 1998, incorporating and extending 1850 abutments.

2  HISTORICAL AND FUNCTIONAL SUMMARY

2.1 The Regent’s Canal opened in 1820, predating the construction of King’s Cross Goods Yard by some three decades.

2.2 The first Somers Bridge, which was sited immediately to the east of the later Coal and Fish Offices, was built 1819-20 across the new Regent’s Canal. A humpbacked arch, it gave accommodation access to fields. It had received its name by 1828, when it appears on Carey’s Map.

2.3 By 1834, the south-west approach to the bridge had been fenced off as a road. It served a brickfield to the north of the canal by 1844. This had its own short basin, soon infilled and obliterated for the construction of the Goods Yard.

2.4 The humpback Somers Bridge was altered in 1850, to provide additional access to the new Goods Yard. Later in the 19th century it was rebuilt and widened with a modified vertical alignment, using girders probably of wrought iron bearing on a rebuilt abutment wall.

2.5 The canalside boundary wall on the southern edge of the Goods Yard was built at the same time. An arched opening was formed in the wall to accommodate the canal inlet leading to the Granary Basin. This opening was bricked up in the 1920s after the basin had gone out of use, and the towpath bridge over the entrance was demolished.

2.6 A double-track railway viaduct was built after 1870 immediately to the east of Somers Bridge to carry coal into the retort houses of Pancras Gasworks on the southern side of the canal. This was probably of timber and iron. It climbed from the east side of the Eastern Coal Drops to span Wharf Road with clearance adequate for road vehicles, and passed over the canal. It was demolished, presumably soon after the gasworks had ceased to make coal-gas in 1904.

2.7 Somers Bridge was again replaced, this time by a reinforced concrete bridge built about 60 m to the east, c.1920, when Goods Way was extended across the site of the former gasworks. This bridge was built by Robert McAlpine & Sons, and according to a contemporary account it was built on the ground nearby, and then pulled into place over the canal.

2.8 This was an early example of bridge “sliding”, now a common technique. To minimise
disruption to traffic both on and below the existing bridge, its replacement is constructed nearby rather than in situ. The existing bridge is then removed, and the new bridge is pulled or slid into place.

2.9 The bridge carrying York Way (formerly called Maiden Lane) was originally built as part of the canal construction in 1819. It was rebuilt and widened in 1850 by the Great Northern Railway for the main access to the Goods Yard and the temporary passenger station on the later Potato Market site (qv). Cast iron girders were used in the bridge deck to lower its vertical alignment. The bridge was further widened in 1923 and again rebuilt in 1998, preserving the 1850 abutments.

2.10 Very high voltage electricity cables were laid in shallow ducts under the towpath in the 1970s, with a pumping and cooling station immediately to the west of Maiden Lane Bridge for the oil that cools the cables. The towpath was opened for public use shortly afterwards.

2.11 A temporary steel bridge for the CTRL haul road was built across the canal east of the site of Somers Bridge early in 2002, severely damaging the blocked entrance to the Granary Basin.

3 DESCRIPTION

3.1 Features are described moving eastwards from the Coal and Fish Offices. These comprise: remains of the former Somers Bridge; the infilled entrance to the Granary Basin; the reinforced concrete bridge; the eastern section of the canalside wall and towpath; and Maiden Lane Bridge.

3.2 The former Somers Bridge

3.3 Somers Bridge stood immediately to the east of the offices. The surviving elements of its northern abutment project slightly from the line of the canalside wall.

3.4 The top of the wall consists of blue engineering brick built to heighten the boundary wall after the demolition of the bridge. It is associated with the corbelled brickwork on the corner immediately to the west that probably carried a service pipe. The top brickwork is in excellent condition.

3.5 Beneath this, there are nine sandstone padstones that supported the beams of the later 19th century bridge, between (and in some areas beneath) which is red brickwork. Three of these padstones are deeper, to carry the main girders of the bridge. Above the brickwork is a coping of thin sandstone blocks laid between the nine thicker sandstone blocks. The stone is in good condition. The brickwork has spalled in some places and is in need of repointing locally.

3.6 The abutment wall beneath this, and extending somewhat westwards, is faced with pink to dark red semi-engineering bricks, pressed from granulated clay and stronger than the local stock bricks. These are laid in English bond. This is in reasonably good condition, with some localised damage.

3.7 There is a pipe running down the wall from above the level of Wharf Road.

3.8 The former railway viaduct over the canal and into the gasworks was immediately to the east of Somers Bridge. It ran at high level over Wharf Road, above the canalside wall, and has left no trace here.
3.9 The infilled entrance to the Granary Basin

3.10 This entrance, now infilled, was spanned by a segmental brick arch, clearly visible on the towpath side of the wall. The arch was very long and shallow, spanning some 18 m with a rise at midspan of only 1.5 m. It was two full bricks in height, with bonded courses. On the north side of the wall the arch was partially visible, rising just above pavement level.

3.11 This brick arch served as a relieving arch to a cast iron girder embedded in the wall. A thick cast iron bottom flange could be seen, level with the springing points of the brick arch, its edge flush with the face of the brickwork, and some 15 m long.

3.12 The greater part of this brick arch was dismantled during preparatory work for the installation of a temporary haul road bridge in late 2001 as part of the CTRL works at St Pancras. This bridge is now in place. In preparation for this bridge, the greater part of the cast iron girder, of considerable size, was cut through only about 5 m from one end, and removed. This removed piece is now in store.

3.13 A photograph taken after this piece had been removed shows that the girder was humpbacked. It had a midspan depth of about 0.9 m, a bottom flange of about 0.8 m width and about 7 cm thickness, and a smaller top flange of about 0.2 m width and perhaps 4 cm thickness. This top flange curves over near the beam end and widens to converge onto the bottom flange.

3.14 This girder will also have supported the deck of a bridge, removed earlier, which had formerly carried Wharf Road over the entrance to the Granary Basin.

3.15 Extending some 10 m westward from the girder end, at the base of the wall, is the scar of the ramp to the former towpath bridge over the basin entrance, that was removed probably in the 1920s. Both this and the former opening space beneath the cast iron girder are infilled with semi-vitrified blue and red brindled engineering bricks. The brickwork between the flange and the brick arch over is similar to the yellow-brown stock brickwork in the wall generally. Two recent infilled areas just above either end of the cast iron flange were presumably made during exploratory investigations.

3.16 The reinforced concrete bridge

3.17 This bridge comprises three upstanding girders, with top and bottom booms and uprights, but with solid webs of thinner concrete than the principals. Each girder has eight rectangular panels. Some panels have diagonals crossing them, although paradoxically these are oriented so as to be in tension when the girders are loaded, whereas concrete is relatively weak in tension and accordingly needs reinforcement. The uprights are single on the outer faces of the bridge, but twinned on internal faces. Under the two road lanes are downstanding transverse beams supporting an in situ concrete deck. Much later asphalt surfacing on the bridge has worn away to expose the original granite setts. Pavements have granite kerbstones and some setts.

3.18 The bridge has two large blue-red brick corner piers on the northern, Wharf Road, side which are coped by large sandstone blocks. On the southern, Goods Way, side standing centrally between the two road lanes is a small square red-brick structure, presumably a former gatehouse controlling access to the Goods Yard. This is now in poor condition; the roof is missing, and a segmental-arched window with stone sill on the Goods Way side is boarded-up.

3.19 The bridge abutments are also of blue-red brick. The south abutment stands at the
canal edge.

3.20  *The eastern section of the canalside wall and towpath*

3.21 Further east, the towpath gradually diverges from the wall, with a grassy bank between the two on which are trees and shrubs. A recent-looking dwarf brick wall along part of the base of this bank suggests a possible past small landslip or subsidence. The retained road surface on Wharf Road has settled here, too.

3.22 Much of the parapet wall along the south side of Wharf Road has been dismantled. Some at least of this appears to have been a consequence of the local ground movements noted above, with the remainder following as part of the CTRL works in connection with forming the haul road route. The drop here is currently protected by temporary barriers. What survives of the brick parapet wall has a distinctive large triangular brick coping.

3.23 The sweeping curve of the canal here reflects a realignment before construction, to placate a notorious local landowner, William Agar. The widening of the canal on the south side predates the railway. It may have been necessitated by barges queuing to deliver coal to the gasworks. The three bores of Gasworks Tunnel pass invisibly beneath here, constructed by cut-and-cover with cast iron roofs close beneath the canal bed.

3.24 Immediately west of Maiden Lane Bridge is a modern single-storey brick-built structure on the north side of the towpath. This is a pumping and cooling station associated with the high-voltage electricity cables laid in shallow ducts under the towpath, which is linked here to York Way by a modern brick and concrete flight of steps.

3.25 *Maiden Lane Bridge*

3.26 The recently rebuilt Maiden Lane Bridge incorporates stonework and stock brickwork from the 1850s. The finely-dressed course of stones for the seating of the original girders, and the rusticated quoins of the abutment wall, have been reinstated and replicated in the now wider bridge. (The new bridge girders are supported on piled foundations behind the abutments.) The design of the new steel parapets is inspired by the 1850 cast iron parapet (which is preserved elsewhere). The rounded stone quoins with formed grooves to avoid fraying of the ropes used by horse-hauled barges are notable, just above the towpath.

4  PHASING ANALYSIS

4.1 The historical summary in 2 above has illustrated the evolution of bridges serving different functions across the canal since it was opened in 1820.

5  FUNCTIONAL AND RELATIONAL ANALYSIS

5.1 Somers Bridge was the first bridge spanning the canal in this section between Maiden Lane Bridge and St Pancras Lock, built for accommodation access to fields severed by the new waterway. It was re-used by the Great Northern Railway for supplementary access to its Goods Yard, and was subsequently rebuilt, perhaps to carry greater loads than the public bridge at Maiden Lane. Somers Bridge was later replaced by a concrete bridge to the east in 1920, but traces of its presence remain.

5.2 The reinforced concrete girder bridge represents the early period of that genre, with
previous trusses in steel as the model. Its structural principles are clearly and uncompromisingly expressed and it is a good example of its type, with the added interest of “off-site” construction. The supplementary brickwork appears to reflect less clarity of thought by other designers on the project.

5.3 The Goods Yard had two canal basins entered through openings in the canalside wall. One, further west, served the Coal and Stone Basin, while in this section of the wall the Granary Basin was accessed. When this became redundant, both basin and opening were infilled. The brick arch and large cast iron beam that spanned this opening have been severely damaged by enabling works for the CTRL project.

5.4 The viaduct carrying coal wagons from the Goods Yard into the retort houses of the Pancras Gasworks was an essential link for coal carried by the GNR, in order for it to compete with both sea-borne and coal carried by the Midland Railway for the making of gas here. When this ceased, the viaduct was redundant, and its removal has left no evidence.

6 LISTING CITATION

6.1 Not listed.

REFERENCES


SUMMARY: THE HERITAGE IMPORTANCE OF THE CANALSIDE WALL AND TOWPATH

ARCHITECTURE AND FABRIC

The abutment of the former Somers Bridge, immediately east of the Coal and Fish Offices, preserves evidence of this feature of the pre-railway landscape relating to the early history of the Regent’s Canal and road transport routes into and out of the Goods Yard. The later, and still surviving, reinforced concrete girder bridge has continued this role, providing a link between Goods Way and Wharf Road.

The various types and colours of brick and stone within the wall indicate the different elements of its construction.

SETTING

The wall and its surviving evidence of bridges are important components of the enclosed and atmospheric character of this section of the canal towpath.

SIGNIFICANCE RELATED TO TYPE

The reinforced concrete girder bridge is a good example of the early form of such structures.

SIGNIFICANCE RELATED TO INTANGIBLES

Recent works in connection with CTRL have removed the greater part of a large cast iron girder carrying the wall over the now-infilled canal inlet to the Granary Basin. The girder clearly defined the profile of the opening, and recalled the period when canal traffic was an important aspect of the Goods Yard operations.
24 WESTERN GOODS SHED
24A WESTERN GOODS SHED, LOWER LEVEL
1 DESCRIPTIVE SUMMARY

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

3.21 The northern approach tunnel

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

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

4 ARCHITECTURAL ANALYSIS

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

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

5 PHASING ANALYSIS

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

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

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

6 FUNCTIONAL AND RELATIONAL ANALYSIS

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

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

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

7 LISTING CITATION

7.1 Not listed.

REFERENCES


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Ordnance Survey five foot to 1 mile series:

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

### ARCHITECTURE AND FABRIC

The lower level of the Western Goods Shed is an integral part of an early steel-framed building, with its ceiling structure incorporating steel beams. It retains its original layout, and evidence of earlier surrounding structures and historic operation.

### SETTING

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

### SIGNIFICANCE RELATED TO TYPE

The lower level of the Shed offers a large open reversibly divisible space. The Shed is a surviving example of the relatively uncommon form of goods station, served by rail on two levels.

### SIGNIFICANCE RELATED TO INTANGIBLES

The lower level retains evidence of the earlier development of the site, including the adjacent Wharf Road Viaduct, the former Coal and Stone Basin, and features linking it with the adjacent Western Coal Drops.
24B  WESTERN GOODS SHED, UPPPER LEVEL

(1988)
BUILDING NAME
WESTERN GOODS SHED, UPPER LEVEL

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

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

NATIONAL GRID REF. | REPORT BY | DATE
---|---|---
TQ 3000 8363 | KS, MTT | April 2004

Not listed
Within Regent’s Canal Conservation Area

1 DESCRIPTIVE SUMMARY

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

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

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

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

2 HISTORICAL AND FUNCTIONAL SUMMARY

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

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

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

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

2.5 Three pairs of railway tracks entered the building from its north end. The westernmost
pair curved slightly towards the north-east before it left the northern extension. These
and the other tracks curved, once they left the Shed, towards the tracks that led to the
Copenhagen Tunnel through which the trains arrived in the Goods Yard. The tracks
ran parallel outside the Western Goods Shed for about 200 m, before they converged
via points, in order to give space for the marshalling of wagons into longer trains. The
sign on the outside face of the north wall of the extension, stating that “ENGINES
MUST NOT PASS THIS POINT” reflected the severe fire risk and nuisance of steam locomotives within buildings. The wagons were brought in for loading with the aid of capstans, driven by hydraulic power and later by electricity. The old-fashioned system of shunting with horses was thereby abolished.

2.6 When the Western Goods Shed was opened in July 1899, the high-level offices were not yet complete. These offices dealt with the paperwork and administration of the loading of freight.

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

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

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

3 DESCRIPTION

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

3.26 High-level offices

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

6 LISTING CITATION

6.1 Not listed.

REFERENCES


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

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


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

Ordnance Survey, 5 feet to 1 mile series:

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

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

**ARCHITECTURE AND FABRIC**

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

**SETTING**

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

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

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

**SIGNIFICANCE RELATED TO TYPE**

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

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

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

**SIGNIFICANCE RELATED TO INTANGIBLES**

The large volume of the Shed, although currently impaired by sub-division and partitioning, reflects the spatial organisation of a large freight depot, which for many years was a busy and noisy hive of activity throughout most of the day and night.
24C WESTERN GOODS SHED, NORTHERN EXTENSION
BUILDING NAME
WESTERN GOODS SHED, NORTHERN EXTENSION

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

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

NATIONAL GRID REF.
TQ 3003 8369

REPORT BY | DATE
KS, MTT | April 2004

Not listed
Within Regent's Canal Conservation Area

1 DESCRIPTIVE SUMMARY

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

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

2 HISTORICAL AND FUNCTIONAL SUMMARY

2.1 The northern extension to the Western Goods Shed was built in two phases, to increase the capacity of the outward-bound goods station by extending the length of the platforms. The 1913 revision of the Ordnance Survey shows a short extension to the original building, corresponding to the four southern bays that have brick east and
west external walls.

2.2 The northern six bays were added later. The RCHME report (Clarke) dates this extension to c.1915, although the 1921 Goad Plan shows the Western Goods Shed still with only a four-bay extension. The six-bay extension was built using the same materials, except that the north and east walls between the steel stanchions were timber-framed, and weatherboarded at high level. Below the timber framing, the east wall and most of the north wall was originally open. This lightweight construction may reflect the fact that this work took place during the First World War.

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

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

2.5 The northern extension is currently vacant.

3 DESCRIPTION

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

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

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

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

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

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

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

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

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

4 PHASING ANALYSIS

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

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

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

5 FUNCTIONAL AND RELATIONAL ANALYSIS

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

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

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

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

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

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

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

6.1 Not listed.

REFERENCES


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


Ordnance Survey, 5 feet to 1 mile series:
  First edition surveyed 1871, published 1874
  Second edition revised 1894, published 1895
  LCC revised edition, 1938 (without amendment)


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

## ARCHITECTURE AND FABRIC

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

## SETTING

The extension is part of the Western Goods Shed functional group. The weatherboarding harmonises with that appearing elsewhere in the Western Goods Shed. The northern ends of the Eastern Coal Drops and the Western Coal Drops also originally had timber-covered north gables. The curve on plan of the extension, to the north-east, reflects the alignment of the tracks that once fanned out across the whole Goods Yard from the GNR main line south of the Copenhagen Tunnels.

## SIGNIFICANCE RELATED TO TYPE

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

## SIGNIFICANCE RELATED TO INTANGIBLES

The use of timber here came near the end of a long tradition of its use in railway buildings. These elements were widely used at an earlier period in other industrial and rural contexts, and were again used more widely during the First World War as an economical form of construction which minimised the use of steel.
25A WESTERN COAL DROPS

(1985)
BUILDING NAME
WESTERN COAL DROPS

LOCATION
Immediately abutting eastern side of Western Goods Shed

CLIENT REF. | EH INVENTORY REF. | IHCM REF. | LINKED EH REFS.
-------------|------------------|-----------|------------------
25A          | F2               | F2/1, F2/2| E, F3

NATIONAL GRID REF. | REPORT BY | DATE
TQ 3002 8360      | MNB, MTT   | April 2004

Not listed
Within Regent’s Canal Conservation Area

1 DESCRIPTIVE SUMMARY

1.1 Originally built 1859-60 to provide additional coal-handling capacity. Yellow stock brick rectangular building with double-pitched roof, some 100 m by 15 m, on three levels. Upper level originally carried four railway tracks in single-volume space, with coal hoppers on intermediate level below, over loading bays for merchants’ carts. 16 bays north-south, with side walls of open arches. Tracks carried on pairs of cast iron beams spanning north-south onto brick cross-walls. Traverser in bay at southern end moved empty wagons onto rail viaduct on east side. (See Figures BD 9 and BD10 in Part 2.)

1.2 Converted 1897-9 to goods shed for outward-bound traffic, when rail viaduct dismantled and re-erected as road viaduct on west side serving upper level. New Western Goods Shed (qv) built abutting drops west wall. Road-to-rail transfer platform built on upper level, serving one railway track along west side of building, and extended northwards beyond drops. Coal hoppers removed and intermediate level adapted to mezzanine use. Upper part of south gable wall rebuilt in reddish brick, and staircase introduced into traverser bay. Distinctive canopy with timber valancing, on decorative cast iron brackets and cantilevered I section rolled steel beams, added along east side at upper level.

1.3 Platform subsequently extended northwards beyond building, with steel canopy, at some time after c.1913.

1.4 Upper level of drops remained large single space until railway use declined, when
building fell into multi-occupancy use. Upper level divided into tenancies by transverse partitioning c.1994. Platform area to north subsequently enclosed, used as bakery, offices, and other purposes. All still in use.

2 HISTORICAL AND FUNCTIONAL SUMMARY

2.1 The Western Coal Drops were built in 1859-60 to augment the goods yard's coal-handling capacity. They were sited between the earlier Eastern Coal Drops on the east and the 1850-1 Coal and Stone Basin on the west. This was entered from the Regent’s Canal under a cast iron bridge carrying the canal towpath.

2.2 The building was on three levels. Four railway tracks at upper level brought in loaded coal wagons. Their cargo was discharged into storage hoppers at an intermediate level. From these, coal merchants’ carts could be loaded at ground level.

2.3 Emptied coal wagons were run south onto a traverser in the southernmost bay of the drops. This transferred them sideways onto a viaduct immediately to the west of the building, on which they could be returned northwards to their origin for reloading. This Western Coal Drops Viaduct (qv) was probably of timber when first built, but appears then to have been rebuilt in iron, possibly in the last quarter of the 19th century.

2.4 Wagon handling inside the drops building and on the traverser was probably by horses, and later by capstans operated by hydraulic power. Several capstans and fairleads survive on the Eastern Coal Drops Viaduct as evidence of these wagon shunting methods.

2.5 The late 19th century growth in general freight traffic led to the conversion of the Western Coal Drops for general outwards goods traffic in 1897-9, at the same time as the new large two-level Western Goods Shed was being erected over the site of the viaduct and the Coal and Stone Basin, immediately abutting the drops building.

2.6 The iron viaduct was dismantled, and re-erected as the northern part of a viaduct on the east side of the Coal Drops, providing road access to the upper level. A new section of viaduct was built to the south of the re-erected viaduct, serving the Western Goods Shed and also giving access between the Western Coal Drops and Wharf Road and the southern part of the goods yard. A timber canopy was added on the eastern elevation of the Coal Drops.

2.7 Major alterations were also made within the Western Coal Drops themselves during these works.

2.8 The paired cast iron beams carrying the westernmost railway track were re-set at a lower level, while a new road-to-rail transfer platform was constructed, supported on the paired cast iron beams formerly carrying the other three tracks, these being removed. The platform level was raised above ground level on the adjacent viaduct to assist unloading from road vehicles. A canopy was added along the east side over the road vehicle unloading area, with timber valancing, on decorative cast iron brackets and cantilevered I section rolled steel beams.

2.9 The coal hoppers were removed from the intermediate level, which became effectively mezzanine space for the lower level offices and stores.

2.10 The building continued in use as a goods depot throughout most of the 20th century. The decline in railborne freight led to the eventual cessation of goods handling here,
and the last track was removed c.1990.

2.11 The Western Coal Drops continue in multiple-tenancy use as workshops and storage. The single-volume upper level was divided into separate tenancies by partitioning c.1994.

2.12 The 1913 Ordnance Survey 1:2500 plan shows the three easternmost railway tracks that previously ran into the building, now terminating against its north gable wall. Subsequent to this, the platform within the building was extended northwards into the open air, possibly as an addition to increase the number of railway goods vehicles that could be loaded at the same time. A 1930s plan of the Western Goods Shed reproduced in the RCHME report on that building shows a central siding running into this platform, flanked on either side by the twin column lines of a steel canopy roof.

2.13 A much more recent building now occupies the platform, retaining the canopy as part of its structure.

3 DESCRIPTION

3.1 The building is rectangular on plan, some 100 m by 15 m. It was originally designed and built with three levels - the upper with railway tracks for loaded coal wagons, the intermediate level with coal storage hoppers, and the lowest for coal merchants to load their horse-drawn carts from the hoppers. As converted for general goods traffic in 1897-9, the building was effectively divided into two levels, with the intermediate level becoming mezzanine space within the lower level, and this arrangement has remained.

3.2 The building is divided into 16 equal north-south bays, with brick piers at 20 feet (6.1 m) spacing.

3.3 At the lower level, each bay of the east wall is spanned by a segmental arch. All of these arches, except that in the southernmost bay, were originally open to allow vehicle access. They have since been infilled with brickwork incorporating doorways and occasional windows. Raised platforms about 1.1 m high have been inserted, no doubt to facilitate loading and unloading of goods when the building was converted from its original purpose. The slightly-projecting platform edgings are of brick, topped by a substantial timber strake to protect road vehicles and brickwork from damage, supplemented by a 0.15 m radius cast iron quadrant-section kerbing set forward of the brickwork.

3.4 At lower level the southernmost bay originally, and has ever since, housed an office (now apparently disused). The east wall in this bay appears original, with a central doorway flanked on either side by a window. All have round-headed arches. The windows have stone sills and cast iron frames. The door has a fanlight. Above the door is a sign “The Dockers Tavern”, indicating use for film locations.

3.5 A cast iron column from the adjacent viaduct stands in front of each brick pier, and at the same spacing.

3.6 At the former intermediate level a number of arches retain a timber hatch that opened by sliding sideways. These are presumably associated with the coal storage hoppers but, with the total removal of all internal equipment, no further conclusions can be drawn.
At the upper level also, each bay of the east wall was spanned by a segmental arch, and all but one still are. All of the arches are open, except in the southernmost and northernmost bays described in the next paragraph. In the seventh bay from the north, the arch has been removed by a full-height rectangular opening that has been cut out, now spanned by a cast iron beam as a lintel, with a lifting beam. The vestigial arch springings show that this enlarged opening is a later alteration. These openings are now fitted with roller shutters, or are otherwise infilled. The slightly-projecting platform edgings are of brick, topped by a substantial timber strake to protect road vehicles and brickwork from damage.

The southernmost bay (formerly housing the wagon traverser at this upper level) has a ‘blind’ segmental arch, above a stone sill and three panels of recessed brickwork. The northernmost bay is similar, although the infilling brickwork in the arch (possibly a later insertion) had a rectangular window, itself later infilled with brickwork.

The west wall of the building appears originally to have been generally similar to the east wall, with arched openings between brick piers. The lower level bays were open to allow loading of road vehicles with coal, except at the southernmost bay which had two windows, since infilled. The upper level likewise was open. A simple brick string course can be seen on the outer wall face, midway between the two levels of openings, from inside the Western Goods Shed.

One bay on the upper level of this wall - the eighth from the southern end of the building - is of solid brickwork, presumably to provide longitudinal stability to an otherwise rather flimsy structure. Solid brickwork is shown in the corresponding bay of the east wall on early plans, but this is no longer present.

The construction of the Western Goods Shed (qv) immediately to the west resulted in the west wall effectively becoming a party wall. The 1930s railway plan in the RCHME report on the Western Goods Shed suggests that most of the openings in the west wall at both levels of the building remained unfilled, allowing direct interchange of goods between the two buildings. Since then, as far as can be seen with limited access, the openings have been infilled, presumably to allow the multiple tenancy of the two buildings.

There are two blocked window openings and a central blind or infilled arch in the west wall of the southernmost bay at lower level, and a further blocked opening above the recessed wall panels at upper floor level. This section of wall is now shared with the Western Goods Shed.

At lower level the north wall of the building serves as a retaining wall. This has not yet been accessible for inspection. At upper level it originally had four openings for the railway tracks, since infilled, and is now largely masked on its north face by the later building on the platform. What can be seen in the narrow space between this building and the Western Goods Shed is a later brick infill.

The lower part of the south wall is of yellow stock brick, with pilasters at either corner and at mid-length and a continuous shallow plinth. There are three openings in each bay, with semi-circular arched openings. The westernmost accommodates a door with a segmental arched opening within a recessed panel. The other five are windows, some with cast iron frames, some infilled, with stone sills and recessed undersill panels. Above these is a simple string course, and above that six recessed brick panels.

The upper part of the south wall appears to have been rebuilt when the conversion to
a goods shed was carried out in 1897-9, presumably to enclose what had previously been an open upper level here. It is of reddish brick, and continues the three pilasters from below up to just under eaves level. These are capped with stone. Four windows with cast iron frames have plain concrete or steel-encased concrete lintels over.

3.16 Internally, the building is best described from the roof downwards. All bays apart from the southernmost bay are similar and can be described as one.

3.17 The double-pitched roof is clad with corrugated iron over timber boarding, and with corrugated translucent plastic sheeting. The boarding is badly stained, indicating extensive damp penetration and potential rot damage.

3.18 The roof covering is supported on timber purlins, carried on a series of clear-span composite queen-rod trusses spanning 48 feet (14.6 m) at 10 feet (3.05 m) spacing - half the spacing of the brick piers. Each truss has timber principal rafters and collar beams with cast iron junction boxes. Queen-rod and tie-rod are wrought iron flats, while the diagonal struts springing from the junction of queen-rod and tie-rod are elegant slender cruciform cast iron sections with visible entasis. This junction is made by a bolt passed through a clevis formed on the end of the strut.

3.19 The canopy on the east side of the building has corrugated asbestos sheeting on timber purlins, supported on I section rolled steel beams cantilevered from the wall piers. These beams pass through the tops of the piers below the padstone bearings of the roof trusses, projecting slightly into the building. Each projection is tied down by twin round bars into a channel section built into the cross wall below.

3.20 Below the beams are decorative cast iron brackets set on small carved padstones. The beams support timber purlins on which is corrugated asbestos sheeting, with a back-fall towards the eaves and a gutter of galvanised riveted steel sheet. The canopy fascia is a timber truss supporting timber valancing. This distinctive feature is in poor condition, and the line of the canopy edge undulates to indicate past movement of its supports.

3.21 The platform at upper level inside the building is about 0.9 m above the adjacent ground level on the viaduct. Originally, four railway tracks ran into the building from the north. Each track was supported by pairs of cast iron beams. During the 1897-9 conversion, three of these tracks were removed leaving only the westernmost, and the three pairs of beams were used to support the new platform. The remaining track and its pair of beams were lowered by about 0.6 m. This track was finally removed c.1990 and the platform has been extended westwards.

3.22 The construction here is described in some detail as it represents the vestiges of the only surviving coal-handling arrangement at King’s Cross apart from the similarly limited evidence in the Eastern Coal Drops.

3.23 The cast iron beams span 20 feet (6.1 m) between the brick cross-walls, on which they bear onto padstones. (It is clear from the mezzanine level below that these padstones have not been raised, but rather that those supporting the westernmost track were lowered.) The beams are of inverted T-section but with a small lip or flange on one side only of the inverted stem, or web, of the T. The web is hump-backed, varying in depth from 8¼ inches at the walls to 14½ inches at midspan (some 210 and 370 mm). The large bottom flange also widens towards midspan on one side only - the side below the web lip - from 12½ inches (about 320 mm) at the wall to 14½-15 inches (370-380 mm) wide at midspan. The bottom flange is typically 1½ inches (38 mm) thick.
3.24 The pairs of beams are placed with their web lips facing outwards, offering a clear rectangular space of 5 feet 8 inches (1.73 m) between the webs. Onto the flanges were set longitudinal timber sleepers to which the running rails were secured at the standard gauge of 4 feet 8½ inches (1.435 m). This arrangement provided a virtually continuous slot between the rails so that the wagons could discharge their coal into the hoppers below through their bottom-mounted doors.

3.25 The platform inserted in 1897-9 was at almost exactly 1.0 m above the rail level of the single track into the building (removed c.1990). The platform edge was carried on substantial timber trusses spanning between the cross-walls. The platform as a whole is probably carried on similar trusses, timber joists, and the cast iron beams. The platform surface is generally asphalt on timber boarding.

3.26 The edge of the platform on the upper level of the Western Goods Shed projected through openings in the original west wall of the Western Coal Drops. Although these openings have now been infilled or boarded off to separate different tenancies, this confirms that the two buildings were interconnected while handling railway goods.

3.27 Several lines of partitioning has been installed across in the upper level allowing the space to be occupied by a number of different tenants as workshops and storage, but losing the sense of space when the level was entirely open.

3.28 The lower level is occupied also by a number of tenants. The interiors in the bays inspected here were similar.

3.29 The upper level is now separated from the intermediate and lower levels by a tongued and grooved timber ceiling carried on timber joists supported off the bottom flanges of the cast iron beams, which are exposed. Partial mezzanine floors have been inserted, carried on rolled steel beams, some of which bear onto stone corbels. This was practical because of the generous resulting storey height of above 4½ m in the lower level following removal of the coal hoppers.

3.30 The southernmost bay, where the wagon traverser was originally sited, is different.

3.31 The eastern two-thirds of this bay at both lower and upper levels now comprises office space, with a generous ceiling height in the lower level of over 4 m. Originally only the lower level was used as offices, as the traverser ran overhead.

3.32 The remainder of this bay is now occupied by a concrete staircase leading up to the upper level. In the north wall of this bay at upper level can be seen the projecting ends of the westernmost pair of cast iron beams that supported the single railway track into the building after 1897-9. The timber ceiling over this area is badly damp-stained.

3.33 The platform north of the Western Coal Drops, and the single-storey building that now occupies it, are described below. The building is of relatively recent origin, and has served variously as a bakery, offices, and other uses.

3.34 There is a narrow open alley between this later building and the Western Goods Shed. This alley was, until c.1990, the route of the one surviving railway siding running into the drops building. A second siding terminated against the east side of the north end of the platform. The 1930s railway plan in the RCHME report (see Clarke) on the Western Goods Shed shows a third siding running centrally into the platform area, flanked on either side by the twin column lines of a steel canopy roof. By the time of the Goad insurance plan of c.1942 this siding has gone; where it ran into the platform at its northern end there is now a concrete ramp up to the platform. A fourth siding ran
south along the full eastern side of the platform.

3.35 The raised stock brick platform is of the same height as the platform within the Western Coal Drops.

3.36 The steel-framed canopy, now enclosed within the building, comprises two rows of circular tubular stanchions, each supporting twin I beams (unusually laid on their side) spanning north-south and supporting profiled metal decking. This decking has a double-butterfly profile east-west, with ridge points at the east and west edges and at mid-width. The valleys occur over the stanchions, which are presumed to double as downpipes for rainwater.

3.37 The east wall of this building is of yellow stock brick, while the north and west walls are of concrete blockwork. Internal partitions are of lightweight studding.

4 PHASING ANALYSIS

4.1 The phasing of the building has been considered above, and can be summarised concisely.

4.2 The Western Coal Drops were built in 1859-60 with a viaduct, probably in timber, on their west side to allow the removal of empty coal wagons. A wagon traverser was located at the southern end of the building.

4.3 In 1897-9 major alterations were carried out in this area of the goods yard. The viaduct, by now rebuilt in iron, was dismantled and re-erected on the east side of the building to provide road access to the upper level. The building itself was converted to serve as a general goods depot. The coal hoppers and three out of four railway tracks were removed. The Western Goods Shed was built immediately alongside the Western Coal Drops, with access being available between the two buildings.

4.4 Goods traffic gradually declined and the last railway track in the building was lifted c.1990. It is currently in multiple occupation.

5 FUNCTIONAL AND RELATIONAL ANALYSIS

5.1 Although the coal hoppers were removed over a century ago, the building still allows a picture to be formed of the coal handling process for which it was originally constructed. Loaded wagons entered at the upper level on four railway tracks, each carried on pairs of cast iron beams spanning between the cross-walls. These allowed the coal to be discharged from bottom-mounted doors under gravity into storage hoppers at the intermediate level. From there the coal could be chuted, again under gravity, into sacks or directly into carts, for delivery by road.

5.2 The southernmost bay accommodated a wagon traverser which allowed the empty wagons to be released southwards from the drops, moved sideways onto the viaduct immediately to the west, and taken northwards, without disrupting incoming loaded wagons.

5.3 Conversion to a goods depot in 1897-9 made effective re-use of the viaduct, now relocated on the east side and providing road rather than rail access.

5.4 The building shared its function with the new Western Goods Shed immediately to the
west, with which it had on-the-level access at both levels.

5.5 More recently the building has continued to provide useful space.

6 LISTING CITATION

6.1 Not listed.

REFERENCES


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

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


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

Ordnance Survey, 5 feet to 1 mile series:

First edition surveyed 1871, published 1874

Second edition revised 1894, published 1895

LCC revised edition, 1938 (without amendment)
## SUMMARY: THE HERITAGE IMPORTANCE OF THE WESTERN COAL DROPS

### ARCHITECTURE AND FABRIC

The repeated arches on both levels along the east side create a pleasing rhythm.

The internal structure of paired cast iron beams, originally provided as part of the coal drop operations is relatively unusual. It was successfully incorporated when the building was converted to a goods shed.

This conversion also introduced a canopy won the eastern side of the building at its upper level. This canopy is a distinctive feature of railway goods sheds, although it is often lost when these buildings are re-used. Suitably repaired, it would give specific identity to the building.

### SETTING

When built, the Western Coal Drops were at the heart of the coal trade in the goods yard. They were surrounded by the earlier Eastern Coal Drops and their Viaduct, the Coal and Fish Offices to the south, and the Drops' own Viaduct and the former Coal and Stone Canal Basin to the west, its site later being occupied by the Western Goods Shed.

### SIGNIFICANCE RELATED TO TYPE

Fully enclosed coal drops were relatively uncommon structures, and few survive today. More common were open-air drops, such as those designed by Plimsoll and built just south of the canal on what is now the Camley Street Natural Park.

The Western Coal Drops were erected only a few years later than the Eastern Coal Drops, but represented an advance in the efficient handling of coal traffic.

### SIGNIFICANCE RELATED TO INTANGIBLES

The building, despite the loss of all coal-handling provisions, allows the process - essentially gravity-fed - to be visualised between coal wagon, storage hopper, and the coal merchant’s horse and cart.
25B  WESTERN COAL DROPS VIADUCT
BUILDING NAME

WESTERN COAL DROPS VIADUCT

LOCATION

On east side of Western Coal Drops, north of Wharf Road

CLIENT REF. | EH INVENTORY REF. | IHCM REF. | LINKED EH REFS.
---|---|---|---
25B | F3 | F6, JD | E, F2

NATIONAL GRID REF. | REPORT BY | DATE
---|---|---
TQ 3003 8360 | MNB, MTT | April 2004

Not listed
Within Regent’s Canal Conservation Area

1 DESCRPTIVE SUMMARY

1.1 Road viaduct serving upper level of former Western Coal Drops and also east side of Western Goods Shed. Northern part of Viaduct originally on west side of Coal Drops, but dismantled and re-erected on east side when Drops converted to goods shed 1897-9. Southern part newly-built in same period. (See Figures BD9 and BD10 in Part 2.)

1.2 Both structures of trough decking on secondary and primary beams on hollow circular cast iron columns. Secondary and primary beams in northern part are riveted plate girders, probably of wrought iron. Beams in southern part are mostly rolled I sections but with some riveted plate girders for longer spans and heavier loads. Construction date and maker’s name on beams (Dorman Long) strongly indicative of steel construction.

1.3 Apparently little altered since originally erected.

1.4 Ground surface under Viaduct retains granite setts.

2 HISTORICAL AND FUNCTIONAL SUMMARY

2.1 The Western Coal Drops (qv) were originally constructed in 1859-60 with high-level rail access for coal wagons using tracks entering the building from the north. A viaduct
with three railway tracks was built on their west side, adjoining the Coal and Stone Canal Basin, for the return of empty wagons once these had discharged their coal in the Drops. Wagons were transferred from the Drops onto the Viaduct by a traverser in the southernmost bay of the Drops building.

2.2 The original structural form of the Viaduct is unknown. It was probably of timber when first built, but appears then to have been rebuilt in iron, possibly in the last quarter of the 19th century.

2.3 An increase in freight traffic led the Great Northern Railway in the late 1890s to decide on the building of a new Western Goods Shed immediately to the west of the Drops. The Drops themselves were to be converted to serve as a general goods transit area with the installation of a road-to-rail transfer platform on their upper level, which would continue to be served by rail.

2.4 The new Western Goods Shed would occupy the footprint of the Viaduct on its original site. Consequently, the Viaduct was taken down and re-erected on the east side of the Drops, to afford road vehicle access to the platform, sections of which projected through wall openings on the east side of the Drops.

2.5 A large new section of viaduct, on a roughly triangular plan, was erected to the south of the relocated section to give road access to the upper level of the east side of the new Western Goods Shed.

2.6 These works were carried out in 1897-9.

2.7 At that time road freight vehicles would have been mainly horse-drawn carts and vans. The Viaduct continues to provide road access to these two buildings today, but carrying lorries and trucks.

2.8 Other than changes in road surfacing, and the more recent handrail on the eastern edge of the Viaduct, there is little evidence of significant alteration of the Viaduct structure in over a century.

3 DESCRIPTION

3.1 The Viaduct as it is today is structurally in two parts: the northern part along the east side of the Coal Drops, re-erected from the west side, and the new construction to the south of this, serving the upper level of the Western Goods Shed. Both provided road access and continue to serve this role. The roadway in both is carried on trough decking - a deeper, heavier, and stronger version of corrugated iron, much used in bridge construction. This is formed from wrought iron or steel plates pressed into a U-shaped profile but with sloping sides. Alternate plates are then inverted, and the resulting corrugated profile is secured by riveting adjacent plates together at mid-depth or their sides where they overlap. The decking spans onto secondary beams, which in turn span onto riveted plate girders or I beams, which are carried on circular cast iron columns.

3.2 The northern part, to the east of the Drops, is about 5 m wide at the north end and 8 m wide at the south end. The eastern edge of the Viaduct is convex on plan. It loosely follows the curve of the adjacent Eastern Coal Drops Viaduct, with a maximum width of about 10 m, but there is a crescent-shaped gap between the two structures that allows some daylight down to ground level here.
3.3 The northern part of the Viaduct has 16 bays of structure, echoing the 16 bays of the Western Coal Drops. Each bay has between three and six north-south secondary beams, depending on the bay width, and spanning onto east-west riveted plate girders at 20 feet (6.1 m) spacing.

3.4 The secondary beams here are generally plate girders, or more correctly boiler-plate girders, with web plates riveted to twin angles forming the top and bottom flanges. There are no flange plates. This form of construction is suitable for modest loadings, and generally dates from the third quarter of the 19th century, although even then it was more common to form plate girders with flange plates connected to web plates by angles, as the flange plates could be sized to give the required bending strength for the loads to be carried.

3.5 Each of the western line of columns stands in front of a brick pier of the Western Coal Drops and is strapped to the pier near its head. These straps appear to be intended to provide lateral and longitudinal stability to the Viaduct, which otherwise is unbraced. The eastern line of columns supports the primary beams with no lateral connection between column heads. However, pierced lugs either side of each head suggest that such bracing might either have been intended, or - more probably - had been provided in the structure’s previous location on the west side of the Coal Drops. Other rivet or bolt holes in the beams and girders attest to previous connections used when the Viaduct stood to the west of the Drops.

3.6 A notable feature of this part of the Viaduct is an expansion joint detail in the seventh bay to the north. In all other bays the secondary beams are secured at either end to a primary beam by riveting to the beam web and bolting to a cast iron support bracket carried on the bottom flange of the primary beam. However, in this particular bay the northern end of the secondary beams simply sit unconnected into a ‘shoe’ formed of riveted plate. This allows unrestrained longitudinal movement at mid-length of the Viaduct - an unusually mature provision for thermal movement over the 100 m or so length of the Viaduct.

3.7 The southern part of the Viaduct is of more irregular plan form. Column location had to take account of ground level road access into the basement of the Western Goods Shed and likewise road access northwards along the eastern side of the Western Coal Drops. As a result, columns are at up to 9 m spacing, and a number of the primary and secondary beams meet in non-orthogonal intersections at column heads.

3.8 At the south end of the Western Coal Drops, the Viaduct is set back to create a rectangular lightwell, allowing natural light down into the area below and into the south wall windows of the ground floor office.

3.9 Both primary and secondary beams in this southern part are generally rolled I sections, with longer spans and heavier-loaded sections being augmented by riveted flange plates. Several beams bear the name ‘DORMAN LONG’ rolled into the web. This was a well-known iron and steel company, based in Middlesbrough, which was among the first to roll structural sections in steel as an alternative to wrought iron from the late 1880s.

3.10 Cast iron columns bear maker’s plates ‘W RICHARDS & CO. LEICESTER’, as do some of the cast iron protective quadrant-section kerbs fitted around them, separated by a concrete infill. (The same company in this same period supplied the cast iron columns in the lower level of the Western Goods Shed (qv), and had earlier supplied the cast iron columns that support the 1888 West Handyside Canopy roof (qv) to the Western Coal Drops Viaduct April 2004.
west and north of the Midland Goods Shed.

3.11 The dating of the Viaduct construction (1897-9) and the presence of the name of Dorman Long on the rolled beams in the southern part of the Viaduct strongly suggests that steel was used for the beams here. It is more probable that the girders in the re-used northern part of the Viaduct are of wrought iron. Sampling for metallurgical analysis could confirm this.

3.12 The condition of the trough decking and beams varies from good to severely corroded locally, no doubt as a result of water leakage from poorly-maintained road surfacing. However no evidence of imminent structural distress was noted.

3.13 The handrail along the eastern edge of the northern part of the Viaduct comprises two horizontal tubular steel rails carried on uprights. These are either relatively modern steel joist sections, or cast iron uprights, some of these bearing the railway company’s cast-in initials GNR, as are to be found also on the Plimsoll Viaduct and elsewhere in the Goods Yard. New steel beams have been inserted in sections to carry the handrail.

3.14 The ground surface below the Viaduct retains its granite setts.

3.15 The Viaduct inevitably changes the nature of the covered spaces below, which would otherwise be open to the sky. Not least, it provides a dry environment. The lower level of the east side of the Western Coal Drops is effectively fronted by a simple arcade, while the southern part of the Viaduct creates an undercroft in a large triangular space between the southern end of the Drops, the discreet entrance to the lower Western Goods Shed, and the Wharf Road Viaduct.

4 PHASING ANALYSIS

4.1 The two parts of the Viaduct appear to have undergone minimal alteration since they were erected just over a century ago, and throughout this period have provided road access to the upper levels of the Western Coal Drops and the Western Goods Shed.

5 FUNCTIONAL AND RELATIONAL ANALYSIS

5.1 The northern part of the Viaduct was originally erected on the western side of the Drops as a rail viaduct, providing a route for the return of empty wagons once these had unloaded inside the Drops. (This is considered in more detail in the report on the Western Coal Drops, qv.)

5.2 The growth of general goods traffic towards the end of the 19th century led the Great Northern Railway to expand the facilities for handling this. A new, large, Western Goods Shed was built immediately to the west of the Drops, on the site of the Coal and Stone Canal Basin. And the Western Coal Drops were converted from handling coal, to deal with goods traffic instead.

5.3 The siting of the new shed required the removal of the existing rail viaduct, but efficiency required that the upper level of the Drops (and also the new Western Goods Shed) should be accessible by road independently of the lower level of these buildings. The logical solution was to relocate the existing rail viaduct serving the Drops from their west to their east side, and to convert this to road use - merely a matter of removing the railway tracks and providing road surfacing.
5.4 A new extension of this viaduct to the south both served the upper level of the Western Goods Shed, and provided a road connection from the upper level of the Western Coal Drops to Wharf Road and the southern part of the goods yard.

5.5 This arrangement was implemented and, to judge from the absence of significant alterations, has worked satisfactorily ever since.

6 LISTING CITATION

6.1 Not listed.

REFERENCES


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

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


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

Ordnance Survey, 5 feet to 1 mile series:

First edition surveyed 1871, published 1874

Second edition revised 1894, published 1895

LCC revised edition, 1938 (without amendment)
SUMMARY: THE HERITAGE IMPORTANCE OF THE WESTERN COAL DROPS VIADUCT

ARCHITECTURE AND FABRIC
The two sections of the Western Coal Drops Viaduct, built probably less than two decades apart at the end of the 19th century, illustrate the structural transition from wrought iron to steel. The earlier northern section in wrought iron was dismantled from the western side of the Drops and reassembled on the east side when the Western Goods Shed was built. The later southern section made early use of rolled and riveted steel sections, with longer spans.

The carefully-detailed movement joint midway along the northern section is evidence of mature and thoughtful design.

SETTING
The three viaducts, side by side, are defining elements, creating a complex and interesting spatial arrangement at both upper and lower levels.

SIGNIFICANCE RELATED TO TYPE
Coal drops and their associated viaducts were once common structures in railway yards, and in ports and along the riverside in coal-mining areas. These are becoming increasingly few in number. Unusually, the King’s Cross Goods Yard retains two sets of coal drops and their viaducts, very close together.

SIGNIFICANCE RELATED TO INTANGIBLES
The Viaduct is a ‘tough’ but efficient and pleasing feature in a major industrial complex, providing essential road access to the upper level of the Western Coal Drops and the Western Goods Shed.

The lower level has a characterful atmosphere, especially at the northern end.
26 PLIMSOLL VIADUCT
1 DESCRiptive SUMMARY

1.1 Surviving north-east curved part of disused railway viaduct, rebuilt in 1920s or 1930s, that led from embanked northern part of site southwards between Eastern and Western Coal Drops Viaducts, curved to south-west across low-level yard, then crossed Wharf Road Viaduct at road level. Formerly continued across Regent's Canal on bridge to serve Plimsoll Coal Drops. Conveyed loaded coal wagons to these coal drops on west bank of canal, and returned empty wagons northwards to marshalling yard, using horse power assisted by gravity. (See Figure BD11 in Part 2.)

1.2 Viaduct has 23 blue engineering brick piers, carrying large longitudinal concrete-encased trough beams and smaller reinforced concrete beams that supported twin railway tracks (now removed). Transverse precast concrete beams supported on smaller longitudinal beams. Northernmost three bays against embanked ground to north are blind, and contain one or more rooms. Twin railway tracks on Viaduct had opposed gradients, to facilitate gravity assistance to haulage of wagons to and from Coal Drops.

1.3 Railway track survives on Wharf Road. Elements of earlier 1865-6 viaduct survive within Wharf Road Viaduct, as do posts of level crossing gate.
2 HISTORICAL AND FUNCTIONAL SUMMARY

2.1 The Viaduct was first built in timber in 1865-6, to serve Samuel Plimsoll’s improved Coal Drops on the west side of the canal (on the site of what is now Camley Street Natural Park). Plimsoll is better known for the introduction of the Plimsoll Line in shipping, but he also revolutionised the design of coal drops. The Camley Street (then called Cambridge Street) Coal Drops were designed with chutes that greatly reduced the breakage of coal as it was being discharged from wagons, compared with earlier methods of handling. Coal trains entered the Goods Yard from the Great Northern Railway main line south of the Copenhagen Tunnels, and the loaded wagons were then transported over the Viaduct, crossing the canal, onto the Plimsoll Coal Drops where they were unloaded. They were returned on the same viaduct, to be taken north for reloading.

2.2 The design of the Viaduct set the outward and return railway tracks on opposing gradients, allowing gravity to reduce the effort required in horse traction, with a 0.75 m (2 feet 6 inches) level difference between the tracks at the Viaduct's north end. The eastern track took the wagons to the Coal Drops, the western track serving as the return track. The wagons would have been manoeuvred on a traverser between the individual coal chutes and the Viaduct.

2.3 Surviving brickwork of the 1860s includes the piers preserved within the structure of the Wharf Road Viaduct. At this time, however, the main structure of the Plimsoll Viaduct was of timber.

2.4 The Goad Fire Insurance Plan of 1921 states that the tracks were "carried on wooden trestles", which indicates that the Viaduct was rebuilt in its present form, probably in the 1920s or 1930s. However, the bridge over the canal was not rebuilt at this time.

2.5 The precast concrete deck elements date to the mid 20th century, and form the supports for the walkways between the tracks.

2.6 The wrought iron lattice-trussed canal bridge was demolished in the mid-1960s, after the Plimsoll Coal Drops had closed, and the railway track on the Plimsoll Viaduct was removed. A concrete single-lane roadway was built between timber baulks, on the western part of the Viaduct.

3 DESCRIPTION

3.1 The Plimsoll Viaduct is curved on plan. It formerly carried twin railway tracks from the higher level area to the north of the site, across the low-level yard, to the Wharf Road Viaduct south of the Western Coal Drops. It originally continued as a bridge over the Regent's Canal to the Plimsoll Coal Drops on the east side of Camley Street.

3.2 The present Viaduct structure probably dates to the 1920s or 1930s.

3.3 It currently has 23 blue engineering brick piers. Each pier is pierced by two arches, except for the northernmost two piers. The northernmost three piers are blind on their west side, and contain one or more rooms that have not been accessible for inspection. The south-west abutment is formed by the arches of the widened Wharf Road Viaduct.

3.4 The piers support four large longitudinal pairs of concrete-encased steel beams with...
troughs between them (two pairs under each former railway track). Either side of each pair of larger beams are reinforced concrete beams of smaller cross-section, with a single reinforced concrete beam set between the two inner troughed beams. The smaller beams support east-west precast concrete beams which carried the railway track (now removed). On the south-west span there is poured concrete instead of the precast concrete beams. The substructure of the south-east track survives.

3.5 The two railway tracks were built on opposing gradients, with a 0.75 m difference in level at the north end of the Viaduct. Between the seventh and fourth piers from the south, the eastern track falls to the same height as the western track. The eastern track took the loaded wagons to the Plimsoll Coal Drops on the west bank of the canal, the western track serving as the return track. At the north end of the Viaduct, the two tracks are set relatively far apart. They converge slightly towards the south. The rails of the tracks survive across the surface of Wharf Road. Two recesses (one still holding a timber post) survive in the brickwork of the Wharf Road Viaduct widening, indicating the position of gate-posts for the level crossing gates controlling road and rail traffic across the Wharf Road Viaduct. These survived to their full height in 1976, and related to both phases of the Plimsoll Viaduct.

3.6 The Viaduct is drained by rainwater pipes set into recesses in the western sides of the piers, except for the second and third piers from the south that have their drainage pipes set into recesses in their north sides. There are timber boards along the sides of the Viaduct, supported on steel brackets. The handrails along the sides of the Viaduct have cast iron posts and two steel rails. Some of the posts have ‘GNR’ cast onto one face. Every fourth post has a pulley wheel attached for a cable. The brackets are in a poor state of decomposition. The concrete is generally in fairly good condition. Locally it has spalled, as a result of rusting of the steel reinforcing bars and girders. The brickwork is in excellent condition. Some of the gaps between the piers (in the fourth-seventh arches from the south) have been enclosed to create storage space, at some time in the late 20th century. There may be archaeological evidence of the construction of the original timber viaduct and bank within and beyond the northern end of the Viaduct, and beneath its piers.

4 PHASING ANALYSIS

4.1 Two curved brick walls survive in the arches of the Wharf Road Viaduct, from the 1865-6 Plimsoll Viaduct. The two level crossing gate-posts, around which the brickwork of the Wharf Road Viaduct’s widening was built, may date to the 1860s viaduct as they seem to predate the widening of Wharf Road Viaduct (qv), which is likely to have taken place soon after 1898-9. However, it is not certain whether the Wharf Road Viaduct’s brickwork was rebuilt in this location using blue brick when the Plimsoll Viaduct was replaced in the 1920s or 1930s.

4.2 The blue brick piers are likely to date to after 1921, as the timber viaduct is still shown on the 1921 Goad Fire Insurance Plan. They are later than the gault brick arching of the Wharf Road Viaduct’s widening. The concrete-encased pairs of steel beams were probably erected when the piers were rebuilt. The railway tracks would probably have run on these beams.

4.3 The reinforced concrete beams may be contemporary with the concrete encased steel trough beams. However, the fact that they support mid 20th century precast concrete beams suggests that they may have been added later, with these precast beams. The hand rails are probably mid 20th century.
4.4 The concrete roadway represents the latest phase of the Viaduct's use.

5 FUNCTIONAL AND RELATIONAL ANALYSIS

5.1 The Plimsoll Viaduct was built initially in timber in 1865-6, to serve Samuel Plimsoll’s improved Coal Drops on the western bank of the canal, on the site of what is now Camley Street Natural Park.

5.2 The coal trains entered the Goods Yard, and the loaded wagons were transported on the Viaduct to the Plimsoll Coal Drops for unloading. The Viaduct crossed the Wharf Road Viaduct on the level, which was strengthened to take the increased loading.

5.3 Some time after the construction of the Western Goods Shed, probably in the 1920s or 1930s, the Viaduct was rebuilt in its present form with concrete-encased steel beams and brick piers, although the bridge over the canal appears not to have been rebuilt.

5.4 The design of the Viaduct set the outward and return railway tracks on opposing gradients to enable gravity assistance to reduce the effort required by horse traction. The eastern track took the wagons to the Coal Drops, and the western track was the return track. The wagons would have been manoeuvred between the tracks using a traverser at the Coal Drops after unloading, ready for the return journey along the Viaduct.

5.5 The canal bridge was demolished in the late 20th century, after the Plimsoll Coal Drops had closed, and the railway tracks were lifted. The Viaduct then became a roadway.

6 LISTING CITATION

6.1 Not listed.

REFERENCES

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


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

Ordnance Survey, 5 feet to 1 mile series:

First edition surveyed 1871, published 1874

Second edition revised 1894, published 1895

LCC revised edition, 1938 (without amendment)
**SUMMARY: THE HERITAGE IMPORTANCE OF THE PLIMSOLL VIADUCT**

**ARCHITECTURE AND FABRIC**

The Viaduct’s value lies in the fact that it preserves the curved line and split levels of the earlier 1864 viaduct leading to the Plimsoll Coal Drops.

**SETTING**

The surrounding heritage resources are of relatively high quality.

The Eastern Coal Drops Viaduct to the east is of similar construction. Blue engineering blue brick, as used on the rebuilt Plimsoll Viaduct, is found in many of the later 19th-20th century elements of the Goods Yard.

The Viaduct creates enclosure.

**SIGNIFICANCE RELATED TO TYPE**

The design of the Viaduct is unusual.

The grading of the twin Viaduct tracks on opposing slopes, to make use of gravity in both directions, facilitates the movement of wagons and is an ingenious and interesting feature.

**SIGNIFICANCE RELATED TO INTANGIBLES**

The Viaduct was built by Samuel Plimsoll in his struggle to become independent of the GNR for the handling of his coal.
27A EASTERN COAL DROPS VIADUCT
Not listed
Within Regent’s Canal Conservation Area

1 DESCRPTIVE SUMMARY

1.1 Former railway viaduct with three sidings, against western face of Eastern Coal Drops (qv). Rebuilt after 1921 in blue engineering brick with segmental arches. Latterly served warehouses in southern part of Eastern Coal Drops building. Its slightly longer predecessor originally retrieved wagons, empty after being unloaded in Coal Drops, via traverser at southern end of Coal Drops and Viaduct. (See Figures BD11 and BD12 in Part 2.)

1.2 Construction is of 24 blue brick arches, concrete pavement, asphalt road surface, and steel handrail. Former railway sidings and ballast removed, but capstans and fairleads remain at southern end, used to haul wagons along the Viaduct. Late 20th century steel staircase at southern end provides access from lower-level yard to upper floor of Eastern Coal Drops.

2 HISTORICAL AND FUNCTIONAL SUMMARY

2.1 There were two phases of viaduct serving the Eastern Coal Drops. The original viaduct was built between 1860 and 1865, at the same time as the traverser was installed at the southern end of the Eastern Coal Drops. It carried three railway tracks. Structural evidence surviving in the Coal Drops’ west wall, confirmed by a c.1860 site plan, indicates that the building was initially built without a traverser. Initially, coal wagons would have both entered and left the Coal Drops from their northern end. The original viaduct would have been built alongside the Coal Drops on their western side.
when it was decided to install the traverser. Wagons, after unloading in the Coal Drops, would be transferred by the traverser at the southern end of the building sideways onto the Viaduct. This extended beyond the southern end of the Coal Drops and their traverser. The 1865 Humber plan shows that the extended southern end of the Viaduct was “for breaks” [sic]. Evidently brake vans, which were vehicles that had to be attached to the back of a goods train before continuous braking was introduced in wagons, were taken to the southern end of the Viaduct. Unloaded wagons were carried individually by the traverser onto the Viaduct, where they were coupled together into trains. Once the last wagon had been coupled to the others, the brake van would then be coupled to this rear wagon, and the train would leave the north end of the Viaduct, hauled by a steam locomotive. Horses would originally have been used to haul wagons within the Coal Drops and on the Viaduct. Hydraulic capstans were later used to move them.

2.2 The Viaduct with its traverser is shown on the 1871 and 1894 Ordnance Survey maps. An 1882 plan of the Goods Yard in the Public Record Office shows that the southern 30 bays of the Eastern Coal Drops had by then been converted to warehousing (the southernmost bays being a bottle warehouse), while the northern 20 bays remained in use as coal drops. Loading doors were inserted in the western wall of the Eastern Coal Drops’ upper level, allowing goods to be loaded and unloaded from the warehousing onto wagons on the Viaduct’s easternmost track. The two tracks to the west remained in place, and would have been used as sidings. (Conversion of the southern section of the Coal Drops as warehousing prevented the continued use of the traverser to serve the remaining northern bays of coal drops.) The earlier Viaduct was still in place on a Great Northern Railway plan of 1906 and on the 1921 revision of the Goad Fire Insurance Plan, which shows that its structure was of cast iron columns and wrought iron girders and a timber deck (by then covered with concrete).

2.3 The current blue-brick Viaduct was built after 1921. The rebuilt structure was slightly shorter than its predecessor, as it no longer had to extend as far south as the traverser. It served the three loading bays of the warehousing. These were protected from the elements by canopies. On the southern end of the Viaduct were hydraulically-powered capstans and fairleads (which still survive in various states); these were provided to pull wagons along the three tracks on the Viaduct. A fairlead set into the west wall of the Coal Drops towards its southern end would also have been part of this system of traction.

2.4 The warehousing probably ceased to be used as such in the 1960s; the siding which served it had been lifted by 1976. The western two tracks continued to serve as sidings, but these tracks too had been lifted by 1982 and their ballast removed. The present asphalt surface has troughs in it, aligned with rainwater pipes, suggesting that this may be the original waterproof surface beneath the ballast.

2.5 The Viaduct currently serves as a high-level pedestrian and road access to the southern part of the top floor of the Eastern Coal Drops, which since the 1980s has been converted into a nightclub. The current exits from this onto the Viaduct are enclosed by modern temporary structures and lightweight porches built off brick stairs sitting on the Viaduct’s road surface.

3 DESCRIPTION

3.1 The Viaduct consists of some 24 segmental arches built with blue engineering brick laid in English bond. The spans at 20 feet (6.1 m) centres align with the double bays of the Coal Drops, allowing access from the lower-level yard via the arches into the lower
level of the Coal Drops. The protruding mortar visible in joints on the brick arch soffits indicates that these arches were built directly off timber formwork.

3.2 Precast reinforced concrete cantilever brackets support a concrete edge beam, on which is built the pavement of concrete slabs, along the outer edge of the Viaduct. This represents a mid 20th century widening of the Viaduct. The concrete in many of these brackets has cracked and spalled, indicating corrosion of the reinforcement. The Viaduct deck here has an asphalt surface, with areas of concrete visible beneath where this has suffered damage. The Viaduct is drained through pipes set into recesses in the western face of its piers. A steel handrail consisting of L section posts supported on steel brackets is set alongside the reinforced concrete brackets mentioned above. It may represent a separate, and presumably later, phase of work. The handrail has two rails braced with steel supports set into the pavement and the brickwork of the wall under. The handrails are joined to the eastern handrail of the Plimsoll Viaduct at their northern end.

3.3 At its northern end, the Viaduct is abutted on its west side by the Plimsoll Viaduct (qv), and access to the arches there is through the latter viaduct. The four presumed northernmost spans were not accessible for inspection or visible from outside, although there is a doorway through the northern pier of the 20th arch from the south, into the next arch north. Similar openings occur in at least some of the other piers, as may be seen in the 12th arch from the south.

3.4 South of here and clear of the Plimsoll Viaduct, the arches were formerly open, facing onto the low-level yard. Five arches towards the north remain open. A few arches at the south end had been infilled with brickwork or closed off by steel doors by 1976 and others have followed. The 12th arch from the south is now a low-level entrance to the nightclub, leading eastwards via a raised concrete platform to stairs within the Eastern Coal Drops. A good example of a 19th century type of semi-portable cast iron platform weighing machine is displayed here.

3.5 There is some cracking in the brickwork at the south-western corner of the Viaduct. This may be due to some ground movement, or wartime bomb damage.

3.6 On the Viaduct deck there are five timber structures with lean-to roofs built over five sets of steps serving doors to the nightclub. These are of relatively recent construction.

3.7 There is a group of capstans and fairleads at the southern end of the Viaduct deck. Two fairleads are located either side of the Viaduct opposite each other; one is set into a recess in the Coal Drops' west wall, and the other is on the Viaduct's west pavement). Two fairleads flank a capstan some 2 m from the southern end of the Viaduct. The fairleads are set onto concrete bases, while the capstan is set into a cast iron housing. The fairlead nearest the Eastern Coal Drops' wall has its outer casing missing, leaving only its base and spindle.

3.8 At the southern end of the Viaduct’s west face there is a length of cast iron hydraulic pipe extending from the ground, bearing the number “1984” (this is presumed to be a specification or part number rather than a date, as the hydraulic system here was abandoned many years earlier).

3.9 A recent steel staircase immediately alongside the Viaduct’s southern wall rises to provide access from the south-west doorway into the ground floor of the Coal Drops, up to the upper level of the Viaduct in its south-west corner. It stands on a concrete platform that has remodelled an earlier one that was seen in 1976.
3.10 A broken granite guard stone protects the projecting south-west corner of the Viaduct.

4 PHASING ANALYSIS

4.1 The Public Record Office holds a site plan produced between 1860 and 1865, which was used in correspondence of 1865 relating to the purchase of the site of the Plimsoll Coal Drops. It shows that the Eastern Coal Drops initially did not have a viaduct alongside. The traverser, an integral part of the Viaduct's original operation, is shown by archaeological evidence to have been inserted after the construction of the Eastern Coal Drops (qv).

4.2 A viaduct complete with traverser is shown on a plan in Humber's 1865 paper. It must have been constructed shortly before then. This viaduct extended slightly beyond the southern end of the Eastern Coal Drops, necessitating the relocation of weigh-houses shown on the earlier plan.

4.3 This viaduct is shown unaltered in layout on the Ordnance Survey revisions of 1871, 1894 and 1913, on the railway site plan of 1906, and on the updating of the Goad Fire Insurance Plan to 1921. The 1921 plan shows this viaduct as having iron girders on cast iron columns and a "concrete-covered wooden platform", the concrete being perhaps a renovation of an earlier timber deck.

4.4 The present viaduct is constructed in heavy brick arches, in the Staffordshire blue brickwork that was widely used for railway structures in the first quarter of the 20th century. Such construction was outmoded by the 1930s (brick viaducts on the Piccadilly line extension in North Middlesex, opened in 1932, are a late example). A dating of the 1920s for the rebuilding of the viaduct is therefore likely. The 1942 revision of the Goad plan shows the present structure. The London County Council's 1938 revision of the Ordnance Survey was a partial revision indicating only major changes, so that - although it shows the Viaduct unaltered since 1894 - this is not evidence that the earlier viaduct still existed in 1938.

4.5 The present viaduct is shorter than the previous one by 6-7 m, facilitating the further widening of the Wharf Road Viaduct (qv) and the opening-up of the low-level yard to larger road vehicles. It is also slightly lower than the previous viaduct.

4.6 The fact that the current asphalt surface undulates, and is troughed in line with the locations of the Viaduct's drainage channels and pipes, suggests that the asphalt is either original to the blue brick viaduct or renewed. The capstans and fairleads are likely to date to the early 20th century, and may be original to the rebuilt viaduct.

4.7 The concrete pavement extension and precast concrete brackets supporting it probably date to the 1940s-50s, perhaps replacing earlier timberwork.

5 FUNCTIONAL AND RELATIONAL ANALYSIS

5.1 The original viaduct must have been built once it was decided to construct the traverser to move empty wagons from the southern end of the Eastern Coal Drops onto the Viaduct. The pre-1865 site plan and structural evidence surviving in the Coal Drops' west wall indicates that the building was initially built without a traverser. Without it, coal wagons would have both entered and left the Coal Drops through their northern end.
5.2 The original viaduct had three railway tracks. After passing through the Coal Drops and being unloaded, the wagons would be carried empty by the traverser at the southern end of the building onto the southern end of the Viaduct. The Viaduct extended beyond the southern end of the Coal Drops building and its traverser. Humber’s 1865 plan states that this southern end was ‘for breaks’. Evidently brake vans, which were vehicles that had to be attached to the back of a goods train before continuous braking was introduced in wagons, were taken to the southern end of the Viaduct. Unloaded wagons were carried individually by the traverser onto the Viaduct, where they were coupled together into trains. Once the last wagon had been coupled to the others, the brake van would then be coupled to this rear wagon, and the train would leave the north end of the Viaduct, hauled by a steam locomotive. Horses would originally have been used to haul wagons within the Coal Drops and on the Viaduct. Capstan shunting, using hydraulically-powered capstans, was a later 19th century development introduced to economise on locomotive and horse power.

5.3 By the time of the rebuilding of the Viaduct, the southern part of the Eastern Coal Drops had been converted to warehousing (its southern bays being a bottle warehouse), while the northern 20 bays remained in use as coal drops. Several loading doors on the west side of the Eastern Coal Drops’ upper level allowed goods to be unloaded from wagons on the easternmost siding on the Viaduct. Conversion of the southern section of the Coal Drops as warehousing prevented the continued use of the traverser to serve the remaining northern bays of coal drops. The western two sidings would have been used as wagon sidings.

5.4 The current viaduct is shorter than its predecessor, as it could no longer make use of a traverser. It now provided a siding, serving the loading doors to the warehousing. The two fairleads flanking a capstan, aligned along the southern end of the Viaduct, were set at the ends of the three tracks. The hydraulic pipe next to the southern pier provides evidence of the source of power to the capstan.

5.5 The present viaduct is perhaps 0.6 m or more lower than the original one, which would have been set to the level of the tracks that entered the Eastern Coal Drops on way-beams, i.e. at the level of the present Coal Drops’ upper floor. This difference in level would have eased the task of unloading glass bottles and other goods from goods vans through the doorways of the warehousing, by making building and van floor levels closer to each other. There was never room, however, for a platform to be built outside the warehouses, so goods vans would have needed to be carefully lined up alongside the loading doors.

5.6 Each viaduct arch was of the same width as, and aligned with, the adjacent two lower-level bays of the Eastern Coal Drops. In addition, many of the Viaduct arches were linked longitudinally. These facts suggest that the space beneath the Viaduct arches probably participated in the work and life of the Coal Drops building. The longitudinal openings indicate that the arches were used as an access route between the lower-level cells, as well as providing a way in and out of the building to the lower level yard.

5.7 The southern warehouse’s upper floor has more recently been converted into a nightclub. The Viaduct deck currently provides high-level pedestrian and road access to the top floor of the Eastern Coal Drops. At the time of writing, it also houses temporary structures and lightweight porches built on brick stairs, enclosing the current upper-level doorways into the Coal Drops.

5.8 The Viaduct has always been an integral component of the Eastern Coal Drops, and has adapted to the building’s changing functions.
6 LISTING CITATION

6.1 Not listed.

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First edition surveyed 1871, published 1874
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**SUMMARY: THE HERITAGE IMPORTANCE OF THE EASTERN COAL DROPS VIADUCT**

<table>
<thead>
<tr>
<th>ARCHITECTURE AND FABRIC</th>
<th>The Viaduct’s presence is vital to the interpretability of the Eastern Coal Drops’ later phase as a warehouse served by rail, relating to the doors and canopies of the western wall and the delivery of goods by sidings.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>The blue brickwork has a bold integrity, although of a later period than most of the other historic features of the site.</td>
</tr>
<tr>
<td></td>
<td>Its historical and physical integration with the Coal Drops is clear from its form and construction.</td>
</tr>
<tr>
<td>SETTING</td>
<td>This viaduct is one of four that encloses the lower-level yard.</td>
</tr>
<tr>
<td></td>
<td>The Viaduct shares important historical and functional links with the surrounding structures and spaces.</td>
</tr>
<tr>
<td>SIGNIFICANCE RELATED TO TYPE</td>
<td>Constructionally, the Viaduct is unremarkable, except for its late date of reconstruction.</td>
</tr>
<tr>
<td></td>
<td>As the successor to the original iron and timber Coal Drops Viaduct structure, it is important to the building type.</td>
</tr>
<tr>
<td></td>
<td>The capstans and fairleads are important as reminders of the shunting of wagons into sidings and as examples of these features of hydraulic power.</td>
</tr>
<tr>
<td>SIGNIFICANCE RELATED TO INTANGIBLES</td>
<td>The Viaduct’s historic features relate to the history of the site and the wide range of activities in a major railway goods yard.</td>
</tr>
</tbody>
</table>
27B EASTERN COAL DROPS
BUILDING NAME

EASTERN COAL DROPS

LOCATION

In the lower-level yard, immediately east of the Eastern Coal Drops Viaduct and west of the Western Transit Shed

CLIENT REF. | EH INVENTORY REF. | IHCM REF. | LINKED EH REFS.
--- | --- | --- | ---
27B | F1 | F1/1, F1/2, F5 | F3

NATIONAL GRID REF. | REPORT BY | DATE
--- | --- | ---
TQ 3005 8356 | KS, MTT | April 2004

Listed Grade II
Within Regent’s Canal Conservation Area

1 DESCRIPTIVE SUMMARY

1.1 Coal drops structure built in 1850 for transfer of coal from rail wagons to road carts, with intermediate storage, under cover of overall roof. Sited to west of Granary group, aligned parallel to it. Southern three-fifths of Coal Drops building converted to warehousing and other uses in later 19th century. Unaltered northern part severely damaged by fire in 1985. Eastern Coal Drops Viaduct (qv) attached to western wall of Coal Drops. (See Figures BD11 and BD12 in Part 2.)

1.2 Of unprecedented scale, approximately 153 m (502 feet) long and 14.5 m (48 feet) wide, and arranged on three levels. Four railway tracks ran longitudinally at high level. Storage hoppers at mezzanine level, and coal merchants’ open-fronted bagging-up spaces at ground level. Structural module of 3.05 m (10 feet), repeated 50 times along structure. Cross-walls at 20 foot centres, and longitudinal spine wall, divided mezzanine and lower levels into two lines of 24 originally identical cells. Formerly a mechanical traverser at high level in twenty-fifth double bay, at southern end, where ground floor contained offices.

1.3 Walls of multicoloured stock brick (yellow-faced purple fabric 3032) laid in English bond. Internal structures of timber with limited use of iron, and slate-clad roof. Composite timber roof trusses now missing in fire-damaged northern part. Trusses have wrought iron queen-rods suspended from cast iron connecting boxes. Above centre of each bagging-up bay, midway between cross-walls, is transverse cast iron
beam standing on cast iron Tuscan columns.

1.4 Long elevations where not affected by warehouse additions have large, round-arched openings at upper level. Each northernmost arch has original infilling of brickwork, to act as longitudinal buttress to whole line of arches. Walls modelled with projecting brick string courses and recessed panels. To span bagging-up openings at ground level, segmental arches spring between cross-walls and lozenge-shaped cast iron skewbacks on cast iron columns. Above each column, blind oculus formed in brickwork.

1.5 Northern end abuts brick retaining wall; here before fire, at track level, was full-width opening beneath vertical-boarded gable. Southern end has similar vertical-boarded gable, above brick end wall, that was probably altered in warehouse conversion.

1.6 At southern end, site of traverser that transferred wagons laterally on wheeled platforms before warehouse conversion is marked by cast iron lintels embedded in side walls of upper level. Original offices beneath at ground floor have three round-headed windows on eastern side.

1.7 Southern 30 bays of building converted for warehousing before 1882. All levels appear then to have been arranged into three units of 10 bays each, with repetition of some features in each module. Upper and lower arcades infilled with brickwork containing windows and doorways, and windows inserted in mezzanine on eastern side, cutting through string course. Ground floor and mezzanine windows have cast iron frames, while upper floor windows are half-round.

1.8 Two loading doors on upper level on eastern side, one with cat-head beam and other with wrought iron wall crane. Narrow inserted loading doors beneath them in the mezzanine. At ground level, substantial timber doorways in three bays.

1.9 At upper level on western side, above Viaduct, former loading doors partly sheltered by three cantilevered timber canopies, one of which remains.

1.10 During warehouse conversion, beams supporting railway tracks were moved further apart and slightly raised to support timber floor; timber stanchions inserted beneath them in place of coal bins. Upper level subdivided by brick partition walls into three units of 10 bays each, with skylights added in roof. Spine wall and sections of cross-walls removed from mezzanine level. Chimney stack rises from each of gable and dividing walls.

1.11 Former staircases within warehouses, of timber with open treads, since replaced. Southernmost warehouse had system of ramps for access by barrows or handcarts. Late 19th century goods lift through all floors, hand-operated by rope and pulley, is survivor of four observed in 1976 (five shown on 1906 plans). Pairs of curved wing walls within ground floor associated with two of these lifts.

1.12 In front of southern end wall, a single-storey office with partly-hipped roof, built c.1890 in bright yellow stock bricks with blue brick quoins.

1.13 New fabric inserted in late 20th century conversion of warehouse portion, but structure not significantly altered otherwise except for relocation and fire-enclosure of staircases. Ground floor spaces let for light industrial and studio uses; mezzanine is partly subdivided for small office units. Nightclub occupies whole of top floor, with staircase access from entrance doors on western side beneath the Viaduct. Windows and skylights boarded over on top floor, and various structures inserted within parts of
roof space.

1.14 Northern two-fifths of range remains derelict and roofless after fire, with most woodwork severely charred or missing, and with fractures in brickwork resulting from thermal expansion. The brickwork still stands full-height, with scaffold shoring.

2 HISTORICAL AND FUNCTIONAL SUMMARY

2.1 The Eastern Coal Drops were opened by the Great Northern Railway (GNR) in 1851 as a major component of the Goods Yard, to handle the all-important coal traffic, excepting that part which was transferred to canal barges in the Coal and Stone Basin, which was on the site of the Western Goods Shed (qv).

2.2 Coal wagons were shunted in trains into the northern end of the building at high level, and discharged through their bottoms into timber storage bins at intermediate level. These bins discharged through chutes in their bottoms, with regulating gates, directly into carts, or else to be bagged up into sacks for customer delivery.

2.3 By 1865, a traverser had been installed at the southern end to speed the turnaround of wagons. The empty wagons were transferred sideways by the traverser, possibly comprising two platforms on wheels, sharing a single pair of transverse rails, onto a parallel track on the original Eastern Coal Drops Viaduct built immediately to the west (qv). There, trains were formed up for their return to the coalfields. This avoided reversing them along the lines by which they had entered and blocking the arrival of loaded wagons.

2.4 In the roadways near the southern end of the building, there were weigh-offices with weighbridges for measuring the coal conveyed by each cart leaving the Eastern and Western Coal Drops. By 1865 there were six of these weighbridges, reduced to one by 1894 when the use of the coal drops had declined. They have now gone entirely.

2.5 Although covered from the rain (an unusual feature for coal drops in the mid 19th century) the upper level was open at the sides through arches to disperse the dust and noise from falling coal. The lower level was open at the sides for the same reasons, and for carts to back in. But it was divided internally by a spine wall and cross-walls to form cells for different coal-merchant tenants, and to support and stabilise the heavily-loaded structure above. The shallow intermediate level was blind, to conceal the bins, the brick oculi in the side walls being apparently purely decorative although possibly conceived originally for ventilation.

2.6 The success of these coal drops is demonstrated by the building of the similar, though smaller, Western Coal Drops (qv) in 1859-60. However, the haughty attitudes of the GNR company to its customers, and its illegal trading in coal, led to a legal judgement in 1860 which forced it to give up its own management of the coal drops, and to lease them to the coal merchants as tenants. Also, although economical of labour, bottom discharge from the wagon into a coal drops bin damaged the coal. In 1865, Samuel Plimsoll persuaded the company to build for him south of the canal an extensive range of improved coal drops to his patent that would not break up the coal (see Plimsoll Viaduct). These changes, and the construction by the GNR of single-level coal yards to the north of the site and elsewhere in London, reduced the use of the Eastern Coal Drops for their original purpose, and before 1882 the larger part of this building was converted to warehousing and other uses.

2.7 Between 1865 and 1871, a viaduct was erected along much of the eastern side of the Coal Drops to connect the Goods Yard sidings to the Pancras Gas Works across the
canal. The structure of this viaduct appears to have been partly supported off or tied into the Coal Drops brickwork, at the line of each cross-wall in the northern seven double bays of the eastern façade. This viaduct was demolished between 1907, when the gas works closed, and 1914. The subsequent making good of the brickwork can be seen, and the brick base of one viaduct pier remains.

2.8 As converted before 1882, the upper and mezzanine levels of the Eastern Coal Drops were divided vertically by walls into three warehouse units for use by tenants; the 1921 Goad plan shows them occupied by two bottle merchants and a hardware warehouse. One bottle merchant, Bagley’s of Knottingley, is remembered in the current name of the building. The ground floor had diverse uses, including stables and a blacksmith’s workshop and forge, which was still present, but disused, in the 1970s.

2.9 For vertical circulation, the new warehouses had five hand-operated goods lifts, one of which remains. The southern warehouse had internal ramps and a ground-level loading bank at the south-west corner. The middle warehouse had a loading door on each level facing east, with a cat-head beam for a hoist pulley. Later, the northern warehouse had similar doors, with a reused wall crane. At the upper level on the western side, loading doors opened onto a siding on the Eastern Coal Drops Viaduct.

2.10 The insertion of the warehouses blocked off the traverser from the coal drops, reverting to the pre-1865 situation except that the introduction of capstan shunting by hydraulic power would have eased the task of retrieving the empty wagons. One of the sidings on the Viaduct took on a new use, delivering goods to the warehouses. The Viaduct (qv) was rebuilt slightly lower and shorter after 1921, and its new level created conventional ‘banks’ in each of the western doorways, to assist the unloading of railway goods vans.

2.11 By 1942, only the northern 12 structural bays were used as coal drops, with storage indicated beneath the other eight. Improvised cladding with doors and windows was fitted to their ground floor openings.

2.12 By 1970, the tracks had been removed from within the Coal Drops; by 1982, the tracks on the Viaduct also had been lifted. The whole building was vacant in 1976, but rehabilitation of the southern end for other uses was commenced by the present lessees around 1980.

2.13 The northern end was devastated in 1985 by a fire which started in a ground floor workshop there.

3 DESCRIPTION

3.1 The Eastern Coal Drops were built in 1850 for the transfer of coal from railway wagons to road carts, with intermediate storage, under the cover of an overall roof. The southern three-fifths was converted for warehousing and other uses in the later 19th century. The unaltered northern part was severely damaged by fire in 1985. The Eastern Coal Drops Viaduct (qv) is attached to the western wall.

3.2 The drops building is on an unprecedented scale, approximately 153 m (502 feet) long and 14.5 m (48 feet) wide and arranged on three levels. Four railway lines ran longitudinally at high level, entering from the embanked goods yard at the northern end. There were storage hoppers at mezzanine level and coal merchants’ bagging-up spaces, open-fronted to the east and west, at ground level. The structural module is 3.05m (10 feet) long, repeated 50 times. Cross-walls at 6.1 m (20 foot) centres and a longitudinal spine wall divided the mezzanine and lower levels into two lines of 24
originally identical cells. Formerly there was a mechanical traverser on the upper level in the twenty-fifth double bay at the southern end, where the ground floor contained offices.

3.3 The walls are of multicoloured stock brick (yellow-faced purple fabric 3032), laid in English bond. Internal structures are of timber with a limited use of iron, and a slate-clad roof upon composite timber roof trusses, now missing in the northern part. These 45 foot span ‘queen-rod’ roof trusses are of a type often employed in the mid 19th century in industrial buildings. They are mostly of timber, but they use wrought iron queen-rods suspended from cast iron junction boxes where the strainer beam meets the principal rafters. There are diagonal struts of timber in the outer panels. The principal rafters continue to the ridge. There is a second, lighter, hanger rod from the apex to the centre of the strainer beam. Purlins (six on each side plus the ridge piece) support vertical close-boards, and probably common rafters above them, beneath the slates. Every second truss is supported on internal stiffening piers that rise from the cross-walls. The rail tracks ran on way-beams of vertically-paired timber baulks, with open voids between them and timber-planked walkways alongside them. At the side walls, these walkways were supported on timber plates on stone corbels, and these continue to carry the warehouse floor in the converted part.

3.4 Above the centre of each bagging-up bay, midway between the cross-walls, there is a cast iron cross beam of unequal-flanged I section standing on cast iron Tuscan columns. The inner ends of the beams are seated on padstones in the spine wall. The columns stand on functional cast iron plinths that were probably concealed by protective kerbs. The storage bins were supported on substantial 9 inch (0.23 m) square timber bridging joists, spanning between the cross-walls and seatings cast on the beam. The timberwork of the coal bins has mostly been destroyed by fire, but in two bays there remain examples of the devices used to control the discharge of coal from the bottoms of the bins. In one, there are cast iron prongs that could be lifted and lowered by a lever; the other has a wrought iron grille that would be similarly adjusted. Stone corbels across the corners below some bins are of uncertain purpose. In some of the bays there are lozenge-shaped small openings in the spine wall, probably for cross-ventilation.

3.5 The long elevations, where unaffected by the warehouse additions, have large, round-arched openings at the upper level, between piers at 3.05 m (10 foot) centres. A compact brick cornice and frieze supports the eaves gutter. Recessed within the arches there are brick parapets, with York stone copings and rectangular panels further recessed decoratively within them. Each northernmost arch has an original infilling of brickwork, to act as a longitudinal buttress to the whole line. Immediately below track level there is a deep, projecting band of brickwork with a subsidiary brick cornice within it.

3.6 To span the openings at ground level, segmental arches spring alternately from the cross-walls and from lozenge-shaped cast iron skewbacks standing on the cast iron Tuscan columns. These skewbacks are actually dummies, cast as end-plates to the internal cross-beams. The abacus of the column capital appears to be cast with the beam above and the echinus is a separate, non-functional, hollow casting. A blind oculus is formed in the brickwork in the spandrel above each column, filled flush with the otherwise plain wall of the mezzanine coal bins and apparently purely for decoration.

3.7 The northern end of the structure abuts a brick retaining wall. At track level there was, before the fire, a full-width opening beneath a vertical-boarded gable. The end piers have stone entablature blocks. The southern end has a similar vertical-boarded gable,
above a brick end wall. This wall was probably altered in the warehouse conversion. The single-storey office attached to this wall is later.

3.8 The first double bay from the south contains the site of the traverser that transferred wagons laterally on wheeled platforms before the warehouse conversion. It is marked internally by cast iron lintels on stone padstones embedded in the side walls of the upper level, and by part of a raised platform (now concealed) at mezzanine level.

3.9 The southern 30 bays of the building were converted for warehousing before 1882. All levels appear to have been arranged into three units of 10 bays each, with repetition of some features in each of these modules. The upper and lower arcades were infilled with brickwork containing windows and doorways, while windows were inserted in the mezzanine on the eastern side, cutting through the string course. The ground floor and mezzanine windows have cast iron frames with segmental heads, while the upper floor windows are half-round ‘lunettes’ with vertical panes and timber glazing bars. The half-round windows have York stone sills, reused from the copings of the former parapets but reset at a higher level. The recessed panels of the former parapets remain below, and the brickwork above is recessed so as to perpetuate the architectural form of the previously-open arcade.

3.10 There are two loading doors on the upper level on the eastern side, one at the 12th bay from the south with a cat-head beam, and the other more northerly with a wrought iron wall crane. The latter has a timer platform at sill level, on metal brackets. Since the viaduct to the Gasworks ran at high level against the Eastern Coal Drops for the first 35 bays from the north, which included the bay with the crane, the installation of the crane must post-date the demolition of the viaduct circa 1907-14. It was evidently second-hand, since it is of a mid 19th century style. The presence of the viaduct may also have been a reason behind the many blind panels in the northern half of the eastern façade of the Coal Drops.

3.11 There are two narrow, inserted loading doors in the mezzanine on the eastern side at the 12th and 26th bays, below the upper loading doors. At ground level there are substantial doorways in the first and second units at the 9th and 18th bays from the southern end, where the 1906 plan shows stables, and a further such door in the 14th bay, near the entrance to a former goods lift.

3.12 In addition to alterations for the conversion to warehousing, the upper levels of the eastern and western walls in this double bay show evidence of having been rebuilt in the 20th century, although faithfully in style and details - perhaps after war damage. On the east elevation, the two southernmost bays on the upper floor have been rebuilt (again possibly following war damage) with a single segmental-headed window that lights a post-1976 internal landing of the south-east staircase. There are two stones set just beneath the plain brick cornice at the ends of the southern two bays, which correspond to those that support the cast iron lintel over the traverser on the west elevation, although they are shallower and so possibly supported the ends of two short spans of lighter load. The original offices beneath at ground floor have three round-headed windows on the eastern side, the central one converted from a doorway.

3.13 The southern end wall has bold brick piers at the corners and a central brick pier. Below the timber gable, four half-round windows echoing those of the eastern elevation are set within rectangular recesses. The recessed-panel motif of the side-wall parapets is repeated here, but on a different module, three on each side of the central pier. How much of the above pre-dates the warehouse conversion is unclear. The mid-level string course continues round. Two mezzanine windows are cut into it in the western half, but there are no mezzanine windows in the eastern half, probably
because the residual traverser structure reduced the usefulness of this space.

3.14 The west wall’s lower level is only visible to the south of the Eastern Coal Drops Viaduct and beneath the arching of the Viaduct (where it is similar to elsewhere). In the southern part the brickwork is painted black. A late 20th century window occupies the southern bay, with a segmental arch-headed doorway in the second bay from the south leading to the stairs that give access to the upper floors. The timber supports of a canopy over the entrance survive, and there is a raised concrete platform in front of the south-west corner of the building at ground floor level, on the site of a loading bank that still survived in 1976.

3.15 The southern three upper-level bays on the west side of the building have been rebuilt three times since initial construction. Currently only the middle bay of the three has an arch. There are two padstones, one at the southern end of the southern bay and the other towards the southern end of the third bay from the south. They are visible externally, and support an unequal I section cast iron beam that carried the cornice and roof over the traverser opening. The internal structure indicates the sequence of events. It seems that the building was originally built without a traverser, as the insertion of the northern padstone truncated the southern part of the arch in the third bay from the south. The brickwork was rebuilt, and the remains of the arch blocked, to create the edge of the traverser opening beneath the padstone. The absence of a traverser in the original building supports map evidence indicating that the Eastern Coal Drops Viaduct was built between 1860 and 1865 (PRO: RAIL 236/295 Part 12). When the traverser opening was blocked, after the southern end of the building had been converted into a warehouse, the arch in the second bay from the south was reinstated as part of the blocking. It is not certain whether a southernmost arch was reinstated. Probably following Second World War bomb damage, the brickwork of the southern bay was rebuilt. The line from which the wall was rebuilt can be seen externally where there is a change in the coursing and brick texture, just to the south of the second bay’s arch.

3.16 The bays to the north have arches with various periods of blocking. Some have the distinctive rectangular recesses towards their bases, and some have half-round windows at their tops in the same style as the majority of those on the east elevation. There are currently five entrances at this level, accessed from the Viaduct by late 20th century staircases covered in light timber structures with lean-to roofs. A fairlead (unpowered capstan) is set into the external brickwork to the north of the southernmost doorway beneath a cast iron lintel. The surrounding brickwork suggests it may date to the early warehouse period. There is one remaining external timber canopy that extends across the 14th to 16th bays from the south. Pairs of severed timbers on the external wall face, with internal surviving east ends, indicate that there were once external canopies spanning the sixth to eighth bays and the 26th to 28th bays from the south. Each canopy was supported on four timber beams cantilevered out from the building and extending beneath, and strapped to, the western ends of the roof trusses’ tie-beams internally.

3.17 Recent sound-proof cladding now hides various features but, from the study of 1980s photographs, the general arrangement of the loading doors on the western side, at their furthest extent, appears to have comprised four or five doors per warehouse unit (extending beyond the canopies), in alternate bays separated by blind panels which would have accommodated the roll-back of the sliding doors. The overhead runway for one such door survives internally in the seventh bay from the south. In the northernmost warehouse, where the last use was observed in 1976 to have been an electrical workshop, the doorways had been converted to large casement windows, except for one that that survives at the northernmost end, hidden externally behind a
temporarily cabin.

3.18 Internally, in the warehouse conversion, the beams supporting the tracks were moved further apart and slightly raised in level to support a timber floor. Timber stanchions with bolster heads (cut from surplus beams) were inserted beneath them in place of the coal bins. The relocated beams (in four lines) rest on timber wall-plates on the cross-walls, instead of on the padstones for the former way-beams (in eight lines). The edge beams remain supported, as originally, on three stone corbels in each double bay length. The way-beams remain on their old alignment in the third bay from the south, next to the site of the traverser. The upper level was subdivided by brick partition walls into three units of 10 bays each, and provided with skylights in the roof. The spine wall and sections of the cross-walls were removed from the mezzanine level. A chimney stack rises from each of the gable and dividing walls. One fireplace remains in the ground floor office at the southern end, where the chimney has three chimney pots rather than two.

3.19 When inspected in 1976, the staircases within the warehouses were seen to be of timber with open treads, but these have since been replaced. The southernmost warehouse had a system of ramps from floor to floor, for access by barrows or handcarts. Parts of these remain, blocked off and cut through by new staircases at the southern end. A late 19th century goods lift through all floors, hand-operated by rope and pulley, is the survivor of four that were observed in 1976 and five shown on the 1906 plans. A pair of unusual curved wing walls within the middle unit on the ground floor was associated with one of these lifts, and the 1906 plan shows a second such pair in the northern unit which may also remain.

3.20 The remaining goods lift is located against the west wall in the 21st bay from the south and the inserted dividing wall. It is timber-framed, and retains its operating mechanism. It probably dates to the late 19th century warehouse conversion. Part of its mechanism bears the inscription: R WAYGOOD & Co LONDON, ENGINEERS (with the last word written beneath the firm’s name). It has a loading capacity of 7 cwt (about 350 kg). At the time of writing, the lift is in good condition and still operates. This now rare type of lift is similar to the others seen in 1976. They were free-standing, so this one may have been moved. It is built in front of one of the half-round windows inserted in the arches when the building was converted into warehousing before 1882, confirming that this window arrangement dated to that period rather than later.

3.21 Access was not possible to most of the lower-level cells for inspection. However access was gained to the 14th, 15th, and 16th bays from the south, which were a single unit. Although the lower cells between the cross-walls had been separated by a further transverse partition beneath the cast iron beam, and a doorway had been cut through the cross-wall between the 14th and 15th bay, much of the original fabric survived. The longitudinal spine wall had been perforated in the 14th and 15th bays, and this must have taken place elsewhere.

3.22 In the south-west ground floor entrance lobby there is a door leading into the original southern offices (not accessible). It is not known whether the fireplace survives in this office.

3.23 Against the south wall of the Eastern Coal Drops there is a single-storey yellow stock brick office extension (brick fabric 3035, using the archaeological system of building material classification), with blue engineering brick quoins. Its principal south elevation has two widely-spaced windows (one at either end of the elevation) and a door and window set closely together in the centre. The roof is hipped at the west end and
gabled at its east end, and has a late 20th century machine-made corrugated tiled covering. The building was probably built around 1890 (for an analysis of its dating see Phasing Analysis below). The 1976 investigation found this interconnected with the office at the southern end of the original building (although not shown thus on the 1906 plan), and it bore a faded signboard (since replaced) with the name of Bagley & Co Ltd, Glass Bottle Manufacturers, Knottingley, Yorkshire.

3.24 New fabric has been inserted in the late 20th century conversion of the warehouse portion, but the structure has not been significantly altered except for the relocation and fire-enclosure of staircases. The ground floor spaces are let for light industrial and studio uses, and the mezzanine is partly subdivided for small office units. The northern part of the mezzanine is circulation space for the nightclub that occupies the whole of the top floor, with a large well for staircase access from entrance doors at ground level, on the western side beneath the Viaduct. On the top floor, the windows and skylights have been boarded over, and all surfaces have been painted in dark colours. Various structures have been inserted within parts of the roof space, comprising high-level offices and timber walkways between them.

3.25 The northern two-fifths of the range remains derelict and roofless after the fire, with most timber severely charred or missing, and with fractures in the brickwork as the result of thermal expansion. The brickwork still stands full-height, with scaffold shoring.

3.26 Adjacent structures

3.27 To the east of the southern end of the Eastern Coal Drops are the ruins of the bottom of the western walls of the hydraulic power station that provided the motive power to much of the Goods Yard, including the hydraulic capstans and probably the Coal Drops traversers. The walls survive as the retaining wall of a car park at the western end of the Granary group’s forecourt. The brickwork here is yellow stock brick (fabric 3035), which tended to be used in the later 19th to 20th century in the Goods Yard. Only the plinth and the sills of six ground floor windows survive. The two northern windows are those of the hydraulic accumulator tower. The intention to install hydraulic power is mentioned in Weale’s 1851 description of the Goods Yard, and it was in use by 1853 when noted in the Illustrated London News. This was a period when the technology was rapidly being taken up by major railway companies. The hydraulic pumping station is shown on Stanford’s 1862 map, Humber’s 1865 plan and the 1871 Ordnance Survey, to the east of the extant ruins. By the time of the 1882 plan (PRO: RAIL 236/362, part 18), the building had been extended to the west into the lower level yard with the same footprint as the extant remains. On this plan it is referred to as “Engines & Boilers for Hydraulic Apparatus”. It was still standing in 1979, but has since been demolished. The west end of the retaining wall on the south side of the car park has brick corbels and an arch from the hydraulic pumping station’s boilerhouse. To its south-east is a retaining wall representing a survival from the stables that were adjacent to the Boiler House. There are two sandstone corbels surviving from these stables.

3.28 To the north of the hydraulic pumping station’s ruins, there is a retaining wall to the higher-level part of the Goods Yard. This wall runs parallel to the Western Transit Shed. The east face of this wall incorporates a fireplace of what appears on the Goad Plans as a small single-storey building. To the west of this wall, immediately to the north of the ruins that project into the lower-level yard, are two brick plinths with sandstone copings, surmounted by substantial timber posts. These were situated beyond the north wall of the former accumulator tower, and may have supported the high-level viaduct that carried tracks over the canal to the Pancras Gas Works retort houses on the south bank. This viaduct was built between 1865-6 and 1871 (it
appears on the 1871 Ordnance Survey map) and was demolished before 1914. It filled much of the space between the Eastern Coal Drops building and the retaining wall to its east. Another brick plinth built against the end of the seventh cross-wall, 43 metres from the northern end of the Coal Drops, probably also supported this viaduct. The structure appears to have been partly tied in to the Coal Drops' east wall at two levels, if not supported off it, since subsequent making-good of the brickwork could formerly be seen, above and below the mezzanine, on the line of each of the first seven cross-walls from the north.

3.29 Between the Eastern Coal Drops and the retaining wall of the higher level roadway to the west of the Western Transit Shed is a long red-brick mid 20th century building. It is shown on the 1938 partial revision of the Ordnance Survey and is described on the 1942 Goad plan as "Mess Rooms". It has concrete flooring and concrete lintels above its openings. It has a north-south gabled roof. Apart from its massing and roof profile, which harmonise with the other Goods Yard buildings, it is of little historical interest, being a common form of building whose materials are not sympathetic to those used in the Goods Yard.

4 ARCHITECTURAL ANALYSIS

4.1 The Eastern Coal Drops’ construction on three levels presented an innovative solution to the problem of transferring coal from rail to road. This was a large building with potential for grandeur. With the open arcading of the sides of the building, it would have been reminiscent of a Roman aqueduct.

4.2 The building was designed with elegance in mind as well as function. Thus the blind oculi have no practical use. Together with the slim columns, the oculi confer lightness on the structure, enhanced by the open arches. The delivery and departure functions are expressed by the arcading. The storage functions of the bins, in the unaltered northern section, are expressed by the blind oculi and the string course. The brickwork is built in the functional English bond rather than the refined Flemish bond.

4.3 The columns are of an unusual form and were made with more than one casting. Although the abacus appears to be part of the column (when it is in fact part of the beam), the diamond-shaped end-plates refer to the fact that the arches are sprung from the beam.

4.4 The original lower-level yard’s masonry structures consisted of the arched Wharf Road Viaduct and the Eastern Coal Drops. These smaller-scale structures, each with repetitive small arches, would have contrasted with the larger scale of the buildings and spaces of the Granary, Transit Sheds and Granary Basin. The arches, however, echoed the blind arches of the Western Transit Shed, and were subsequently echoed in turn in the Western Coal Drops.

4.5 As with all of the early Goods Yard buildings, the Eastern Coal Drops combined brick, timber, cast iron and wrought iron in an empirical way.

4.6 The conversion to a warehouse maintained the classicism of the building. The introduction of lunette windows above recessed panels, blocking the openings on the upper level, respected the original design. The original form of the south elevation is uncertain, but the relationship of their surrounding brickwork to the six recesses between mezzanine and upper levels is a variation upon that in the altered blockings of the east and west elevations. The six recesses and the pilasters are therefore more likely to predate the conversion, while both the brickwork above the recesses and the
windows are likely to be part of the conversion. However, the need to light the mezzanine floor led to the relatively insensitive insertion of the windows through the string course.

4.7 The southern office building detracts from the architectural effect, as its materials and overall form contrast with those of the Coal Drops.

5 PHASING ANALYSIS

5.1 The fact that the northern bays of the building were little altered since 1851 provides evidence of the original construction (recorded by Tucker in 1976 before the fire). The conversion of the southern end cut through many of the original features, providing further evidence of its phased development that remains legible within the building.

5.2 The arches, internal spine walls and cross-walls, beams, columns and roof trusses, and corbels are all original (except the timber columns with cross heads at mezzanine level).

5.3 The earliest development was the insertion of the southern traverser. Its insertion is demonstrated by the partial truncation of one of the southern arches to accommodate the traverser opening. The associated return viaduct is not shown on an early 1860s plan (PRO: RAIL 236/295, part 12), but it and the traversers are shown on Humber’s plan of 1865.

5.4 It is not known whether the southern wall on the upper level was originally open between the pilasters or not. However, the current infill between the southern wall’s pilasters and above the six recessed panels on top of the southern string course probably dates to the late 19th century warehouse phase (see Architectural Analysis above).

5.5 The next major phase of development was the conversion of the southern 30 bays into a warehouse before 1882 (PRO: RAIL 236/362). On the upper level, this involved the building of a timber floor over the track way-beams; the re-blocking of the southern traverser bay; the partial blocking of the upper-level arches and the insertion of lunette windows in their tympanums; the insertion of three raised loading doors on the upper level, alongside a siding on the Viaduct and sheltered by canopies; the introduction of five hand-operated lifts to move goods between the upper and lower levels (one of which occupied the location of the traverser, which must have been removed internally, although remaining externally as shown on a GNR plan of 1906); and the building of two upper-level cross-walls and chimney stacks. At the level of the former coal storage bins, it involved the laying of a mezzanine floor and the insertion of windows with cast iron frames. (It is uncertain whether the windows were inserted along the west wall facing onto the, then, still-extant original, columnar viaduct); the reduction and perforation of the spine wall and cross-walls; the laying of timber beams over the surviving cross-walls and inserted stanchions; and the construction of staircases to provide access between the floors. At lower level, the western arches were mostly blocked with brick, with windows and doorways inserted in them. The blocking of many of the arches would have necessitated the creation of some openings through the cross-walls and perhaps through the spine wall at this time, to maintain access throughout the building. Not all of these changes were necessarily simultaneous.

5.6 The presence of a functionally-unrelated eastern viaduct serving the gasworks, which stood on timber or iron pillars at the upper track level, close against the northern two-
thirds (34 bays) of the eastern façade, from before 1871 until after 1907, will have imposed constraints; the loading-doors crane of the northern warehouse unit are presumed to post-date its removal some time after 1907.

5.7 The single-storey office building built against the southern wall of the Eastern Coal Drops probably dates to around 1890. The 1882 plan (PRO: RAIL 236/362, part 18) and earlier plans show no building against the southern end of the Eastern Coal Drops, but it appears on the 1894 Ordnance Survey and the 1906 GNR plan.

5.8 On the evidence of the Goad plans, the rebuilding and slight shortening of the Eastern Coal Drops Viaduct took place after 1921 and before 1942. Its engineering brick is characteristic of the pre-1930 period. The previous structure is shown on the 1921 Goad plan to have been of cast iron columns, iron girders, and timber dating to the 19th century, with a later covering of concrete.

5.9 Following the late 19th century warehouse conversion, the more recent alterations (except for the recent refurbishment) have been incremental, mostly consisting of the occasional creation and blocking of openings.

5.10 There is no sign from the exterior of the building of the conversion of some of the northern, since-burnt, bays for storage purposes during the 20th century (as shown on the Goad plan). However, the headroom beneath the bins would have allowed the use of the ground floor with minimal intervention. In 1976 it was indeed observed that the southern 12 of the 20 coal drop bays had been infilled with makeshift windows and doors, which will have been burnt away in 1985. The upper level of the Coal Drops remained unaltered over the full 20 northern bays, except for the removal of the rails, when inspected in 1976.

5.11 The late 20th century conversion of the upper level into a nightclub involved the timber blocking of the window and door openings; the insertion of gantries along the building; the construction of a stage at its northern end; the insertion of high level rooms on the cross-walls; and the creation of a staircase well throughout the height of the building on the western side.

5.12 The conversion of the mezzanine to offices required the insertion of new staircases at the southern end, in place of the former timber stairs and ramps.

6 FUNCTIONAL AND RELATIONAL ANALYSIS

6.1 The Eastern Coal Drops were built to an innovative design to transfer coal from rail to road transport. The interchange for coal between rail and canal took place in the Coal and Stone Basin, nearby to the west. The lower-level yard was, therefore, essentially the coal yard. The success of the Eastern Coal Drops is indicated by the fact that additional, similar GNR drops were needed by 1859-60 (the Western Coal Drops); but their decline started when Coal Drops to an improved design were built across the canal in c.1865 (Plimsoll’s Coal Drops). Before the opening of the Western Coal Drops, Herapath’s Journal had stated that “the traffic of the Great Northern Railway is coal” (Hunter and Thorne, 112).

6.2 The coal trains would have approached the Eastern Coal Drops from the Copenhagen Tunnel, to the north-east of the building. The tracks fanned out from that focal point, with the buildings of the Goods Yard also arranged in a fan plan form orientated towards it. The Eastern Coal Drops was unusually built almost parallel to the Granary and Transit Sheds, with its northern end facing even further north than the Granary
6.3 Loaded wagons were shunted from behind, southwards into the upper level of the Coal Drops along one of the four tracks. Their coal was then discharged from the bottom of the wagons into the bins at mezzanine level. Initially, before the traverser was inserted, locomotives would have had to pull the empty wagons out northwards, following the route by which they had entered the building.

6.4 With the construction of the adjacent Eastern Coal Drops Viaduct and the traverser linking this Viaduct to the Coal Drops, empty wagons could now be taken to the southern end of the building and carried sideways on the traverser onto the adjacent Viaduct. The southern end of the Viaduct extended beyond the southern end of the Coal Drops. Humber’s plan of 1865 shows that this southern end of Viaduct was to hold brake vans, which would then have been coupled to the rear of trains. It seems, therefore, that the empty wagons moved by the traverser would be formed one-by-one into trains on the Viaduct. A brake van was then attached to the rear wagon, and a locomotive coupled in front of the wagons. The train could then depart northwards back to the coalfields for the wagons to be reloaded.

6.5 Later, when capstan shunting had been developed, the wagons could be manoeuvred into and through the Coal Drops by cables drawn by hydraulically powered capstans. Hydraulic power may also have operated the traverser.

6.6 The bottom discharge from the wagons into the bins caused much damage to the coal through breakage on impact. The coal was stored in the bins until ready for transfer to carts in the lower level arches. Carts were loaded from the bins by means of six chutes in each two-celled bay with gate mechanisms which allowed the flow of coal to be regulated so that sacks could be loaded gradually. The carts had to be weighed (gates, barriers, and related road features appear on Humber’s 1865 plan on the southern access routes to the Coal Drops, which formed the only road access), prior to leaving the Goods Yard over the canal bridge or past the present Regeneration House eastwards to York Way.

6.7 Related clerical work and administration of the Coal Drops’ operation took place in the lower-level offices at the southern end of the building and also in the Coal and Fish Offices to the south (qv, first built c.1852).

6.8 In the late 19th century, the southern part of the building was converted to warehousing. The 1882 plan (PRO: RAIL 236/362, part 18) shows these bays divided from the northern 20 bays that continued in use as a coal drops; the conversion is likely to have taken place before then. The warehousing was divided into three parts at upper level, and included heated rooms (probably offices or “mess rooms”).

6.9 The three western canopies at upper level denote three loading doors, one for each of the three warehouse units. The bins became a mezzanine floor, the longitudinal spine wall being lowered. The mezzanine floor was lit by inserted cast iron-framed windows, cutting through the existing string course. Doors and blockings were gradually inserted into the lower-level arches, although these continued to be separated by the cross-walls of the two-bay cells. Hand-operated lifts were inserted, providing access for goods between the floors (one lift still survives). There may have been five of these lifts, and there were internal ramps, now mostly concealed. A wrought iron crane on the eastern external wall of the upper level provided an alternative method of lowering goods to the roadway. It is likely that the traverser would have been removed as part of the warehousing conversion, although the 1882 plan (PRO: RAIL 236/362, part 18), the 1894 Ordnance Survey map (Hunter and Thorne, 92) and the 1906 GNR plan...
show that the traverser bay on the original viaduct was still in place at the beginning of the 20th century.

6.10 After 1921, the Eastern Coal Drops Viaduct on the west side of the building was rebuilt. The revision of the Ordnance Survey map of 1913 shows the earlier viaduct still in place, with its traverser-related fixtures, and the Goad plan, revised in 1921, still shows the Viaduct’s 19th century structure. The use of blue brick arches suggests a pre-1930 rebuilding date for the Viaduct. Its rebuilt southern end now stopped short of the southern end of the coal drops. The Viaduct would have served the southern warehousing, but the northern coal drops were not connected to the Viaduct by rail in the absence of a traverser, precluding the former efficient ‘merry-go-round’ handling of loaded and empty wagons. By 1894 a single-storey office building had been built against the southern wall of the Eastern Coal Drops.

6.11 In the 20th century, the southern part of the building continued as warehousing. The Goad plan indicates that by 1942 only the northern 12 arched bays were used as coal drops, with the southern part of the northern end converted for storage. At this time the southern part remained a bottle warehouse, the northern part was a storage unit, while a “Studio” was one of the uses of the ground floor. When inspected in 1976, the building was disused after the cessation of railway activity. A stable and blacksmith’s workshop were among the disused functions on the ground floor, while a store for way-bills and other records was found in the mezzanine. After 1976 three of the internal lifts (observed by J Lawson in 1976) were removed. Most of the mezzanine was converted into the offices that still remain, while the lower floor consists of small business units. The upper level is in use as a nightclub, but all levels of the northern section of the Coal Drops were gutted by fire in 1985 and are now derelict.

7 LISTING CITATION

7.1 “Coal drops. 1851-2. Probably by Lewis Cubitt. Late C19 southern section converted into a warehouse. Northern, coal handling bays, damaged by fire, 1985. Multicoloured stock brick supported externally and internally by a framework of cast iron columns and beams in each bay. Slated hipped roof.

7.2 “EXTERIOR: oblong plan; 2 storeys and mezzanine. South elevation with single storey extension above which main building with 4 lunettes, recessed oblong panels below and brick pilasters supporting iron gable end.

7.3 “Eastern elevation with segmental-headed ground floor openings (cart loading bays), brickwork of arches extended and linking to give impression of arcading with inset cast iron Tuscan columns. Metal framed windows with small panes. Occasional flat circular pattern in brickwork of spandrels. Mezzanine floor with half length segmental-arched windows and brick cornice, breaking at the window heads. 2nd floor (railway level), shallow brick arcading blind apart from lunettes in arch heads; recessed oblong panels at the base of each arch. Western elevation with similar arcading and remains of railway line on round-arched viaduct at top floor level.

7.4 “INTERIOR: has massive timber framing to support railway at upper level and storage hoppers at mezzanine. Open composite truss roof with timber tie-beams, rafters, collars and struts and single iron rods from apex; also queen posts of wrought iron. Wrought iron plates at joints and cast iron brackets where principal rafters are formed of two timbers joined at collar height.

7.5 “HISTORICAL NOTE: the coal drops were built as part of a system of distributing coal
from the north-east and Yorkshire to the London market. Originally the structure carried 4 high-level railway tracks from which waggons [sic] discharged coal into storage bins on the mezzanine floor above cart-loading bays. A waggon traverser was provided at the southern end by which empty waggons were transferred to a wooden viaduct west of the coal drops. Approach by road is at lower level.”

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SUMMARY: THE HERITAGE IMPORTANCE OF THE EASTERN COAL DROPS

ARCHITECTURE AND FABRIC

The regular rhythmic pattern of arches, openings, columns, and other features in the long facades combine to generate a sense of grandeur while using simple forms and materials.

The spatial divisions and structural elements that preserve evidence of the building’s original construction and its subsequent adaptation are essential components of its significance; and they illustrate its historical development. These include:

- The tripartite division of the building cross-section into track (upper) level and road (lower) level - both expressed by arcades - and the bin (mezzanine) level, which is expressed by the string course, blind oculi, and later inserted windows
- The surviving cross-walls and cast iron columns and beams
- The remaining longitudinal way-beams and corbels in the mezzanine
- Later interventions, such as the lunette windows, the hand-operated lift, the lower-level timber doors, the upper-level western canopies, and fabric relating to the traverser.

Evidence relating to the building’s historic operation is provided by features such as the vestiges of the coal storage bins and their mechanisms, and the powered and unpowered capstans providing hydraulic power for moving wagons.

The remains of the nearby building that housed the hydraulic power-generating apparatus and boilers preserves evidence of how the Goods Yard operated. This represents the earliest survival relating to the use of hydraulic power on this major transport site.

SETTING

The adjacent Eastern Coal Drops Viaduct is an essential component and companion of the Coal Drops; the two together ‘make sense’ of the historic operation of coal-handling in the Goods yard.

The arcading echoes that of the Western Transit Shed, the Wharf Road Viaduct, the Eastern Coal Drops Viaduct and the Western Coal Drops.
<table>
<thead>
<tr>
<th>SIGNIFICANCE RELATED TO TYPE</th>
<th>The building was pioneering in the design of large-scale coal drops. When built, it formed the centrepiece of the GNR’s London coal trade.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>The form of the building and its sheer length was unprecedented for its time.</td>
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<tr>
<td></td>
<td>The building represents the sole survivor of a particular stage in the development of the Coal Drops as a functional building type.</td>
</tr>
<tr>
<td></td>
<td>Possibly uniquely for a Coal Drops of the time, the building was under the cover of an overall roof.</td>
</tr>
<tr>
<td></td>
<td>There are direct typological relationships between the structure of the Eastern Coal Drops and the Western Coal Drops.</td>
</tr>
</tbody>
</table>

| SIGNIFICANCE RELATED TO INTANGIBLES | The building’s complex history is easily understood through its surviving fabric. |
1 DESCRIPTION SUMMARY

1.1 One of two brick buildings arranged either side of the Granary and Train Assembly Shed to handle outward-bound goods traffic. Built on an unprecedented scale, 180 m long by 25 m clear width, and almost 7.5 m clear height. Original longitudinal platform survives in an altered, extended form towards north end of shed. North gable end is dominated by a large clock that timed the train departures. (See Figures BD13, BD14, and BD15 in Part 2.)

1.2 Walls originally had six large openings and five smaller doorways on west side, five large openings and two smaller doorways on east side, providing access to Train Assembly Shed, with six arches leading into Granary, three of which spanned railway lines. These have been altered in many instances. Two southern doors and two northern doors. Of these doors, only east door at north end remains open, and its opening has been altered.

1.3 Original roof fully hipped at south end and gabled at north end, with composite timber and wrought iron trusses and cast iron elements. Roof rebuilt in 1936-8, to same profile, using steel trusses and corrugated asbestos covering, with half-hipped south end.

1.4 Although track and most platforms now gone, many survivals remain in Shed from both original construction and subsequent development. Parts of original stables survive under platform. Original overhead runway beams for sliding doors, and guard
stones and timber rubbing strakes protecting brickwork from road traffic.

1.5 A fire in 2001 in first floor offices above western bay of Train Assembly Shed also damaged the east wall of the shed. Several damaged roof trusses and some covering removed from Shed during the subsequent clearance work, and since replaced.

2 HISTORICAL AND FUNCTIONAL SUMMARY

2.1 The Western Transit Shed was built in 1850 as part of Lewis Cubitt’s Goods Station. It was built with the Western Transit Shed to handle all of the London merchandise traffic of the GNR. The Eastern Transit Shed handled incoming railway traffic and the Western Transit Shed handled outward-bound traffic. The buildings were on an unprecedented scale, among the longest of their day.

2.2 The Western Transit Shed included an internal roadway along its western side, a central platform, and an eastern track which served the platform and was connected by wagon turntables and cross-tracks to the Train Assembly Shed. This track also extended southwards to give rail access via turntables to the Granary and to the basin in front of the Granary. The platform was set over an arm of the canal running north from the Granary Basin to the south, to allow for unloading from barges. There was also stabling for horses beneath the platform, further north. The goods could be loaded from road carts into rail vehicles across the platforms, with cranes assisting the loading of heavy items. The roadway initially ran the length of the shed, with east-west road access through arched doorways the building’s west side.

2.3 The current offices to administer the work in the Western Transit Shed were built between 1865 and 1871 with access from the south end of the platform, to both its ground and first floors (the latter via a staircase that has been replaced in the 20th century). The offices did not obstruct the access routes to the south, which were blocked in later.

2.4 An 1882 plan shows some remodelling since 1871. There were two additional tracks that entered the north end of the shed and extended into the shed as far south as the southern part of the fifth external bay from the north. Additional platforms were provided in the Train Assembly Shed; to serve these, an east-west cart road was made through the Western Transit Shed, just north of the Granary.

2.5 In 1899, with the opening of the Western Goods Shed to handle outward bound traffic, the two Transit Sheds, the Granary, and the Train Assembly Shed became the inward-bound goods station.

2.6 In 1936-8 the two Transit Sheds and the Train Assembly Shed were remodelled to convert them into an outward goods station, with new platforms concentrated in the former Train Assembly Shed. The former turntables and cross-tracks were done away with, and the east-west road was widened. Several of the vehicular doorways on the western side of the Transit Shed were enlarged. The roof was rebuilt at the same time with light steel trusses and corrugated asbestos sheeting, with a half-hipped south end replacing the earlier fully-hipped arrangement.

2.7 Following abandonment for railway use, the building was further subdivided with lightweight steel-framed partitions for warehousing, with roller-shutter doors. The southern and northern ends of the platform and track were removed, and the surviving platform extended.

2.8 At the time of this report, the northern part of the Eastern Transit Shed was occupied.
The area to the north of the east-west road was severely damaged by fire in 2001. The north end was most recently used for storage, and the area south of the east-west road was in use by Pickfords removals.

3 DESCRIPTION

3.1 The two Transit Sheds were of exceptional size for the period (some 180 m long, 25 m wide and 7.5 m clear height). They have brick outer walls. At the southern end there are six arches in each shed (mostly blocked) leading into the Granary, the north wall of which is also the southern wall of the Transit Sheds. The 1930s roofs have steel roof trusses, and are half-hipped at their south ends and gabled at their north ends, with corrugated asbestos sheeting and top lighting.

3.2 The outer walls are of multicoloured brick of fabric type 3032 and 3034 (using the archaeological ceramic building material classification system) which differ from those in the slightly later Granary. The external walls generally appear as a blind arcade of segmental arches between pilaster strips at 7.6 m centres. Internally, brick pilasters supported the roof trusses (see below). The internal brick pilasters are staggered relative to those outside, on a 3.8 m module to support the roof trusses.

3.3 On the west wall, even-numbered bays have segmental-arched door openings which match those of the blind arcade above. The even-numbered bays originally alternated between having large doors and having smaller doors. The odd numbered bays were originally blind arches without openings. Some of the original openings have been rebuilt to form rectangular door openings, and additional smaller door openings have also been inserted later.

3.4 The east wall’s original openings did not generally align with those on the west wall. Their totally different functions (those on the east being for rail access, those to the west providing road access), would have made their alignment opposite each other unnecessary. The east wall has a c.1938 wide opening at its north end under an inserted compound steel girder bearing the rolling marks ‘Appleby-Frodingham 24x7½’ and ‘British Steel’, opposite that on the Eastern Transit Shed. Apart from the opening for the roadway to the north of the Granary, the insertion of which involved some rebuilding of the junction between the Granary and the Transit shed’s east wall, the rest of this wall to the north of the Granary has been altered little. Exceptions to this are to be seen where it was altered in 1899 to accommodate the offices above the western bay of the Train Assembly Shed, and where it has been damaged in this same area as a result of the recent fire. At the south end, where the Transit Shed abuts the Granary, the Granary’s four southern arches are blocked. The northern two Granary arches led, in 1990, to a toilet and another room in the Granary that was partitioned off from the Granary and formed part of the Western Transit Shed.

3.5 The north wall of the Western Transit Shed is a large gable with an original central blind arch. Against this can be seen the faint profile of a now-demolished single-storey building with a symmetrically-pitched roof. There is a central clock above the blind arch, with its now-disused mechanism housed within the building. A single railway track originally passed into the Transit Shed through an opening on the east side of this gable end, with a second opening for road traffic on the west side. Between 1871 and 1882 the west end of the wall was altered to accommodate two openings for railway tracks. (This (this would have necessitated the shortening of the internal roadway.) Today, there is evidence that all the northern openings have since been altered. There is a small attached late 20th century building on this gable end.
3.6 The south wall extends only up to eaves level, reflecting the fact that the roof was originally fully hipped. Above this level, the brickwork of the Granary’s Western Offices is recessed from that of the shed. Fletton brick pilasters built onto the wall of the offices support the hips of the 1938 half-hipped roof.

3.7 The Western Transit Shed was originally roofed in a single symmetrically-pitched span east-west by exceptionally long-span (78 feet clear) composite timber and iron trusses. The main members were of timber, with wrought iron straps and tie-rods. The trusses also employed cast iron shoes and junction boxes, as widely used in such trusses of the time and as survive in the Granary. In 1936-8 these trusses were replaced by straightforward, mainly riveted but partly bolted, steel trusses of Polonceau configuration, fabricated from rolled steel angles joined by gusset plates. At the same time the original roof covering - of slate, with areas of glazing (Goad Sheet 12/400, 1921) - was replaced by corrugated asbestos sheeting. Part of the roof was removed and rebuilt as a result of the 2001 fire.

3.8 The Western Transit Shed roof is drained by downpipes, which on the external west face drop down on pilaster lines between the blind arches.

3.9 The Transit Shed was originally served by a canal basin entering the building from the south. This is inaccessible at present, and is probably filled in. Stables for railway horses were provided under the platform, and survive beneath the surviving section of platform. These stables probably occupied a space nearly 90 metres long by 9 metres wide beneath the platform, of which a length of about 57 metres (15 bays) is visible from the current access hatch.

3.10 In these stables, slim internal slim cast iron columns support east-west cast iron beams of inverted Y section. These in turn support the brick jack-arching of the ground floor level. This floor is further supported on 20th century I section steel columns, carrying north-south steel beams that are cut through the earlier structure. These beams support the west edge of the platform above, which was moved to the east of its original location in the later 20th century. Original timber pegs set into the curved wall in the stables (whose profile responds to one of the former turntables) were used to hang harnesses and horse furniture. 19th century plans show a U-shaped ramp down to the stables at their northern end. This may well remain beneath the platform and floor.

3.11 Beneath the eighth roof truss from the north end, there is an east-west partition. To the south of this, the original platform survives with an eastern extension. The original platform’s west edge has been truncated and refaced, although its original substructure probably survives behind the later work.

3.12 The 1936-8 east-west roadway is 15m wide. The Shed wall above it is carried on a steel plate girder that is set into a pier on the north-west corner of the Granary.

3.13 Among the surviving fixtures relating to the early use of the Transit Shed are some cast iron overhead runway beams from the original internal sliding doors behind the larger openings, and guard stones and some timber rubbing strakes that protected the brickwork from carts. A 20th century concrete platform was built at the south end of the building, onto which was built a steel staircase providing access to the first floor of the Granary’s Western Offices. This replaced an earlier staircase in the same location. The southern doors are all blocked, and an internal single-storey brick office has been inserted in the south-west corner.
4  ARCHITECTURAL ANALYSIS

4.1 The Western Transit Shed is an integral part of Cubitt's design of the Granary group of buildings. The Transit Sheds are exceptionally long and wide for their time. The arcading on the walls and the height of the sheds would have added to the monumentality of the Granary group. The timber trusses were of unusually long span. The fact that the two Transit Sheds were set back from the south front of the Granary, and were lower than it, emphasised the architectural primacy and sheer size of the Granary.

5  PHASING ANALYSIS

5.1 The outer walls of the Shed are original to the 1850 building. Parts of the original platforms survive, as do the stables beneath the platform. The faint scars on the outside of the north gable provide evidence of a former attached building, which however appears less substantial than that on the north wall of the Eastern Transit Shed. Guard stones and rubbing strakes, which protected the brickwork from carts, also survive from the original building, as do some of the cast iron overhead runway beams for the sliding doors. The clock is also probably original, as is the clock housing.

5.2 The construction of the Granary's Western Offices (built between 1865 and 1871) meant that new pedestrian access routes into them were required. There were ground and first floor doors, the latter accessed from a staircase built at the south end of the Transit Shed’s platform. The two original southern doorways remained unblocked into the 20th century. By 1990, only one of the arches into the west side of the Granary had been blocked.

5.3 The next major phase of changes took place between 1936 and 1938, when the building was re-roofed, some of the openings were enlarged, and a widened east-west roadway was built through the Transit Sheds to the north of the Granary.

5.4 Following the closure of the Goods Station, the Transit Shed was converted to warehousing. The track was removed or covered over. The platform was partly removed and partly extended. Areas of the shed were partitioned off using lightweight steel-framed partitions. Several of the door openings were altered to suit the needs of the occupants.

5.5 By this time the floors were generally covered in asphalt.

6  FUNCTIONAL AND RELATIONAL ANALYSIS

6.1 The Western Transit Shed was originally the departures goods station. The central platform was used to load railway wagons on the single eastern track from carts that circulated through the eastern, northern and southern doors. There was access through doors in the platform’s deck to the canal dock from the Granary basin and from there to the Regent's Canal. This dock ran beneath the building, which allowed for the unloading of goods from barges for loading onto trains.

6.2 Departing trains could leave from the eastern track (now covered or removed). Five wagon turntables allowed railway wagon access between this Transit Shed and the adjoining Train Assembly Shed (through arched doorways in the east wall of the Transit Shed). There the wagons were formed up into trains for departure. Empty
wagons for loading could be sent from the Train Assembly Shed, or directly from the arrivals shed (the Eastern Transit Shed). Towards the south end of the shed there were three turntables on the eastern track that transferred wagons from the Granary onto this track.

6.3 The volume of departing goods demanded increasing volumes of clerical work, and the Offices to the south were rebuilt between 1865 and 1871.

6.4 By 1882, the northern rail entry into the Shed had been altered. There were now two doors with two railway tracks running part of the way down the west side of the shed, with the road stopping short of their buffers. By this date a roadway had been formed across the Transit Shed, north of the Granary.

6.5 Both Transit Sheds, the Train Assembly Shed, and the Granary became the inward-bound goods station in 1899, when the newly-built Western Goods Shed and the existing Western Coal Drops became the outward-bound goods station. This necessitated increased office space over the western bay of the Train Assembly Shed.

6.6 In 1936-8, improved road access was created with the widening of the east-west road through both Transit Sheds on a line to the north of the Granary. The turntables and cross-tracks into the former Train Assembly Shed were abolished. It is possible that the platforms at the south end of the building may have been removed at this time, although this is uncertain.

6.7 After the goods station closed in the late 1960s the shed was divided into warehouse units.

7 LISTING CITATION

7.1 Although within the curtilage of the Grade II listed Granary, the Eastern Transit Shed is not described in the listing citation.

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29A  THE GRANARY
1 DESCRIPTIVE SUMMARY

1.1 Large six-storey brick building, designed by Lewis Cubitt and built 1851-2. Some 55 m by 30 m on plan, and 21 m in height. Located symmetrically between the Eastern and Western Transit Sheds (qv), and structurally integrated with them. Its north-south axis aligns with the Copenhagen Tunnel. Flanked on either side by later offices (qv). (See Figures BD13, BD14, and BD15 in Part 2.)

1.2 Two east-west hipped roofs with composite timber and cast iron trusses, with wrought iron strapping. Elevations of purple stock brick with yellow surfaces.

1.3 Ground floor’s east and west walls each have six arches. Three tracks originally ran transversely through three of six arches in ground floor’s east and west walls (arches now substantially or totally blocked). Six turntables in centre of building (now gone) enabled wagons to be manoeuvred through two extant doorways in the north of the building into Train Assembly Shed, where wagons were prepared for departure. Train Assembly Shed’s roof supported here on three brick piers attached to the Granary’s north wall. Formerly three loading banks on north side of ground floor (separated by the railway lines leading to Train Assembly Shed), and a single bank along south side of ground floor. Only north-east and north-west banks survive, altered. Hydraulic hoists carried sacks and other loads through nine trapdoors in upper three floors, and through six in the lower floors. These either extant or covered over. Four of these sets of floor openings originally extended down through hatches in ground floor to two
canal arms. These arms since backfilled, and hatches no longer survive. Internal hoists were suspended from three extant gantries on roof.

1.4 Main front (south) elevation has four lines of loading doors (now blocked), each in a projecting bay and topped by canopies that housed external parts of hoist mechanisms. These canopies are roofed with Roman style roof tiles. This elevation has three lines of segmental-headed windows alternating with lines of doors. North wall of building has no loading doors on the upper floors, but each bay was originally lit by a window. Walls topped by a decorative stone cornice.

1.5 Internally, laid out in nine east-west bays and seven north-south bays defined by grid of circular cast iron columns, of same section on all floors except smaller in diameter towards top of building. Timber floors joists and boarding, supported on paired cast iron beams. Original south-east and south-west staircases remain, originally lit by windows on east and west elevations of building, now by three south-facing windows on bottom three half-landings, necessitated by construction of flanking offices. Two electric lifts on north side of building.

2 HISTORICAL AND FUNCTIONAL SUMMARY

2.1 The Granary was built by Lewis Cubitt as the architectural centrepiece of the Goods Yard complex in 1851-1852. Its five upper floors were initially used to store grain in sacks, mainly received by rail from eastern England. The lower part of the building was devoted to facilities that were used for receipt and despatch by rail (at ground floor level), canal (below ground level), and road (externally). The building was aligned so that its north-south axis was centred on the Copenhagen Tunnel to the north, through which the trains arrived.

2.2 On the ground floor three transverse railway lines were connected by wagon turntables to two tracks leading from the Train Assembly Shed (qv) and to the single tracks in the Eastern (arrival) and Western (departure) Transit Sheds. Goods were loaded and unloaded onto platforms along the north and south sides of the building.

2.3 Two canal docks penetrated beneath the building from the Granary Basin to the south, with canal barges being loaded and unloaded through large trapdoors in the platforms. There were two further canal docks, one either side of the Granary, passing under the later flanking offices and beneath the southern ends of the Transit Sheds. There was also direct railway wagon access between (at least) the Western Transit Shed (Departures) and the Granary Basin. The southern loading doors on each floor allowed sacks to be loaded into carts on the external roadway. The movement of sacks between floors was through a series of trapdoors, by means of hydraulically-operated hoists that were housed above roof level. There was also a system of chutes which directed sacks down the building for loading into road vehicles on the north and south sides of the building. The earliest concrete evidence for a road along the north side of the building is the plan of the Goods Yard of 1882, with no road appearing on the 1865 plan and the 1871 Ordnance Survey large-scale map. The chutes on the north side of the building could therefore not have been used to load road carts in the early days and may have been added later. The fact that the railway tracks in the Train Assembly Shed are shown on the 1865 Humber plan to have extended to the north wall of the Granary suggests the possibility that the chutes that emerged from the northern side of the building may have been an early feature of the building, and could have been used to load railway wagons for local distribution by rail. The tanks that served the Goods Yard’s hydraulic power system and also provided a reservoir of water for other purposes, such as fire-fighting, were housed in the roof space and
were supported on taller columns than those that supported the roof on the fifth floor.

2.4 At some time between 1865 and 1873 the transverse lines within the Granary were no longer connected to the track in the Eastern (Arrivals) Transit Shed, presumably to reduce congestion. This rail link had been re-established by 1908, see below.)

2.5 The flanking offices either side of the Granary are absent from Humber’s plan of 1865, but are present on the first edition of the Ordnance Survey of 1871. The need for such increased office space to deal with the operation of the Granary and Transit Sheds provides evidence of the success of the Goods Yard. When the flanking offices were built, access to them was provided from the corner staircases in the Granary. The side windows on the bottom three floors of the staircases were first blocked, and then new windows were inserted on the main south elevation to replace them. The staircases were previously entirely lit from windows in the side walls.

2.6 In the early days, grain would have come in by rail and, after storage, gone out mainly by road and canal for local delivery. Local steam flour mills, that appeared largely in response to the railway traffic in the 1850s, processed the grain and perhaps sent flour out again through the Granary. With the late 19th century agricultural slump and the relocation of mills to the Port of London, the goods handled by the Granary diversified.

2.7 By 1882 there was a roadway on the north side of the Granary, leading westwards through the adjoining Western Transit Shed (although according to the 1882 plan not eastwards). By this time, the chutes that enabled sacks to be passed out of the building to the north were probably being used to load road carts. Whether the installation of the chutes pre-dated the road or not is uncertain (see above).

2.8 With the construction of the Western Goods Shed (1897-1899, qv), the Granary and the adjoining sheds became the inward-bound goods station, with the outward-bound traffic being handled by the new Western Goods Shed. When high-level offices were also constructed over the west side of the Train Assembly Shed at this time, access to them was provided from the north-west corner of the second floor of the Granary. The success of this change of use in reducing congestion can be seen in a plan produced after 1908 (PRO Rail: 783/110), which shows that the railway track link between the Eastern Transit Shed and the Granary had been re-established by the reinstatement of one of the turntables linking the two buildings.

2.9 The original gas lighting had been replaced by electric light by 1905 (Guildhall Library: MS 14943/20. 42), although some of the gas fittings remain.

2.10 The canal connections became disused and were infilled around 1920. In 1927, after the Grouping of the railways, the London & North Eastern Railway installed electric lifts to replace the hydraulic hoists (PRO: RAIL 390/547). There is some evidence that the lifts have been replaced since by lifts with a greater capacity. It was recorded at that time that the two lower floors would remain for grain and flour storage and that the three upper floors were to be used for continental cased goods imported via Harwich. It is not certain when most of the internal hydraulic piping was removed, although the insertion of the lifts in the 1920s and the increasing reliance on electric power in the 20th century would have gradually obviated the need for it. It is also not certain when the rainwater from the roof was re-routed through piping to the exterior walls, rather than downwards through the central cast iron columns.

2.11 In 1938 the roles of the Western Goods Shed and the Granary and its adjoining buildings were reversed, with the Transit Sheds now becoming the outward-bound
goods station. The reconstruction of the east-west road immediately to the north of the Granary in 1936-38, to make it run through both Transit Sheds with an increased width, did not fully sever the rail connections with the Train Assembly Shed to the north, which still ran within the new road surface. This would have increased the efficiency of the interchange of goods between the Granary and road vehicles on the north side of the building from the three sack chutes on the northern side of the building. With the rebuilding of the road, the north elevation of the Granary was altered to accommodate the steel plate girders carrying the adjacent Transit Shed flank walls and the new steel roof structure spanning over the road. The projecting piers that supported the original roofs of the Train Assembly Shed (shown on the 1873 plan) were at least mostly removed by 1882 (1882 plan), leaving shorter piers (or sections of the Transit Shed walls) projecting from the north-east and north-west corners of the Granary. These piers would have been removed in 1936-1938, with the north-east and north-west corners of the Granary being strengthened with blue brick to support the girders that carried the flank walls of the Transit Sheds over the road. A blue brick pilaster on the north wall of the Granary that supported the girder and wall of the high-level offices of the Train Assembly Shed probably dates to 1936-1938, although it may date earlier to the 1890s when the high-level offices were built.

2.12 After the railway access was severed, the building continued as a warehouse and has most recently been mainly used for document storage. The platforms in the southern part of the ground floor were removed, and a concrete floor was laid approximately at the level of the previous track. Enlarged lightweight partitions around the staircases were inserted, probably as a fire precaution. The roof was re-covered in corrugated steel in the late 20th century. The date at which the tanks in the roof space were removed is uncertain, although it probably took place when the piping was largely removed. The roof was re-covered recently in corrugated zinc sheeting over roofing felt. The two northern bays on the west side of the Granary’s ground floor were partitioned off with brick walls and re-orientated to open into the Western Transit Shed. At the time of this report the building was mostly vacant. The ground floor is currently divided by lightweight partitions into two rental units.

3 DESCRIPTION

3.1 The Granary is of six storeys, built in the Classical style and located symmetrically between the Eastern and Western Transit Sheds (qv). Its axis aligns with the central south portal of the Copenhagen Tunnel. Later asymmetrical flanking offices were added on either side (between 1865 and 1871, both qv). The column grid divides the building into seven full-width east-west bays (each approximately 6.9 m wide), flanked by two half-bays, and into seven shorter north-south bays (each approximately 4.0 m wide). The principal elevation is to the south with four projecting bays of loading doors. The north elevation had no loading doors except for openings at ground floor level. The east and west side elevations are almost featureless except for windows that light the staircases at their south ends between the top two floors of the building. The parapet has a deep stone cornice extending around the building.

3.2 The ground floor has six arches (now blocked) on each of its east and west sides that originally provided access to the Transit Sheds. The middle four arches on both of these walls were wider than the outer arches. Three railway tracks originally ran east-west through the second to fourth arches from the south. Six turntables in the centre carried wagons to and from the Train Assembly Shed to the north. The arrangement allowed for the flexible use of the railway wagons.

3.3 The building was organised so that grain sacks and other goods could be moved
between the upper floors of the building and the railway wagons by means of hoists leading through trapdoors with their mechanisms housed in three north-south gantries on the roof. A system of chutes between the floors facilitated the passage of sacks down the building; the chutes enabled sacks to be passed out of the building onto carts in the adjacent roadways. Three emerged from the north side of the building (where there was a roadway that was initially built between 1873 and 1882) and three from the south of the building. A loading bank along the southern two bays of the ground floor, and three set either side of and between the north-south tracks leading to the Train Assembly Shed, allowed goods to be loaded and unloaded from the railway wagons through the loading doors at the front (south) of the building. The 1873 plan shows four ‘flaps’ in the platforms that originally provided access to the canal dock berthing tunnels beneath the building. The four loading doors on each floor on the south elevation enabled sacks to be lowered externally directly onto waiting carts, by means of a hoist above each line of doors. There were two corner staircases on the south side of the building and two later post-1927 lifts that rose from the north-west and north-east platforms.

3.4 Structurally, as is usual with buildings of this scale and period, the timber and iron floor structures and roof are supported on both loadbearing walls and the column grid. The cast iron columns are taller (4.1 m) on the ground floor than on the floors above (where they are 2.4 m high). The columns have the same sections on all floors, except that they become narrower towards the top of the building. The columns have cruciform ribbing and support paired east-west cast iron beams of inverted T section (with a short top flange and a wider bottom flange, as is usual with cast iron beams), the ends of which are supported on bullnose sandstone corbels. The large east-west spacing of the columns (6.9 m) was needed to span the turntables and canal docks. The wide span also necessitated the use of cast iron beams. Although the north-south spanning timber floor joists are hidden above late 1990s plasterboard ceilings on the ground floor and hardboard ceilings on the first to fourth floors, their ends can be seen to be supported on stone corbels, each of which has two small curved brackets. On the fifth floor the column lines support single cast iron beams. The beams carried by the two northern and two southern lines of columns once supported water tanks housed in the roof space. These were possibly associated with the hydraulic power supply in the building (Guildhall Library MS 149432, 42), and may have had several functions, including acting as a fire-fighting reservoir and supplying water to the hydraulic pumping station nearby. The two central beams support the roof valley and the inner ends of the roof trusses. The columns supporting these two latter beams had water inlets cast into their capitals on their inner facing sides. These indicate that originally the rainwater was designed to drain through the hollow cores of the columns supporting the central valley, and suggest a different, earlier, guttering configuration from that which survives. It is assumed that these columns were connected to internal drains set below the ground floor.

3.5 Two hipped roofs run east-west with a central flat valley. Each roof has 12 full roof trusses, in addition to two trusses extending across the hips, all of which are original. The roof construction is mostly of timber with cast iron shoes and wrought iron straps and rods. The truss tie-beams are set into cast iron shoes on the external walls (supported on stone corbels, north or south, depending upon the roof), and on the beams that support the roof valleys. Each principal rafter consists of two lengths of timber which meet at the queenposts. These queenposts rise from the tie-beam, and have the usual jowled or joggled profile on their outer side towards the top where they pass between the two lengths of rafter, with their inner sides rebated. This joint is braced by a collar (strainer beam) set into the rebates in the inner faces of the queenposts. The bottoms of the queenposts each have a sloping joggle on their outer sides that supports a raking brace that is tenoned into the lower section of the
principal rafter. The upper sections of the rafters are tenoned into both the top ends of
the collar and into the inner sides of the queenposts (that pass through to support the
roof). A cast iron shoe joins the two top sections of rafter and supports the ridge plate.
A wrought iron tie-rod extends from the base of the ridge shoe and is bolted through
the collar. A wrought iron strap secures each queenpost to the tie-beam and two
wrought iron straps, one on each face, bolted with square bolts, strengthen the joint
between the lower section of rafter, the queenpost and the collar. The outer end of the
principal rafter is held to the tie-beam by a cast iron shoe. The shoe is bolted from the
sides through the tie-beam. There are six purlins to the outer sides of the roof (in
addition to a plate that supports the parapet box gutter) and five purlins to the inner
sides. The valley is supported on the same cast iron beams as the rest of the roof.
Timber beams sit on timber planks that rest onto the two cast iron beams' lower
flanges. These support longitudinal beams that support the planking beneath the
roofing felt. The roof is covered with roofing felt, above which is a corrugated zinc roof
added in 1990. The original slate roof may survive beneath the present covering,
although this is not known.

3.6 The external walls are built with a Flemish bond facing, with the internal wall faces
being in English bond, using purple stock brick with yellow surfaces. Externally, darker
horizontal bands of brick at each floor level are only just discernible today under a
century or more of dirt. The quality of construction in wall cores is not known, but they
are likely to be solidly built with ‘seconds’ roughly set in crudely placed lime mortar. It
is not known if the walls were built on a damp-proof course, but at the time of
construction the use of slate for this purpose was common. The bricks are
archaeologically classified, according to the ceramic building material fabric
numbering system used in Greater London, as fabric type 3032. (Examples of the
fabric can be found in the archives of the Museum of London.) The east and west
walls narrowed in thickness up the building just beneath each successive floor. The
internal pilasters into which are set the corbels supporting the floor beams, however,
did not step in as they rose through the building, so that they projected furthest on the
fifth floor. The internal brick pilasters in the east and west walls terminate in blind
arches on the fifth floor. On the north and south walls there were no pilasters, although
the walls narrowed gradually as they rose through the building.

3.7 On the principal, front (south) elevation, the end bays have segmental-headed timber-
framed casement windows to the staircases in the landings between the ground, first
and second floors, and there is a timber-boarded blocked door to the western bay
leading to the south-west staircase. The eastern ground floor front entrance is in its
original position on the east elevation of the south-east corner bay. There are four
loading bays with doors on all floors (blocked with black painted timber boarding in the
post-railway period), set into projections in the front elevation’s brickwork, and three
bays with segmental-arched windows on all floors set into recessed brickwork in
between the projecting bays. The ground floor windows were blocked with timber
boarding in the post-railway period. The loading bays are raised above ground level,
each having a sill consisting of two large granite blocks. The loading bays are topped
above the fifth floor level by stone pulley mountings supported on stone brackets.
These have a classical treatment and the canopies sport moulded cornices. The
canopies are roofed with Roman-style roof tiles. The parapet is surmounted with a
projecting millstone grit cornice that projects further above the loading bays and
extends around the building. The ground floor plinth has a sandstone coping, possibly
acting as a damp-proof course. Each ground floor opening has numbering painted in
white on a square blue background either side (except on the east side of the eastern
loading bay). There are two timber signs either side of the ground floor window
fronting the third westernmost bay. The central bay has four, probably 20th century,
cement-lined mortices set beneath the window opening.
3.8 The east and west elevations are featureless above the ground floor, except that the south-east and south-west staircase bays are lit by windows on the east and west elevations on the fourth and fifth floors. On the ground floor, the external east elevation is pierced by four wide arches approximately 3.8 m wide, flanked by two smaller arches approximately 2.9 m wide. The southern arch is open and accommodates a doorway between the Granary and the Eastern Transit Shed. The northern arch has an arched recessed bay above at first floor level. On the ground floor's west wall, only the smaller southern arch and the wider adjacent arch were visible on inspection, the area to the north being obscured by containers. Plans of the building produced in 1990 (Terrestrial Surveys Ltd., Drawing No. 1001/1) show that at that time three of the four wide arches on the west wall were still open. The narrow northern arch had been converted into the entrance to late 20th century toilets housed in the building’s north-west corner bay, which faced onto the Western Transit Shed and was partitioned off from the rest of the Granary’s ground floor.

3.9 On the north elevation, the roof of the Train Assembly Shed obscured the external view of much of the elevation. Internal inspection and distant views showed that there were windows in each bay (except for the two end bays) extending across the whole of the elevation above the ground floor, some of which were blocked (including those behind the lift shafts). An original relieving arch appears at the base of the wall in line with the original eastern canal arm beneath the Granary. (The canal dock did not extend beyond the Granary’s north wall, but the arch would have carried the wall over the soft ground in the vicinity of the canal dock.)

3.10 There is evidence of some rebuilding on the north elevation. An early alteration consisted of a doorway inserted at the west end of the second floor which provided access from the Granary to the high-level offices built in the 1890s over the western bay of the Train Assembly Shed. The steel door within this opening is a late 20th century replacement of the original. With the reconstruction and extension of the east-west road on the north side of the building in the late 1930s the north-east corner brickwork was rebuilt on the ground floor using blue brick to support the steel plate girder spanning the road. The brickwork is braced at the corner by two angled I-section steel braces. The north-west corner of the building was also rebuilt using blue brick. A further blue brick pilaster was built onto the external face of the north wall of the Granary, that supported the girder that carried the south-east corner of the high-level offices of the Train Assembly Shed. This may either date to the 1890s when the offices were built, or to the 1930s, when the road was widened. More recent alterations include the insertion of sliding steel doors and steel shuttering to suit the needs of the lessees of the two ground floor units. Steel doors are set in the third, fourth, and sixth bays from the east, and there is a high-level window in the fifth bay from the east. Most of the ground floor window openings are blocked, some of which had remained windows until they were blocked while others had had their sills lowered to form loading doorways that served the internal platforms.

3.11 The original staircases are built within internal brick towers and are located in the south-west and south-east corner bays. They have sandstone steps with a wrought iron handrail. The access between the floors and the staircase is via riveted wrought iron plate fire doors. These were probably inserted in the early 1890s in order to reduce the amount of insurance premium payable (Guildhall Library MS 1494313, 136). Evidence can be seen internally of the blocking of the original side windows that lit the stairs between the ground and third floors, before the 1865-1871 construction of the flanking offices (qv). These areas of the staircases are now lit by segmental-headed windows on the half-landings between the floors on the front elevation. The staircases have mid to late 20th century stud walled extensions that extend into the second southernmost bay on the first to fifth floors. A void beneath the south-west
staircase at ground floor level suggests that further stairs may have led down to a basement. It is possible that this may have provided access to the western canal dock.

3.12 There are two electric lifts set within blue brick and fletton brick lift shafts in the third and seventh structural bay from the west against the north wall of the building. The openings have concrete lintels. Lifts were first inserted into the building in 1927 (PRO RAIL 390/547). There were three lifts, two of 10 cwt and one of 15 cwt capacity. The current lifts each have a 30 cwt capacity. These were not built as planned. On a drawing dated 1925 the shafts are shown clad in framing with lightweight 4 inch thick walls. The brickwork of the current shafts is 9 inches thick. Although the shafts appear to date to before the Second World War, the lintels over the openings appear to be post-war. It is possible that larger, more powerful lifts were inserted after the Second World War into existing 1920s lift shafts, and that the lift doors and openings were remodelled. It is also possible that the lift shafts were wholly rebuilt, re-using the late 1920s materials. There are two brick structures with flat corrugated steel roofs on the roof, housing the motors that operate the lifts.

3.13 There was a system of hoists and trapdoors for the passage of sacks between the floors. The sack hoist’s hydraulic winches were housed in three original extant cabins built on the roof valley, with three wooden gantries running north-south with two pulley wheels on each side below the gantry. The ends of the gantries are apparently encased in cast iron and penetrate the roof spaces to abut the ridge pieces. They are supported on the uppermost roof purlins. The cabins are located over large central hatches in the third, fifth and seventh bays from the west on the third, fourth and fifth floors. There are smaller floor hatches in the bays flanking the large central hatches to their north and south. These descend through all the floors of the building and, before the backfilling of the canal docks, originally extended through the ground floor platforms to the railway lines and canal docks. There were occasional holes in the floor that have been patched up, which may have held services or chutes and some holes for pulley wires.

3.14 There was also a system of timber chutes to pass sacks down the building. Although they were covered over in many places their locations at least are known to survive. On the fifth floor there were two chutes on the south side of the floor, in the second bay from the south and sited in the second and fourth bays from the west. On the fourth floor there were two floor chutes in the bays immediately to the east of those in the floor above, and on the third floor they were in the bays immediately to the east of those on the fourth floor. This pattern of chutes, one bay to the east on each successive floor, continued down the building to the ground floor. On the north side of the building there was one fifth floor chute in the second bay from the north, two bays in from the west of the building. Successive chutes extended one bay to the west on each successive floor to the ground floor.

3.15 Internally, on the ground floor, part of the original north-east timber platform survives. Its west side, the curved recess on its south-west corner (which originally accommodated a turntable), and part of its southern edge are extant. Its eastern side had been removed from just to the east of the 1920s lift shaft. The north-west platform appears to have been rebuilt or strengthened; although it retains its original shape, it has a concrete surface on its eastern side and fletton brick supporting walls set beneath the concrete platform around its edge. There is some evidence that the original structure of this platform survives on the west side of the platform, although it is obscured beneath a metal plate surface. The north-west platform had an angled southern concrete extension extending as far south as the third bay from the north in the western bay with its edge running diagonally across the third most northern bay in the second westernmost bay). The northern two bays along the west wall of the
3.16 Blocked arched recesses in the north wall indicate the position of original openings. The chutes to the north and south sides of the building from the first floor are encased in plasterboard and appear in the ground floor’s ceiling. On the north and south walls they appear in the third, fifth and seventh bays from the west. The six side arches are visible on each of the east and west walls and are blocked with brickwork. The floor is concrete, and there is a row of sandstone blocks along the base of the south wall and at the east end of the north wall. These may have supported the structure of the original platforms. There is evidence of machinery having once been fixed to the south wall in the third bay from the west, and some vestiges of the earlier hydraulic piping. There is a small area of platform on the south wall that covers a cable pit below. The west edge of the pit would have roughly aligned with the east side of the backfilled eastern canal dock.

3.17 Throughout the building there are numbers written in white or yellow on dark circular background, displaying a numbering system that was in place before the most recent occupants’ use of the building (D Jones, Pickfords, pers. comm.). At inspection all of the windows were covered internally, to preserve the documents stored by Pickfords from the effects of strong sunlight.

3.18 On the fifth floor, two flights of timber steps, one in the western and one in the easternmost bay in the central east-west bay (the fourth bay from the south or north) led up to the roof. Since the most recent re-roofing only the eastern steps now lead to the roof. The two internal lined timber box gutters are each fed by two cast iron downpipes leading from the central valley on the east and west sides of the third bay from the east and west. Both gutters run to downpipes on the north wall of the building. The western gutter reaches the wall on the east edge of the third bay from the west, while the other gutter reaches the north wall in the second bay from the east. This arrangement represents a replacement of the original rainwater drainage system that ran through the columns.

3.19 There is segmental arching to all of the openings in the bays on the north and south walls and to the side staircase windows. Generally there are five timber-framed casement windows on each floor on the north wall, with two additional blocked windows behind each lift. On the fifth floor the north wall has four windows, three in the bays between the lift shafts and one in the bay to the east of the east lift shaft. There is a brick-blocked opening in the bay to the west of the western lift shaft.

3.20 On the fifth floor the south wall has windows in the third fifth and seventh bays from the west. Fixed to the wall, above the loading doors, are cast iron plates with the vestiges of fittings related to the former hoists. These survived in differing states of completeness. That in the fourth bay had no wheels, that in the sixth bay consisted of only part of its housing. A water pipe extended horizontally from the brickwork to the west of the window in the south wall, and in the third bay from the west a hydraulic pipe rose from the floor near the south wall on the east side second bay from the east.

3.21 On both the east and west ends of the central bay there were timber staircases leading up to the roof. They emerged onto the roof through two cubicles. The 1990 corrugated zinc roof covering ran across the western cubicle, preventing access to the roof at this point. This zinc roof covering covers all of the valley cubicles and the hoist gantries. Inadequate drainage causes rainwater to build up and seep into the north-west corner of the fifth floor. A chimney stack is located on the roof above the north side of the southern bay at its west end. It cannot be seen in the thickness of the wall
on the floor beneath, and evidence of it may have been removed below the roof.

ARCHITECTURAL ANALYSIS

4.1 The Granary was built to the design of Lewis Cubitt to clearly be the centrepiece of the Great Northern Railway Goods Yard. As well as designing the Granary to be flanked by the two Transit Sheds, Cubitt also designed King’s Cross Station and the adjoining Great Northern Hotel. The building was considered to be of considerable architectural merit, and Cubitt displayed a watercolour of the building at the Royal Academy in 1851 (Denford and Woodford, 82), the year of the Great Exhibition.

4.2 The building is designed in a sober classical style which, combined with its size, confers a degree of monumentality on the building. It is designed to be seen from the front and its monumentality is emphasised further by the building’s relationship to the two adjoining Transit Sheds. These were built at a much lower height to be recessed from the principal south frontage of the Granary, and to act architecturally very much like the pavilions on a country house, to point up the central building. This idea was further exploited with later construction of the two flanking offices. The original hipped-roof Transit Sheds, and the lack of adornment, emphasises the restrained classicism of the building. This restrained style would have been considered fitting for a working Goods Yard building.

4.3 The building follows all the classical norms. It is raised on a sandstone topped brick plinth, and the orders are implied between it and the cornice. The roofs are hidden in accordance with traditional classical practice. The south frontage is provided with a sense of rhythm, with the four loading bays projecting forward from the main frontage, with smaller repetitive fenestration in the recessed walling in between. The millstone grit stone cornice is quite deep and emphasises the loading bay projections where it breaks forward with them. The moulded hoist canopies further emphasise the projections, their Roman style tegula and imbrex roofing being particularly unusual. The austere side elevations help to draw attention to the frontage.

4.4 When viewed from within or around the original basin to the front of the building, it would have appeared to be raised up on a large plinth, adding to the monumental effect. The four symmetrical canal dock entrances that led under the Granary and the Transit Sheds would have added to the classical sense of order. The fact that the building faced the central portal of the Copenhagen Tunnel confirms the fact that the orientation of the Granary group was supposed to form the main axis of the Goods Yard.

4.5 The symmetry on a north-south axis is carried into the internal layout of the floors and even into the system of trapdoors and the symmetrical staircases onto the roof.

4.6 At the same time as rigidly adhering to the classical norms, Cubitt designed a building that was remarkably flexible in its operation. The spacing of the column grid did not interrupt the operation and symmetry of the canal docks, the railway lines on two axes, or the turntables. It was accomplished by the use of paired cast iron east-west beams to span the resulting 6.9m bays. The fact that grain sacks, and later other goods, could be stored from and moved between three different forms of transport (road, rail and canal), while allowing for the movement of full and empty wagons from the building and between the Transit Sheds and the Train Assembly Shed, proved the practicality of the design. The flexibility of the design, and the complexity of its possible operation, in a way proved its undoing, as the building became prone to congestion. Thus it became necessary to cut the track link between the Granary and
the Eastern Transit Shed between 1865 and 1873; and, from 1899, when the Western Goods Shed was built, it only handled one-way traffic. It is possible to see the building’s inability to cope with the volume of traffic as a symptom of the success of the Granary and the Goods Yard and railway in general, which succeeded in attracting more custom than it could cope with.

5 PHASING ANALYSIS

5.1 The building survives largely as it was built in 1851-2, with only a few changes being made before the railway ceased to use the Goods Yard.

5.2 When the flanking offices were built between 1865 and 1871, the staircase windows on the first to third floors in the side elevations were blocked, and new windows were therefore inserted on the front, south, elevation.

5.3 The rainwater was diverted from draining down the hollow-cored central cast iron columns, flowing instead into internal timber gutters that led to downpipes on the external elevations, although the date of this alteration is unknown. The original arrangement would have been difficult to maintain, and may have impeded the functioning of the canal access as the rainwater may have been fed into the basin and canal docks.

5.4 Between 1873 and 1882 a roadway was inserted along the north wall of the building in the Train Assembly Shed and the Western Transit Shed. This involved the removal of the piers along the north wall of the Granary, which had supported the roof of the Train Assembly Shed.

5.5 In the early 1890s, wrought iron plate fire doors were inserted in the internal staircase openings. The 1890s also saw the addition of the high-level offices in the Train Assembly Shed, with the probable accompanying reconfiguration of the junction of that structure with the north wall of the Granary, including the insertion of a doorway on the second floor of the Granary.

5.6 The by now disused canal docks were infilled in about 1920.

5.7 New larger electric lifts were installed in 1927. The hydraulic power system (including the associated piping), and possibly the roof tanks, were removed after that. This may also have been when the platforms were repaired using concrete and brick, although this equally might have happened later.

5.8 The late 1930s extension of the east-west road to the north of the building involved some reconstruction to accommodate the girders of the Train Assembly Shed and the Transit Sheds that spanned it. It also involved the removal of the attached piers that supported the earlier roof of the Train Assembly Shed.

5.9 A number of the internal trapdoors were removed and replaced with infill timber flooring. The roof hoists would have gone out of use by this time, as they were dependent on hydraulic power. The external hoists on the southern loading bays also fell into disuse.

5.10 In the late 20th century, the railway access was severed and the platforms on the ground floor were mostly removed. The concrete floor was inserted on the ground floor, and the lifts were repaired or rebuilt. The staircase partition extensions would have been added, and the windows and loading doors blocked with timber, when the building was converted for document storage. The roof and the five roof cubicles and
three gantries were covered in corrugated zinc sheeting in 1990.

6 FUNCTIONAL AND RELATIONAL ANALYSIS

6.1 The Granary’s five upper floors were initially used for the storage of customers’ consignments of grain in sacks, mainly received by rail from eastern England, but with the capability of storing other dry goods, which became the dominant item of storage in the 20th century. The lower part of the building was devoted to facilities for receipt and despatch of goods by rail (at ground floor level), canal (below ground level), and road (externally)

6.2 On the ground floor, three transverse railway lines were connected by wagon turntables to two tracks leading from the wagon marshalling shed - the Train Assembly Shed - and to the two tracks which passed through the Eastern (arrival) and Western (departure) Transit Sheds, allowing flexibility for the movement of wagons. Short banks (platforms) faced the railway tracks on the north and south sides of the ground floor, with curved recesses to accommodate the turntables. About half of the north-east bank and part of the original north-west bank still survive.

6.3 Two canal docks penetrated beneath the building from the Granary Basin to the south (which itself had a tunnel access from the canal), with canal barges being loaded and unloaded through large trapdoors in the platforms. There was also direct railway wagon access between, at least, the Western Transit Shed (Departures) and the Granary Basin.

6.4 The four southern loading doors on each floor of the Granary allowed sacks to be loaded into carts on the external roadway. The movement of sacks between floors was through a series of trapdoors, which formerly extended through the height of the building, by means of hydraulically-operated hoists which were housed above roof level. There was also a system of chutes which directed sacks down the building for loading into road vehicles.

6.5 There was little original provision for the transfer of goods by barrow between the Granary and the departure and arrival platforms in the Transit Sheds, although the fact that there were six arches between the Granary and each of the sheds (of which only three spanned railway tracks) would have allowed for limited movement of goods by hand between the granary and the flanking sheds.

6.6 The 1865 and 1873 plans (respectively in Humber’s Plate 11 and in Hunter and Thorne at page 96) show that between these dates the transverse railway tracks linking the Granary and the Eastern Transit Shed had been lifted, presumably to reduce congestion in this area of the buildings.

6.7 Geographical considerations suggest that, in the early days, grain would have come in by rail and, after storage, gone out mainly by road and canal for local delivery, particularly to several steam flour mills that were established nearby in the 1850s. The processed flour may have been an outward-bound commodity. In the late 19th century, as English grain production declined due to competition from cheap American grain, and as local stone-ground mills gave way to roller mills located in the Port of London, trade patterns and the goods carried became more diverse.

6.8 The original gas lighting had been replaced by electric light by 1905 (Guildhall Library: MS 14943/20. 42).

6.9 With the construction of the Western Goods Shed, the operation of the Granary and
adjoining sheds was streamlined in that the buildings became the inward-bound goods station, with the outward-bound traffic being handled by the Western Goods Shed.

6.10 The canal connections became disused and were infilled around 1920. In 1927, after the Grouping of the railways, the LNER installed electric lifts (two of 10 cwt. and one of 5 cwt) to replace the hydraulic hoists (PRO: RAIL 390/547). It was recorded at that time that the two lower floors would remain for grain and flour storage and that the three upper floors were to be used for continental cased goods imported via Harwich.

6.11 In 1938 the roles of the Western Goods Shed and the Granary and adjoining buildings were reversed, with the Transit Sheds becoming the outward-bound goods station. The construction of the east-west road immediately to the north of the Granary in the late 1930s did not fully sever the rail connections with the Train Assembly Shed to the north, which still ran within the new road surface. From this time too the interchange of goods became possible between the Granary and road vehicles on the north side of the building and two sack chutes provided a northern exit for sacks.

6.12 After the railway access was severed, the building continued as a warehouse and was most recently mainly used for document storage. At the time of this report the building was mostly vacant.

7 LISTING CITATION


7.2 “EXTERIOR: 6 storeys. Main south front with symmetrical façade of 9 bays with 4 slightly projecting hoist bays. Flanking bays with later square-headed, recessed windows to 4 storeys, illuminating stairs. Segmental arched, recessed casements to window bays, alternating with hoist bays with double, wooden half glazed hoist doors to each floor set in segmental-arched recesses rising full height of building. Some remaining crane mechanism under projecting stone hoods carried on paired brackets. Projecting stone cornice and blocking course carried round projecting bays.

7.3 “INTERIOR: with wooden flooring carried on cast-iron columns and T beams. Each floor with 46 columns arranged in 6 colonnades each supporting a line of paired cast-iron beams running approximately east-west. From the ground to fourth floor column circumferences become progressively smaller. Column heights 2.4m except for those at ground floor being 4.1m. fifth floor taller columns in 2 central colonnades support the roof structure, lower columns forming two colonnades to either side support massive cast-iron beams that originally bore water tanks used in a low pressure hydraulic power system. Wooden roof structure with queenpost trusses having a single wrought-iron suspension rod running down from the apex to the collar in each truss; cast-iron brackets at the intersection of timbers are used in place of timber joints. Staircases in south-east and south-west corners; stone geometrical stairs with original wrought-iron balustrades. Original cast-iron, double fire doors from staircase on each floor.

7.4 “HISTORICAL NOTE: this warehouse was the primary feature of the goods interchange facilities at King’s Cross. Designed to store up to 60,000 sacks of grain which were moved by an early use of hydraulic power to hoists, the Granary originally had 2 canal arms running beneath the ground floor with access to the Regent’s Canal via an open basin or dock on the main south front (now filled in). Rail access was from 3 lines running east-west to the flanking transit sheds, platforms that served these
lines survive in the north-west and north-east corners of the Granary.”

REFERENCES


MS 14943/2, 13 and 20. (In Guildhall Library.)

Ordnance Survey, 5 feet to 1 mile series, second edition revised 1894, published 1895

Ordnance Survey: 25 inch to 1 mile series, first edition 1865, second edition 1894

RAIL 390/547. (In Public Record Office.)

RAIL 783/110. (In Public Record Office.)

SUMMARY: THE HERITAGE IMPORTANCE OF THE GRANARY

ARCHITECTURE AND FABRIC
The Granary is architecturally a high quality building, designed by Lewis Cubitt to be the centrepiece of the Goods Yard.

There is a remarkable degree of survival of the original fabric and features, preserving much evidence of its original operation.

It is a unique building, not least for integrating three transport modes - canal, rail, and road - in its operation.

The internal cast iron framing of beams and columns combines elegance with functional efficiency.

SETTING
The setting of the Granary, framed by the Transit Sheds, backed by the Train Assembly Shed, and fronted on its main south elevation by the Granary Basin, was an integrated design by Cubitt. The survival of these original buildings (and the later flanking offices), and of the relationships between the buildings and the external features, preserves the character of the original composition.

The Granary and the adjacent buildings and spaces incorporate materials, styles and a level of quality of construction also used in Cubitt's other buildings for the Great Northern Railway, including King's Cross Station and the Great Northern Hotel. This unity of style and fabric maintains a thematic linkage between, and forms a major component of, both the King's Cross Conservation Area and this part of the Regent's Canal Conservation Area.

SIGNIFICANCE RELATED TO TYPE
The large size of the building, its classical treatment and the use of materials, such as stone, confer a degree of monumentality that accords with its current status as the only surviving centrepiece of one of London's major 19th century trade hubs.

Its well-thought-out layout, the organisation of goods handling, and the use of hydraulic power all qualify it to be regarded as an efficient 'high-tech' machine of its time, as well as an imposing example of the large warehouse.

SIGNIFICANCE RELATED TO INTANGIBLES
Historically, the Granary and its linked buildings formed a major hub of London's freight trade.
29B WESTERN GOODS OFFICES
FLANKING THE GRANARY
BUILDING NAME
WESTERN GOODS OFFICES FLANKING THE GRANARY

LOCATION
Immediately west of the Granary and south of the Western Transit Shed

CLIENT REF. | EH INVENTORY REF. | IHCM REF. | LINKED EH REFS.
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29B | G2 | G2 | G1, G3

NATIONAL GRID REF.
TQ 3010 8353

REPORT BY
KS, MTT

DATE
April 2004

Within curtilage of the Granary, listed Grade II
Within Regent’s Canal Conservation Area

1 DESCRIPTIVE SUMMARY

1.1 Three-storey office building added between 1865 and 1871 against the south wall of the Western Transit Shed (qv) on the west flank of the Granary (qv). Six bays long by one deep, with a gabled slated roof. Two chimney stacks. Remains of an original second floor fireplace. Accessed from the adjacent Transit Shed and the south-west staircase of the Granary on two floors. No internal stairs. (See Figures BD13, BD14, and BD15 in Part 2.)

2 HISTORICAL AND FUNCTIONAL SUMMARY

2.1 The western office building flanking the Granary was built between 1865, when it was absent from Humber’s plan, and 1871, when the first edition 25 inch and 5 feet to 1 mile Ordnance Survey maps were surveyed. The building was sited in front of the originally-exposed south wall of the Western Transit Shed. It was erected to handle the growing volume of clerical work required for the increasing goods traffic being handled in the Granary and Transit Sheds. Its location suggests that at least part of its operations were concentrated on the work of the outward-bound goods traffic handled in the Western Transit Shed. Unlike its eastern counterpart, its footprint has changed little since it was first built.

2.2 It was built to the east of the cart road opening in the south wall of the Western Transit Shed, spanning over the railway track opening in the same wall. A passage was left on the ground floor of the building’s east end for railway wagons and for pedestrian
access to the south-west doorway of the Granary that led to the latter's south-west staircase. The 1871 Ordnance Survey map and an 1873 plan (Hunter and Thorne, page 96) shows a ground floor doorway leading directly into the Western Transit Shed to the north, and another in the location of the surviving doorway. The 1873 plan also shows a staircase leading from the Transit Shed platform to the first floor of the building. There was further direct access to the first and second floors of the building from the Granary, via its south-west staircase. There is, however, no evidence that there was access on foot between the floors within the building. However, a dumb waiter that survives at ground floor level would have facilitated the passage of papers and other small objects between the floors. A window between the original ground floor room and the eastern passage would have allowed for the monitoring of traffic and people entering and leaving the Western Transit Shed and the south-west door of the Granary. The doorway to the Granary was later moved away from the passage, to the front wall.

2.3 In the late 20th century, the opening for rail vehicles in the south wall of the Transit Shed was blocked, and a lightweight timber doorway and window was inserted in the same opening on the south wall of the offices.

2.4 The windows and much of the internal brickwork between the windows were replaced in the late 20th century.

2.5 The building has always been used as offices until recently. It is currently disused.

3 DESCRIPTION

3.1 The offices are of three storeys, six bays wide and one bay deep, with a symmetrically-pitched and gabled roof. They are built against the west wall of the Granary. Unlike the eastern offices, they have no access between the floors within the building. The ground floor has two rooms (the eastern room, formerly the vehicular passageway, has been inaccessible for inspection). The two upper floors each form a single room. The architecture resembles that of the eastern six bays of the eastern offices, although their position relative to the Granary differs.

3.2 There is a brick plinth at ground level, a brick string course at first floor level, and a brick cornice at eaves level that extends to the west gable wall as a projecting string course. This also extends up to the top of the gable to create the effect of a pediment.

3.3 The external brickwork is built using a mixture of multicoloured stock bricks of fabrics 3032 and 3034 (using the archaeological system of ceramic building material classification) and yellow stock brick of fabric 3035, laid in Flemish bond. The brickwork of the plinths is mostly of the former fabrics, while that used further up the building is mostly 3035. This may be indicative of some rebuilding of the facing brickwork, further evidence of which is the use of blue brick around the vehicular passageway opening.

3.4 On the front (south) elevation of the offices, the ground floor has a front door recessed into a larger arch in the west bay. There are two windows occupying the two bays to its east. A rectangular timber-shuttered opening occupies the eastern bays, which internally is formed by the former railway track entrance to the Western Transit Shed. The first and second floors each have six windows on the front elevation.

3.5 The west elevation has one window to each floor.

3.6 There is a chimney stack in the north-west corner of the building, which has angled
corner fireplaces on each floor. Another stack is located in the north-east corner of the third bay from the west, although no fireplace was observed on either the first or second floors in this location.

3.7 Access to the main ground floor room is currently only from the southern ground floor door. The blocked northern ground floor doorway leading to the Western Transit Shed is visible in the shed’s south wall. The angled corner fireplace in the north-west corner of the ground floor room is a 20th century fletton brick replacement of the original. The brick lining of the north-east corner fireplace in this room survives, but no other elements of the original fireplace survive. The ground floor ceiling is of matchboard. There is a blocked window on the east wall of the main room through which it would have been possible to monitor traffic leaving and entering the east door at the south end of the adjoining Western Transit Shed. At the back of the ground floor is a dumb waiter with walls of tongued-and-grooved timber boarding. It does not survive further up the building.

3.8 The first floor is accessed from a black-painted 20th century steel staircase in the south end of the Western Transit Shed. An 1873 plan indicates that this is a replacement of an earlier staircase. The staircase is unsafe (pers. comm. Pickfords’ employees). The first floor was (and is still) accessed from the Granary’s south-west staircase. The doorway in the staircase’s west wall was cut through the earlier blocked window that lit the stairs. There is a later, either late 19th or 20th century cupboard built into a recess inserted in the east wall of the room to the south of the door. There is a matchboard ceiling, and conduit along the ceiling for the electric wires that supplied the missing pendant lights, which would have had pendant pipes. There are replacement pendant lights.

3.9 The second floor office is painted green, with a 20th century suspended steel-framed ceiling with hardboard panels. Some ceiling panels are degraded and collapsed due to water ingress. The electric lighting consists of a row of electric lights suspended centrally, with the wiring encased in conduit. The lights and conduit probably date to the second quarter of the 20th century. There is a tile surround to a sink (removed) on the north wall of the third bay from the west. Some wall plaster has come away from the north wall, revealing fletton brickwork below roof level. This would have been added at some time from the end of the 19th century or the 20th century, but most probably in the 1930s, when the southern end of the adjoining Western Transit Shed was re-roofed. As with the first floor, access is from the Granary’s south-west staircase, the second floor landing of which is three steps down from the office’s second floor. Windows and surrounding brickwork have recently been replaced. The north-west corner fireplace, which is original to the building and has a slate mantelpiece and surround with painted brick, has suffered some damage.

3.10 The roof is shallow-pitched and slated. The king-rod roof trusses are of composite construction. Each is of timber with a cast iron ridge shoe and a wrought iron king-rod. A vertical rectangular timber-lined shaft, inserted through the roof, can be seen where the ceiling has been damaged.

3.11 The building has external electric lighting, three granite ‘glinters’ close to the wall on the external paving, and a wrought iron bracket fixed externally to the east of the third window from the west on the second floor. There are also telegraph brackets.

4 PHASING ANALYSIS

4.1 The exterior brickwork is probably original to 1865-6/1871, as is the roof structure. The
4.2 Otherwise much of the building and its internal features and fittings were rebuilt in the 20th century. The fletton brickwork on the north wall, just below the roof timbers, was probably inserted in 1938, when the southern roof hip of the adjacent Western Transit Shed was rebuilt and raised to form a half-hipped roof. The electrical conduit for the lighting, and the pendant lights themselves, also probably date from the mid 20th century. The blocking of the track opening on the east side of the front elevation dates from the middle to late 20th century. The steel staircase that rises from the Transit Shed platform to the first floor office also probably dates from the mid 20th century.

4.3 Recent window frames and brickwork indicate that the windows and much of the internal brickwork between the windows was recently replaced.

5 FUNCTIONAL AND RELATIONAL ANALYSIS

5.1 The offices were built to administer the activities of the departure side of the Goods Station (now called the Western Transit Shed) and the interchange of goods between it and the Granary. This was facilitated by the presence of many doorways leading to the adjacent buildings. The ground floor doors led into the Western Transit Shed and to the front of the building. The Granary’s south-west door was easily accessed, as it was situated on the east side of the rail track entrance that ran through the east side of the offices on the ground floor. The Granary’s south-west door led directly to the Granary’s south-west staircase, which also provided access to and between the first and second floors of the offices. The first floor also had direct access to the Transit Shed platform via the external staircase.

5.2 The early lighting to the building would have been fuelled by gas, but the second floor electric lighting dates to the mid 20th century and possibly from the period of reorganisation that took place in 1938.

5.3 The western chimney stack served corner fireplaces on all three floors, while the eastern stack apparently served only a fireplace on the ground floor.

6 LISTING CITATION

6.1 Although within the curtilage of the Grade II listed Granary, the offices are not described in the listing citation.

REFERENCES


Ordnance Survey, 5 feet to 1 mile and 25 inch series, first edition 1874 (surveyed 1871)
SUMMARY: THE HERITAGE IMPORTANCE OF THE WESTERN GOODS OFFICES FLANKING THE GRANARY

ARCHITECTURE AND FABRIC

The building is a small purpose-built Victorian office that retains evidence of and features relating to its historic development. It has retained its character.

It is a characteristic example of the restrained, classical styling of the GNR’s office and domestic buildings, executed in the local brickwork. It demonstrates simple good manners in its broad sash windows and string courses, and a touch of style in the pedimented west gable and the recessed doorway.

SETTING

This is one of several buildings of similar use, materials and form within the Goods Yard, which help to create its character. The subsidiarity in scale of the flanking offices also enhances the monumentality of the Granary and the former Granary Basin space to the front. There are also strong historic operational links between the buildings.

The materials and visible slated roof are characteristic of those in the Goods Yard and in this part of the Conservation Area.

SIGNIFICANCE RELATED TO TYPE

Together with the other flanking office, the Coal and Fish Offices, and the offices attached to the south end of the Midland Goods Shed, this is now an uncommon example of the type of provision made by the railways in Victorian times for the handling of the voluminous routine business of a goods yard. It is a simple functional building, less aspiring than the goods yard’s principal offices at Regeneration House, but with ample ceiling heights and good daylighting.

This is the least altered of the several office buildings, and retains its corner fireplaces, its matchboard ground and first floor ceilings, and the 1930s-style electric light fittings on the top floor.

The interdependence of its activities and those of the adjoining Transit Shed and Granary is demonstrated by several present and former door openings.

SIGNIFICANCE RELATED TO INTANGIBLES

The offices are a building with strong visual and historical operational links with the Granary and the Western Transit Shed.
29C EASTERN GOODS OFFICES
FLANKING THE GRANARY
**BUILDING NAME**

**EASTERN GOODS OFFICES FLANKING THE GRANARY**

**LOCATION**
Immediately east of the Granary and south of the Eastern Transit Shed

**CLIENT REF.**
29C

**EH INVENTORY REF.**
G3

**IHCM REF.**
G3

**LINKED EH REFS.**
G1, G2

**NATIONAL GRID REF.**
TQ 3018 3512

**REPORT BY**
KS, MTT

**DATE**
April 2004

**Within curtilage of the Granary, listed Grade II**

**Within Regent's Canal Conservation Area**

1 DESCRIBITVE SUMMARY

1.1 Three-storey office building built against the south wall of the Eastern Transit Shed (qv) on the east flank of the Granary (qv). Site of offices originally open, but a smaller building here by 1865, replaced by present offices by early 1870s. Nine bays wide by one deep, with a gabled roof that was formerly slated but currently has a cover of corrugated asbestos sheeting. Two chimney stacks to the rear wall. Entrance door leads onto a staircase which rises through the building. Building has access to the Granary’s south-eastern staircase on two levels above the ground floor, and formerly had access to the adjacent Eastern Transit Shed. (See Figures BD13, BD14, and BD15 in Part 2.)

2 HISTORICAL AND FUNCTIONAL SUMMARY

2.1 The eastern office building flanking the Granary was built on the site of a shorter office building shown on an 1865-6 plan (Humber), which was located between the two doorways in the south wall of the Eastern Transit Shed. This shorter building was itself built in front of the originally-exposed south wall of the Eastern Transit Shed. The 1871 Ordnance Survey shows it rebuilt wider, extending to its present south-east corner and blocking off the eastern vehicular doorway of the Transit Shed. The 1873 plan of the Granary (Hunter and Thorne, page 96) appears to indicate that the building’s upper floors were extended to the west to meet the south-east corner of the Granary, while the vehicular passage at ground level was widened. It was originally built as the
offices dealing with the increasing clerical work generated by traffic passing through the Granary group and its sheds.

2.2 The different window spacing in the three western bays appears to reflect the extension of the upper floors to the west to meet the Granary between 1871 and 1873. The 1871 map omits the front door, but shows a further northern ground floor door giving access to the Eastern Transit Shed. The 1873 plan shows additional access from the Transit Shed via a staircase that leads to a door on one of the upper floors of the offices. This plan also shows the front door and the chimney stacks in their current location, with the front door recessed within a blind arch, a detail that has been lost through later alterations but which still survives in the western offices on the other side of the Granary. After the 1871-3 extension of the offices to the Granary, there was access from the first and second floors of the Granary staircase into the upper storeys of the offices. The number of access routes and their locations define the buildings, and indicate the operations within these buildings, that were administered from the offices. They were concerned with the business of the Granary and the Transit Sheds, and it was deemed useful to be able to access all floors of the Granary from the offices. Walking through the Granary would also have given access to the upper floors of the western offices.

2.3 During the 20th century, the entrance to the Eastern Transit Shed was blocked. The ground floor’s west wall was rebuilt closer to the Granary, narrowing the access to the Granary’s side entrance. Bomb damage led to the rebuilding of part of the south-east of the building in the late 20th century. The offices were also refurbished. The main entrance is currently on the south (front) elevation.

2.4 The building’s most recent use was as offices administering the work undertaken in the Granary and adjoining buildings. Subsequent occupancy has been intermittent.

3 DESCRIPTION

3.1 The offices are long and narrow, being nine bays wide from east to west but only one bay deep. They are of three storeys, with a symmetrically-pitched roof.

3.2 The external brickwork is yellow stock brick (fabric type 3035, using the archaeological system of ceramic building material classification) to the east, and purple multicoloured stock brick with yellow surfaces (fabrics 3032 and 3034, using the same classification system) on the western part of the principal, south elevation. The brickwork is laid in Flemish bond to match that of the Granary.

3.3 There is a brick plinth with a yellow limestone coping, a projecting brick string between the ground and first floor, and a brick cornice at eaves level. This cornice extends across the east gable wall as a projecting string course, and is also carried to the top of the gable, creating the effect of a pediment on the east elevation.

3.4 The six easternmost bays are uniformly spaced, with sash windows. They include the narrow entrance door on the ground floor, set into the fourth bay from the east. The westernmost three bays on the upper two floors are wider, and are separated from the eastern bays by a broad pier. Plans show that there was formerly a cross wall here, which - from some time between 1865 and 1871 until c.1873 - was the western end wall of the building. The three western bays are therefore later infill, first appearing on the 1873 plan. The join in the facing brickwork was carefully executed so as to be invisible after repointing and weathering. The front wall now makes a butt joint with the south-east corner of the Granary, but projects slightly forward of it, as the east end
bay of the Granary is set back by one brick.

3.5 Towards the west end of the front elevation, at ground floor level immediately to the west of the cross wall that formed the building’s west wall before c.1873, there is a former vehicular opening under a concealed girder. This opening is now blocked with matchboarding, with a sash window within it. This opening allowed continued access to the door of the Eastern Transit Shed, which is now also blocked. Beyond the blocking on the front elevation, at the west end of the ground floor, there is a bay of plain brickwork that supports the wall above, and which first appears on the 1873 plan. Through this, at its west end, is a narrow inserted segmental-headed opening that leads through a passage to a door in the side of the Granary (currently the only access to the Granary from the south). To carry the brickwork, the arch bears against a stone skewback inserted in the brickwork of the Granary, with tumbled-in brickwork aligned to the line of thrust above it. The passage is walled off from the offices.

3.6 There is a change in the texture of the brickwork between the west and east parts of the front elevation that aligns with the west side of the sixth window from the east on all floors. It is likely that this change represents the edge of the brickwork rebuilt after the Second World War.

3.7 There is a chimney stack in the north-east corner of the building which has angled corner fireplaces on each floor. There is also a similar stack at the rear of the building in the north-west corner of the sixth bay from the west, in the same location as on the 1873 plan.

3.8 Internally, the entrance door leads directly to the staircase that gives access to all floors. The internal space is divided by the staircase to create two office areas per floor, with extra partitions in the western portion of the building on the second floor. A rear passage extends part way along the top floor. Modernisation and refurbishment had covered evidence of original fabric in the areas inspected, and it was not possible to gain access to the roof. Access has not been obtainable to inspect the offices of Pickfords Records Management and Bullens (the ground floor offices to the west of the door, the first floor offices, and the eastern offices on the second floor).

3.9 The roof is symmetrically-pitched with a shallow slope, and has a corrugated asbestos covering. The internal roof structure was not visible during inspection, but is of short span (about 4.5 m).

4 PHASING ANALYSIS

4.1 There was at first no building in front of the Eastern Transit Shed. What was possibly a temporary office had been built by 1865. This was replaced by the eastern six bays of the present structure between 1865-6 and 1871. The three western bays were inserted to link to the Granary between 1871 and 1873, bridging over the vehicular approach to the south-western door of the Eastern Transit Shed. The two main phases can be deduced from plans, supported by visible differences in the spacing of the windows.

4.2 While pedestrian access to the Granary staircase was initially via the vehicular entrance, a separate passage was later inserted. The lightweight timber infilling of the vehicular entrance on the ground floor (which included a sash window and appears in a photograph of 1976), and the removal of the cross wall to incorporate this area into the offices, took place in the 20th century. The wall was rebuilt with a new sash window in the 1990s.
4.3 The change in brick texture visible on the front elevation, which is slightly to the east of the western edge of the 1865-1871 building, represents the extent of the brickwork that was rebuilt following Second World War bombing. The brick type used in the eastern part of the building (3035) is the same as was used to repair the south-east corner of Regeneration House, which may also have suffered bomb damage. The brickwork around the front door may have been simplified at this time. The roof was also re-covered with asbestos-cement sheeting after the Second World War.

4.4 The early plans show northern ground and upper floor doors and a staircase that led from the Eastern Transit Shed to the upper floor doors. It is not certain when these were removed and blocked. The stairs from the Transit Shed's platform must have led to the first floor of the offices, as the second floor would have extended above the roof of the Transit Shed. Also, the number of steps shown on the 1873 plan is similar to those shown on the corresponding staircase from the Western Transit Shed to the western offices, and these are known to have led to the first floor. These western offices also have extant stairs that lead to their second floor; and, although they are replacements of the original stairs, it is likely that the two office buildings - with similar functions - would have been built to mirror each other in their access routes.

5 FUNCTIONAL AND RELATIONAL ANALYSIS

5.1 The building functioned as offices from the start. The incremental growth of this and the other flanking office building in the period before 1873 suggests a rapid increase in the volume of traffic and/or the complexity of clerical work in its administration.

5.2 The two doors to the north, and the associated stairs shown on the early plans, indicate the close relationship that the building had to the operation of the Eastern Transit Shed (originally the incoming goods station). The doors to the Granary staircase, while perhaps being primarily required for access to the extended offices, reflect also the need for the management of this longer-term storage facility. The plethora of access routes confirms the level of operational integration and interaction between these buildings.

6 LISTING CITATION

6.1 Although within the curtilage of the Grade II listed Granary, the offices are not described in the listing citation.

REFERENCES


SUMMARY: THE HERITAGE IMPORTANCE OF THE EASTERN GOODS OFFICES FLANKING THE GRANARY

ARCHITECTURE AND FABRIC
The building is a small, purpose-built, Victorian office that retains evidence of its historic development and has undergone some alteration since first built, but has retained its character. It demonstrates simple good manners in its broad sash windows and string course, with some style in the pedimented gable.

It is a characteristic example of the restrained, sub-Georgian styling of the GNR’s office and domestic buildings, built in the local brickwork.

SETTING
This is one of several buildings of similar use, materials and roof form within the Goods Yard, which help to create its character. The subsidiarity in scale of the flanking offices also enhances the monumentality of the Granary and the former Granary Basin space to the front. There are also strong historic operational links between the buildings.

The materials and visible roof are characteristic of those in the Goods Yard and in this part of the Conservation Area.

SIGNIFICANCE RELATED TO TYPE
Together with the other flanking office, the Coal and Fish Offices, and the offices attached to the south end of the Midland Goods Shed, this is now an uncommon example of the type of provision made by the railways in Victorian times for the handling of the voluminous routine business of a goods yard. It is a simple functional building, less aspiring than the goods yard’s principal offices at Regeneration House, but with ample ceiling heights and good daylighting.

The interdependence of its activities and those of the adjoining Transit Shed and Granary is demonstrated by several present and former door openings.

SIGNIFICANCE RELATED TO INTANGIBLES
This is a building with strong visual and operational links with the Granary and the Eastern Transit Shed.
30 TRAIN ASSEMBLY SHED
BUILDING NAME

TRAIN ASSEMBLY SHED

LOCATION

North of Granary and between Eastern and Western Transit Sheds

CLIENT REF.   EH INVENTORY REF.   IHCM REF.   LINKED EH REFS.
30            G4               G4             G1, G2, G3

NATIONAL GRID REF.

TQ 3016 8362

REPORT BY

MNB, MTT

DATE

April 2004

WithincurtlageoftheGranary,listedGradeII
WithinRegent’sCanalConservationArea

1 DESRIPTIVE SUMMARY

1.1 Large shed some 155 m by 55 m on plan, built 1850 for marshalling wagons loaded or unloaded in adjacent Eastern and Western Transit Sheds (both qv) into trains for departure northward. Four equal north-south bays with symmetrically-pitched roofs. Originally single-storey; first floor of offices added over southern part of westernmost bay 1897-9, but these offices severely damaged by fire in 2001 and subsequently demolished. (See Figure BD13 in Part 2.)

1.2 Much altered, particularly in 1936-8 together with adjacent Transit Sheds. Original 45 feet (13.7 m) span composite timber and wrought iron roof trusses replaced by light steel trusses on riveted plate girders and rolled steel beams. Roof now supported on some cast iron columns, but mainly on steel stanchions.


1.4 East and west walls between Train Assembly Shed and flanking Eastern and Western Transit Sheds of brick, with arch openings all now blind; those originally open to accommodate railway tracks to adjacent sheds since infilled.

1.5 North wall of Shed originally open, with twelve tracks passing through it. Much altered now, with roller shutter doors and single-storey brick offices. Original stone-capped
brick piers survive here on line of valleys between the four bays of pitched roofing (corrugated asbestos with strips of glazing).

1.6 South wall of Shed, north of inserted roadway, now of steel-braced concrete blockwork and profiled metal sheeting. Edge of raised platform clearly visible, edged by rail sections on dwarf brick walling.

1.7 Larger, enclosed part of Shed currently in use as ‘The Raceway’, a go-kart track with built-up undulating and curved roadway. Spectator facilities on west side. Southern part remains as east-west roadway.

2 HISTORICAL AND FUNCTIONAL SUMMARY

2.1 The Train Assembly Shed was built in 1850 as an integral part of Lewis Cubitt’s design of the Granary group. Incoming wagons laden with general goods freight were unloaded in the Eastern Transit Shed. This had only one long platform face, but five sets of wagon turntables on transverse tracks allowed individual wagons to be manoeuvred into this shed for unloading. They could then be transferred to the long single platform in the Western Transit Shed for reloading, or - if to be returned empty - they could be assembled into a train on one of the twelve tracks within the Train Assembly Shed, three in each of its four bays.

2.2 At this time the interior of the Shed was spanned by four bays of east-west composite timber and wrought iron roof trusses, supported by an alternating sequence of cast iron columns and lengths of brick wall that provided longitudinal stability to the column lines.

2.3 The large number of tracks in this central shed facilitated the gradual assembly of trains for particular routes and destinations. This avoided the need for frequent shunting of wagons.

2.4 Two tracks continued southwards into the ground floor of the Granary for grain traffic. Here again, wagon turntables on transverse tracks assisted the efficient turn-round of wagons.

2.5 A plan of the Granary in 1873 (reproduced in Hunter and Thorne) shows this arrangement of tracks, with the Transit Sheds to west and east described respectively as the ‘Departure’ and ‘Arrival’ goods stations. The Train Assembly Shed itself is titled ‘The Arcade for preparing wagons for the country’.

2.6 Changes took place soon afterwards. A railway plan of 1882 shows two of the twelve tracks truncated and replaced by north-south platforms, with an east-west platform introduced on the north side of a transverse access road immediately to the north of the Granary. Formation of this road necessitated openings being formed through the side walls of the Train Assembly Shed into the adjacent Transit Sheds.

2.7 Further changes resulted from works carried out in a major campaign in 1897-9. The newly-built Western Goods Shed, together with the adapted Western Coal Drops, now handled all outgoing goods traffic. The Granary group, including the Train Assembly Shed, now concentrated on incoming goods traffic. A single-storey range of offices was added at first floor level above the tracks, extending north from the Granary over slightly more than half of the westernmost bay. This necessitated the provision of new cast iron columns along the east side of this bay to support the additional load, as well as the introduction of heavy riveted steel plate girders to span the offices across the roadway next to the Granary. The composite roof trusses of the Train Assembly Shed...
2.8 Further major alterations were carried out in 1936-8, affecting all three sheds north of the Granary. Their roofs (except that over the first floor offices) were totally rebuilt. In the Train Assembly Shed the composite trusses were discarded, and replaced by rolled steel I section principal rafters with steel tie-rods linking their feet. These were supported on steel beams, riveted compound girders, and stanchions. The interior of the Train Assembly Shed was replanned, with the removal of the transverse tracks and turntables, and the provision of a full set of longitudinal platforms. Its function reverted to the handling of outwards goods traffic. The east-west roadway was widened and extended through new openings formed in the outer walls of the Eastern and Western Transit Sheds.

2.9 Railborne goods traffic declined after World War II, but the Shed continued to handle rail parcel traffic until 1981, using the 1938 platforms. The tracks were subsequently removed inside the Shed. The remainder of the floor area north of the road was raised to platform level. The north wall and the adjacent part of the Shed was modified to accommodate roller shutter doors and offices. Separation between the south of the Shed and the east-west roadway was achieved with concrete blockwork and profiled metal sheeting braced by steel stanchions.

2.10 In recent years the Shed has been adapted as ‘The Raceway’, a go-kart circuit raised above ground level.

2.11 The first floor offices in the westernmost bay were severely damaged by fire in 2001, and were subsequently demolished. An adjacent section of the Western Transit Shed roof was also damaged and demolished. It was being rebuilt in late 2003.

3 DESCRIPTION

3.1 The building was originally 155 m by 55 m on plan. The east-west roadway later brought through the south end of the Shed occupies a width of about 15 m.

3.2 The east and west walls between the Train Assembly Shed and the flanking Transit Sheds are of brick, with arch openings all now blind. The width and spacing of these arches differs on either side of both walls. There were originally seven openings in each wall, five for the transverse railway tracks linking the sheds and two for foot traffic. These have since been infilled.

3.3 Further descriptions of the east and west side walls are given in the reports on the Eastern and Western Transit Sheds (both qv).

3.4 The north wall of the Shed is a gable with four equal bays reflecting the symmetrical symmetrically-pitched roofs behind. It was originally open, with three tracks passing through it in each of the bays. Three stone-capped brick piers are present, continuing the lines of internal columns (formerly alternating with longer sections of brick walling) under the valleys between the four bays of pitched roofing.

3.5 Neither Humber nor an 1882 railway plan show intermediate columns between the piers, and so it would seem that - as now - the end roof trusses supported a lightweight fascia above the railway tracks. Originally this was probably timber valancing, now it is corrugated asbestos above the valley level.

3.6 The three easternmost north wall bays have roller shutter doors at platform level,
topped by a profiled metal fascia up to valley level. The westernmost bay has a roller shutter door on its eastern side, next to a single-storey, relatively recent, office also set at platform level.

3.7 The south wall of the Shed, north of the roadway, includes steel stanchions supporting the roof trusses spanning north-south across the roadway. The wall infilling is non-loadbearing concrete blockwork and profiled metal sheeting supported on sheeting rails, all being stabilised by the stanchions. The edge of the raised platform can be seen here, faced with rail sections on dwarf brick walling.

3.8 The original roof was of timber boarding on composite timber and wrought iron trusses. (Some of these were relocated to roof over the 1897-9 first floor offices, and survived until the recent fire.) The 1936-8 reconstruction of the Shed roof adopted a simple steel construction, with rolled I section principal rafters spanning east-west, and tied together between their feet by circular tie-rods supported by two flat sag-bars. The joints are welded, a relatively early use of the technique in structures. The roof is sheeted with corrugated asbestos and bands of glazing. Valley gutters are also of asbestos.

3.9 The roof trusses are supported on rolled steel sections spanning north-south, with riveted compound girders being used for longer spans of up to about 12 m, particularly at the north end of the Shed. Stanchions are single British Standard Beams, or twin BSBS battened together where longer roof spans, and hence heavier loads, have to be carried.

3.10 The 1897-9 first floor offices had a slated symmetrically-pitched slate roof on trusses as noted, with timber boarding on the soffits. Brick walls and timber floors were supported on riveted steel plate girders. These were carried on eight hollow circular cast iron columns placed along their eastern face. These columns have square headplates with triangular stiffeners, and a cast-on plaque near ground level inscribed "W. RICHARDS & SON MAKERS LEICESTER". (Fire damage rendered most of this area inaccessible during earlier inspections. Subsequent repairs have introduced a false ceiling under the area of the offices, preventing further inspection from ground level.)

3.11 The roof over the roadway is a continuation of the roof construction to the north. The east-west trusses are carried on riveted compound steel girders spanning north-south. These girders are supported on steel stanchions to the north of the roadway, and on the north wall of the Granary to the south (qv).

3.12 Inside the Shed, the platform construction is about 1 m above the adjacent ground level. At the present time, the Shed is being used for 'The Raceway', a go-kart track built up off the platform level to form an undulating and curved roadway. Spectator facilities are provided along the west side of the track.

3.13 The inserted roadway south of the Shed is surfaced with asphalt. Some granite setts remain.

4 PHASING ANALYSIS

4.1 The Train Assembly Shed opened for its original function in 1850. Initially it had no platforms, as all wagon loading and unloading was carried out in the adjoining Transit Sheds. Some platforms were added towards the end of the 19th century.

4.2 In 1897-9 a range of first floor offices was added over the southern part of the westernmost bay, and the Granary group concentrated solely on incoming goods
4.3 The Shed roof was totally reconstructed in steel in 1936-8, when the roadway to the south was extended to east and west, and it too was re-roofed in steel. Platforms were extended within the Shed.

4.4 The Shed continued in use for outgoing goods until the late 1960s, and then handled rail express parcels until 1981, after which the tracks were removed. It then served the ‘Lynx’ road express parcels service until 1988, after which it found intermittent use for storage, including a period as a disaster relief collection centre for Bosnia. It was converted in the mid-1990s to house a go-kart circuit.

4.5 A fire in 2001 severely damaged the first floor offices, which were subsequently demolished. Repairs have since been carried out, and the go-kart circuit continues in use.

5 FUNCTIONAL AND RELATIONAL ANALYSIS

5.1 The initial function of the Shed was for the assembly of trains of wagons after they had been loaded or unloaded in the adjoining Transit Sheds. Each train, intended for a particular route or destination, could be made up from individual wagons using the transverse tracks and their wagon turntables. The building was the freight equivalent of the departure platforms of a passenger terminus.

5.2 The location of the incoming and outgoing Transit Sheds, either side of the Train Assembly Shed, was an obvious and logical design decision. So too was the siting of this latter Shed immediately to the north of the Granary, into which railway tracks from all sheds provided great flexibility in moving wagons for the specialised grain traffic.

5.3 From c.1899 the Shed served, with the remainder of the Granary group, for the handling of incoming rail-borne goods, while outgoing goods were dealt with in the Western Goods Shed and the adapted former Western Coal Drops. This was facilitated by the addition of some platforms within the Shed, and the presence of an inserted east-west roadway immediately north of the Granary, linking the three sheds. The newly-built first-floor offices catered for the paperwork associated with the increasing goods traffic.

5.4 The modernisation of 1936-8 belatedly brought the shunting system up to date (for capstan haulage), and greatly increased platform capacity and the efficiency of operations. The roof reconstruction and other alterations at that time assumed the continuing long-term demand for rail-borne goods traffic. However, rising labour costs and improving long-distance road transport after World War II caused to a progressive loss of competitiveness for rail freight, leading in the 1960s to the drastic closure of loss-making services. Despite that, the Shed remained in the freight-handling business until the late 1980s. The raising of the ground floor level to platform height has assisted such usage.
6 LISTING CITATION

6.1 Although within the curtilage of the Grade II listed Granary, the Train Assembly Shed is not described in the listing citation.

REFERENCES


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<th><strong>SUMMARY: THE HERITAGE IMPORTANCE OF THE TRAIN ASSEMBLY SHED</strong></th>
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<tr>
<td><strong>ARCHITECTURE AND FABRIC</strong></td>
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<tr>
<td>The Shed is flanked on either side by the original 1850 brick walls dividing it from the Eastern and Western Transit Sheds, although openings in these walls have been altered.</td>
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<tr>
<td>The original composite roof trusses and columns have been replaced by 1930s steelwork, although the roof profile has been preserved and the internal plan form of four wide equal bays has been retained.</td>
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<tr>
<td><strong>SETTING</strong></td>
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<tr>
<td>The building is an integral part of Cubitt’s original design of the Granary group.</td>
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<td><strong>SIGNIFICANCE RELATED TO TYPE</strong></td>
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<tr>
<td>The arrangement of a train assembly shed with many tracks, flanked by two transit sheds separately dedicated to incoming and outgoing goods handling, is unusual but logical.</td>
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<td>Despite recent fire damage and alterations including the replacement of its roof construction, the Shed remains a good exemplar of the functional tradition in industrial buildings.</td>
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<td><strong>SIGNIFICANCE RELATED TO INTANGIBLES</strong></td>
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<td>The large single-storey space adds to the monumentality of the Granary group.</td>
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31 EASTERN TRANSIT SHED
BUILDING NAME

EASTERN TRANSIT SHED

LOCATION

East of both the Granary and the Train Assembly Shed, west of the West Handyside Canopy

CLIENT REF.  | EH INVENTORY REF. | IHCM REF. | LINKED EH REFS.
--- | --- | --- | ---
31 | G3 | G3 | G1, G2, G4

NATIONAL GRID REF. | REPORT BY | DATE
--- | --- | ---
TQ 3020 8361 | KS, MNB, MTT | April 2004

Within curtilage of the Granary, listed Grade II
Within Regent’s Canal Conservation Area

1 DESCRiptive Summary

1.1 One of two brick buildings arranged either side of the Granary and Train Assembly Shed to handle inward-bound goods traffic. Built on an unprecedented scale, some 180 m long by 25 m clear width, and almost 7.5 m clear height. Original longitudinal platform removed or altered, and railway track removed (or covered over in places rather than removed). (See Figures BD13, BD14, and BD15 in Part 2.)

1.2 Walls originally had six large openings and five smaller doorways on east side, five large openings and two smaller doorways on west side, providing access to Train Assembly Shed, with six arches leading into Granary, three of which spanned railway lines. Former road vehicle doorways on east sides of north and south walls, and railway vehicular doorways on west sides of north and south walls. These openings altered in many instances, and arches to Granary blocked.

1.3 Original roof fully hipped at south end and gabled at north end, with composite timber and wrought iron trusses and cast iron elements. Roof rebuilt in 1936-8, to same profile, using steel trusses and corrugated asbestos sheeting, with half-hipped south end.

1.4 Although track and most platforms now gone, many survivals remain in Shed from both original construction and subsequent development. These include windows and joist holes for mezzanine floors in more than one part of building. Also original overhead runway beams for sliding doors, and guard stones and timber rubbing
strakes protecting brickwork from road traffic.

2 HISTORICAL AND FUNCTIONAL SUMMARY

2.1 The Eastern Transit Shed was built in 1850 as part of Lewis Cubitt’s Goods Station. It was built with the Western Transit Shed to handle all of the London merchandise traffic of the GNR. The Eastern Transit Shed handled incoming railway traffic, and the Western Transit Shed handled outward-bound traffic. The buildings were on an unprecedented scale, among the longest of their day.

2.2 The Eastern Transit Shed included an internal roadway along its eastern side, a central platform, and a western track that provided turntable access to the Granary and Train Assembly Shed. The platform was set over an arm of the canal running north from the Granary Basin to the south, to allow for the loading of barges. There was also stabling for horses beneath the platform, further north, that still survived in 1942, according to a Goad insurance plan of that date. The goods could be loaded from the platforms onto road carts. The roadway initially ran the length of the shed with east-west road access through arches in the building’s eastside. Wagon turntables diverted the wagons into the Granary for unloading or reloading, and into the Train Assembly Shed for marshalling or diverting into the Western Transit Shed or Granary.

2.3 The current offices to administer the work in the Eastern Transit Shed were built between 1865 and 1871 with access from the south end of the platform, to both its ground and first floors (the latter via a staircase, now gone). The construction of the offices blocked the road vehicle doorway on the south wall of the Transit Shed, but preserved the railway track opening on the west part of the shed’s south wall, maintaining wagon access to the Granary basin.

2.4 By 1873 the turntables providing railway access to the Granary had been removed, the railway track had been cut short of the opening in the south wall, and the gap between the south end of the track and the southern doorway had been covered by an extension of the platform. By 1882 the turntables that diverted wagons into the Granary had been reinstated.

2.5 In 1899, with the opening of the Western Goods Shed to handle outward-bound traffic, the two Transit Sheds, the Granary, and the Train Assembly Shed became the inward-bound goods station.

2.6 In 1936-8 an east-west road was built through both Transit Sheds and the Train Assembly Shed, along the north side of the Granary. The Shed roof was rebuilt at the same time with light steel trusses and corrugated asbestos sheeting, with a half-hipped south end replacing the earlier fully-hipped arrangement. In 1938 the Transit Sheds, Granary and Train Assembly Shed became used solely for outward-bound goods traffic.

2.7 Following abandonment for railway use: the building was further subdivided with lightweight steel-framed partitions for warehousing, with roller-shutter doors. The platform and track were removed.

2.8 The Eastern Transit Shed has been used for storage: the northern part by UPS, and the southern part by the London Philharmonic and London Symphony Orchestras.
3 DESCRIPTION

3.1 The two Transit Sheds were of exceptional size for the period (some 180 m long, 25 m wide and 7.5 m clear height). They have brick outer walls. At the southern end there are six arches in each shed (mostly blocked) leading into the Granary, the north wall of which is also the southern wall of the Transit Sheds. The 1930s roofs have steel roof trusses, and are half-hipped at their south ends and gabled at their north ends, with corrugated asbestos sheeting and top lighting.

3.2 The outer walls are of multicoloured brick of fabric type 3032 and 3034 (using the archaeological ceramic building material classification system), which differ from those in the slightly later Granary. The external walls generally appear as a blind arcade of segmental arches between pilaster strips at 7.6 m centres. Internally, brick pilasters supported the roof trusses (see below). The internal brick pilasters are staggered relative to those outside, on a 3.8 m module to support the roof trusses.

3.3 On the east wall, even-numbered bays have original segmental-arched door openings which match those of the blind arcade above. Generally, the even-numbered bays originally alternated between having large doors and having smaller doors, while the odd-numbered bays had blind arches and no openings. Some of the original openings have been rebuilt to form rectangular door openings, and additional smaller door openings have also been inserted later. From north to south, between the external arch piers, the sequence of openings was observed thus: blind arch/large opening/blind arch/small opening/later inserted rectangular opening/large opening/blind arch/small opening/blind arch/large opening/later opening enlarged from original small opening/blind arch/large opening/blind arch/later enlarged opening/blind arch with small inserted door/large opening/1938 roadway entrance replacing two bays/blind arch/large opening/blind arch. At the south end of the east wall, beyond the arcading, there are two inserted windows (now blocked with timber), the upper of which suggests a mezzanine floor at least in the shed’s south-east corner. No evidence survives of this internally.

3.4 The west wall’s original openings did not generally align with those on the east wall. Their totally different functions (those on the west being for rail access, those to the east providing road access) would have made their alignment opposite each other unnecessary. The west wall has a c.1938 wide opening at its north end under an inserted compound steel girder bearing the rolling marks ‘Appleby-Frodingham 24x7½’ and ‘British Steel’. Apart from the opening for the roadway to the north of the Granary, the insertion of which involved some rebuilding of the junction between the Granary and the Transit Shed’s west wall, the rest of this wall to the north of the Granary has been altered little, except for the blocking of former openings. At the south end, where the Transit Shed abuts the Granary, the Granary’s four wide arches flanked by two narrower arches are all blocked, although the three southern wider arches (that originally spanned the railway tracks) were blocked in such a way to create recesses in the Transit Shed’s wall. In the south arch is a door to the Granary. The narrower north arch is set beneath a high-level recess that rises to the level of the roof gutter. Within this recess, set further back from the wall face, is an arched recess.

3.5 The north wall of the Eastern Transit Shed is a large gable with an original central blind arch. Against this is the profile of a two-storey pitched-roof building. This was shown on the 1865 Humber plan and the 1871 OS plan. The building is shown on the former plan to have included Guards’ rooms, and it was still standing at time of the revision of the Goad plan of 1942, on which it is described as a “Mess” with “Kitchen”, but it has since been demolished. Its walls do not appear to have been bonded to the
main wall. Its fireplace flues, however, remain clearly visible as voids within the north gable’s brickwork. A single railway track originally passed into the Transit Shed through an opening on the west side of this gable end, with a second opening for road traffic on the east side. Today, both openings remain at either end of the wall, although the original shallow arches have been infilled at the top to form rectangular openings for roller-shuttered doors. A smaller third door has been inserted into the central blind arch.

3.6 The south wall extends only up to eaves level, reflecting the fact that the roof was originally fully hipped. Above this level, the brickwork of the Granary’s Eastern Offices is recessed from that of the shed. Three fletton-brick pilasters built onto the wall of the offices support the hips of the 1938 half-hipped roof.

3.7 The Eastern Transit Shed was originally roofed in a single symmetrically-pitched span east-west by exceptionally long-span (78 feet clear) composite timber and iron trusses. The main members were of timber, with wrought iron straps and tie-rods. The trusses also employed cast iron shoes and junction boxes, as widely used in such composite trusses of the time and as survive in the Granary. In 1936-8 these trusses were replaced by straightforward, mainly riveted but partly bolted, steel trusses of Polonceau configuration, fabricated from rolled steel angles joined by gusset plates. At the same time the original roof covering - of slate, with areas of glazing (Goad Sheet 12/400, 1921) - was replaced by corrugated asbestos sheeting.

3.8 The Eastern Transit Shed roof is drained by downpipes, which on the external east face are located on the pilasters between the blind arches. Immediately to the east of this building, the open area towards the Midland Goods Shed is roofed over by the trusses of the West Handyside Canopy, erected in 1888.

3.9 The Transit Shed was originally served by a canal basin entering the building from the south. This is inaccessible at present, and is probably filled in. Stables for railway horses were provided under the platform. The construction of these is described in the English Heritage Inventory of 1988, but access to the stables has reportedly been blocked since then. There is no evidence of access visible at ground floor level, although they may survive hidden beneath the platforms and floor surfaces.

3.10 The 1936-8 east-west roadway is 15 m wide. The Shed wall above it is carried on a steel plate girder set into a pier on the north-east corner of the Granary.

3.11 To the north of the east-west road there are platforms in place, retaining elements of the original platforms. They have however been altered and extended during the life of the building. Among the surviving fixtures relating to the early use of the Transit Shed are some cast iron overhead runway beams from the original internal sliding doors behind the larger openings, and guard stones and some timber rubbing strakes that protected the brickwork from road carts.

4 ARCHITECTURAL ANALYSIS

4.1 The Eastern Transit Shed is an integral part of Cubitt’s design of the Granary group of buildings. The Transit Sheds were exceptionally long and wide for their time. The arcading on the walls and the height of the sheds would have added to the monumentality of the Granary group. The timber trusses were of unusually long span. The fact that the two Transit Sheds were set back from the south front of the Granary, and were lower than it, emphasised the architectural primacy and sheer size of the Granary.
5 PHASING ANALYSIS

5.1 The outer walls of the Shed are original to the 1850 building. Parts of the original platforms survive to the north of the east-west roadway through the shed. They have been partly removed and partly extended. The scars on the northern gable provide evidence of the former attached building. Guard stones and rubbing strakes, which protected the brickwork from carts, also survive from the original building, as do some of the cast iron overhead runway beams for the sliding doors.

5.2 In the period following the construction of the Granary’s Eastern Offices (built between 1865 and 1871), the doorways that led through the south end of the Transit Shed were gradually blocked. The 1873 plan shows the adjoining southern offices in place, and also a continuous platform that had been extended across the southern end of the shed (to the east of its original extent between 1871 and 1873, and to the south-west between 1871 and 1873). A high-level window at the southern end of the east wall of the Transit Shed provides evidence that there was an internal mezzanine level in this area, with perhaps an office below, lit by another window. The yellow brick surrounds to the inserted windows are of a brick type (fabric type 3035) that was generally used in the Goods Yard after c.1870. Between 1865 and 1873 the plans show that the railway tracks leading between the Granary and the Eastern Transit Shed were severed. After this time there would have been little reason to keep the Granary arches to the shed open.

5.3 The next major phase of changes took place between 1936 and 1938, when the building was re-roofed and a widened east-west roadway was built through both Transit Sheds to the north of the Granary.

5.4 Following the closure of the Goods Station, the Transit Shed was converted to warehousing. Areas of the shed were partitioned off using lightweight steel-framed partitions. Several of the openings were altered to suit the needs of the occupants.

5.5 By 1990, all of the arches between the Granary and the Eastern Transit Shed were blocked except for the southern arch, which is continued as an access route into the Granary.

5.6 By this time the floors were generally covered in asphalt.

6 FUNCTIONAL AND RELATIONAL ANALYSIS

6.1 The Eastern Transit Shed was originally the arrivals goods station. The central platform was used to unload railway wagons from the single western track into carts that circulated through the western, northern and southern doors. By 1871 the southern roadway door was blocked. There was access through doors in the platform’s floor to the canal dock running beneath the building, which allowed for the unloading of goods onto barges for distribution by canal via the forecourt basin in front of the Granary.

6.2 From the western track, five wagon turntables (now covered in asphalt or removed) allowed railway wagon access between this Transit Shed and the adjoining Train Assembly Shed (through arches in the west wall of the Transit Shed). From there the wagons could be diverted to form outward-bound trains, diverted into the Granary from the north or sent directly into the Western Transit Shed for loading. Towards the south end of the shed there were three turntables on the western track that transferred...
wagons into the Granary. There the goods could be unloaded for storage, or already unloaded wagons could be reloaded and sent out to the Western Transit Shed or the Train Assembly Shed for departure. The 1865 Humber plan shows that the western track continued through the southern door of the Eastern Transit Shed and terminated by the Granary Basin.

6.3 Between 1871 and 1873, the direct track access into the Granary via the southern turntables was severed, although there was an indirect route through the Train Assembly Shed. Between 1865 and 1871 the western railway track was stopped short of the Transit Shed’s south door, removing the direct track access to the forecourt basin. The platform is shown on the 1873 plan to have been extended in front of the doorway. By 1882 the three turntables providing access to the Granary had been reinstated.

6.4 The volume of arriving goods demanded increasing volumes of clerical work, and the small temporary office building shown against the south wall on the 1865 plan was replaced by 1871 by the surviving offices, which were extended to the Granary’s east wall by 1873.

6.5 Both Transit Sheds, the Train Assembly Shed, and the Granary became the inward-bound goods station in 1899, when the newly-built Western Goods Shed and the existing Western Coal Drops became the outward-bound goods station. This necessitated increased office space over the western bay of the Train Assembly Shed.

6.6 In 1936-8, improved road access was created with the widening of the east-west road through both Transit Sheds on a line to the north of the Granary. It is possible that the platforms at the south end of the building may have been removed at this time, although this is uncertain.

6.7 After the railway ceased to use the site the shed was divided into warehouse units.

7 LISTING CITATION

7.1 Although within the curtilage of the Grade II listed Granary, the Eastern Transit Shed is not described in the listing citation.

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- Second edition, revised 1894, published 1895
- LCC revised edition, 1938 (without amendment)


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<td>The Eastern Transit Shed is part of the original composition</td>
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<td>and operation of the Granary group, and therefore has high</td>
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<tr>
<td>group value.</td>
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<tr>
<td>Its brickwork is original and the roof profile is preserved.</td>
</tr>
<tr>
<td>It is a building of exceptional size for its time.</td>
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<tr>
<td>The present roofing is of less interest, except for its profile.</td>
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<tr>
<td>The internal layout arrangement has been altered considerably.</td>
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<tr>
<td>Many evocative early features survive, including guard stones, rubbing strakes, and beams spanning early doors.</td>
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<tr>
<td><strong>SETTING</strong></td>
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<td>The brickwork type and form harmonise in character with that</td>
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<td>of the Eastern Coal Drops and the Granary.</td>
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<td>group.</td>
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<tr>
<td>There is a harmony of materials and style in the Goods Yard.</td>
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<tr>
<td>The building makes a positive contribution to the Conservation Area.</td>
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<tr>
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32 WEST HANDYSIDE CANOPY
BUILDING NAME
WEST HANDYSIDE CANOPY

LOCATION
Between Eastern Transit Shed and Midland Goods Shed

CLIENT REF.  | EH INVENTORY REF.  | IHCM REF.  | LINKED EH REFS.
---         | ---              | ---       | ---
32         | H1               | H1/2, H5  | G3, H2, H3

NATIONAL GRID REF.
TQ 3022 8360

REPORT BY
MNB, MTT

DATE
April 2004

Within curtilage of the Granary, listed Grade II
Within Regent's Canal Conservation Area

1  DESCRIPTIVE SUMMARY

1.1 Canopy roof constructed 1888 between Eastern Transit Shed of Granary group and Midland Goods Shed, at same time as East Handyside Canopy erected between Midland Goods Shed and buildings of the 1850 temporary passenger terminus to the east. Provided covered area for unloading fish and other perishable traffic directly from railway vans into road vehicles, while continuing to give roadway access to the goods sheds on either side and the Goods Yard beyond. Roof open at both ends. South end of roof aligned with, and built into, north wall of Regeneration House. (See Figures BD16 in Part 2.)

1.2 Nine symmetrically-pitched roof bays, clad with corrugated asbestos sheeting, flat wired glass, and metal and translucent plastic sheeting, with north-south triangular wrought iron trusses of about 15 m span. These trusses carried on east-west lattice girders of three types, of up to about 35 m span. Spans vary because the area is of irregular plan form.

1.3 Lattice girders supported on D section cast iron columns introduced against east wall of Eastern Transit Shed and west wall of Midland Goods Shed wall and, further north on east side of roof, on lattice girders and compound stanchions that also support adjacent section of East Handyside Canopy.

1.4 Railway traffic here ceased in c.1970s but railway tracks remain embedded in granite sett paving. Area used for vehicle deliveries and parking by occupants of adjacent
buildings, and also as through route to and from north end of Goods Yard.

2  HISTORICAL AND FUNCTIONAL SUMMARY

2.1 For nearly four decades after the Goods Yard came into use, the area between the Granary group and the Midland Goods Shed was open to the sky. One railway track ran southwards through this area, close to the Midland Goods Shed wall, towards the original canal basin (since infilled) in front of the Granary.

2.2 In 1888 the area was roofed over to provide better operating conditions in all weathers. At the same time the East Handyside Canopy was erected similarly to cover the space between the Midland Goods Shed and the buildings of the 1850 temporary passenger terminus to the east. This eastern area was by then part of the Potato Market.

2.3 While the covered area to the west also saw potato traffic, it became the centre for fish and other more perishable traffic brought in by rail. This could be unloaded directly and quickly into carts and other road vehicles. Thorne et al. note that fish was sold here on Sundays, when the fish market at Billingsgate in the City of London was shut. The original railway track in this area, together with a later, shorter, siding gave rise to the area’s nickname among railwaymen of “The Long and Short Fish Road”. The open area with its natural through ventilation was well-suited to the handling of fish.

2.4 Railway traffic in this area ceased c.1970s. However, the rail tracks remain embedded within granite sett paving. The area has since been used for vehicle deliveries and parking by occupants of adjacent buildings. It also serves as a through route for road traffic from the north end of the Goods Yard.

3  DESCRIPTION

3.1 The West Handyside Canopy is a nine-bay symmetrically-pitched roof structure some 140 m in length, with trusses spanning north-south onto east-west lattice girders which are carried on cast iron columns abutting the Granary group and the Midlands Goods Shed. At its north end the roof continues past the Shed and abuts the East Handyside Canopy, a similar roof of the same date, erected between the Shed and the buildings of the 1850 temporary passenger terminus to the east. Both roofs extend as far north as the north gable of the Eastern Transit Shed, so that the Midland Goods Shed is surrounded by an overall roof on three sides.

3.2 The south end of the West Handyside Canopy roof is aligned with, and partly spans onto, the north wall of Regeneration House, which pre-dates the roof by nearly four decades.

3.3 Both roofs were designed by the Great Northern Railway’s engineer Richard Johnson, and were fabricated by the well-known ironworking firm of Andrew Handyside & Co. of Derby.

3.4 However, different structural solutions were chosen for the two roofs, in response to the different widths to be spanned and different support conditions along the sides of the roofs. Both roofs made use of triangular trusses, of the same design and similar spans, but differing in their orientation.

3.5 The East Handyside Canopy roof spans a virtually constant width of some 16 m, and its structure is a series of closely-spaced clear-spanning east-west triangular trusses.
Each truss delivers a smaller load into its supporting structure than do the girders of the wider-spanning West Handyside Canopy roof. Consequently, each truss can be supported on the west side directly by the brickwork of the Midland Goods Shed, and on the east side by cast iron beams of the 1850 temporary passenger terminus.

3.6 In contrast, with its varying but significantly wider roof span, the West Handyside Canopy comprises north-south triangular trusses spanning onto east-west lattice girders. These deliver quite substantial loads into their supports at either end, and so are carried on cast iron columns introduced for the purpose, standing against the walls of the Eastern Transit Shed and the Midland Goods Shed.

3.7 The nine roof bays are each of about 15 m span north-south. The roof is currently clad with mid 20th century corrugated asbestos sheeting, with strips of glazing partly in flat wired glass. Much of the glazing has been replaced with corrugated metal sheeting and smaller panels of translucent plastic sheeting. The cladding is supported on light purlins of timber and some relatively recent cold-formed steel sections, spanning between light and elegant wrought iron triangular multiple-panel king-rod trusses at about 2.7 m centres. The truss rafters are of T section, and the bottom tie-bars are circular rods with forged eyes at connection points, as were commonly formed in such structures. These tie-bars have a slight upward camber from eaves to midspan, and are anchored in U-shaped shoes, loosely clasping the webs of the rafter feet and pinned to them by bolts. The internal elements of the truss follow a standard king-rod arrangement, with two pairs of T section struts (compression members) and five vertical circular hanger rods including the central king-rod. The connections of these rods to the truss are clasped between paired gusset plates.

3.8 The trusses span north-south, parallel to the east wall of the Eastern Transit Shed, onto 10 deep riveted east-west lattice girders. These girders are built up from flange plates, angles, and vertical and diagonal web members of flat bars and T sections. The trusses meet the lattice girders just above their bottom flange, so that the girders stand above the roof valleys. This reduces the overall depth of roof construction, but complicates the drainage of the valleys.

3.9 There are three variants of lattice girder design, adopted because the girder spans vary substantially. From north to south the girder types are in the sequence A:B:C:B:B:C:C:A+A, as follows:

- **Type A**: shortest spans of 12-15 m, at the north end of the roof and in the two spans of the south end either side of Regeneration House; web of quadruple-Warren diagonals stiffened by vertical posts at truss positions; truss bearing onto columns at each end stiffened by riveted open-spandrel wrought iron bracket
- **Type B**: intermediate spans of 18-26 m; heavier than A, with double-Warren diagonals stiffened by vertical posts set either at truss positions or more closely spaced
- **Type C**: longest spans of 30-35 m; heaviest trusses, with widest flanges and single-Warren twin diagonals of laced struts forming twin webs.

3.10 The construction date of 1888 suggests that the girders, like the trusses, are of wrought iron rather than steel, although steel was just beginning to be used structurally at this time.

3.11 The lattice girders are generally supported at either end by D section hollow cast iron columns, of two sizes to suit greater or lesser loading from the varying truss spans. An exception to this arrangement is on the east side of the roof, north of the Midland Goods Shed, where the girders are carried on north-south lattice girders spanning between cast iron columns (see below).
3.12 This relatively unusual profile allows the backs of the columns to be set flush against adjacent brickwork. As well as minimising the intrusion of the column sections into the working area, this contact has a structural function - to allow the columns to be stabilised against falling over parallel to the wall by being tied into the brickwork. Pairs of small lugs at the head and foot of each column extend either side of the flat back of the column section to provide locations for long tie-bolts that pass through the wall to be anchored against a plate on the inside face. The projecting part of the column presents a rounded profile, which minimises the risk of damage from vehicle impact.

3.13 The columns are of plain section. Their capitals are simple rectangular tables stiffened by integral brackets. Each column has a small integral maker’s plate at the base bearing the inscription “A. HANDYSIDE & CO. LTD 1888 DERBY & LONDON”. Accompanying this are raised moulded letters identifying the column type, for example “C”.

3.14 On the west side of the roof, the trusses are at right angles to the east wall of the Eastern Transit Shed, and the columns are set directly against the existing brick piers of this wall. On the east side, however, the west wall of the Midland Goods Shed is at an oblique angle to the trusses, so it was necessary to build a triangular section of brickwork forward from this wall at column positions to provide a backing to which the columns could be tied.

3.15 In one case a lattice girder is supported on a cast iron bracket cantilevered from a cast iron column, necessitated by the presence of an opening under the girder.

3.16 At its north end the roof continues past the north gable of the Midland Goods Shed, and here the east-west girders span at their eastern end onto three bays of riveted wrought iron lattice girders, which also support the roof trusses of the East Handyside Canopy on their east side. These girders are similar to the type A girders described above, spanning between about 13 m and 20 m with quadruple-Warren diagonals stiffened by vertical posts. These girders in turn span onto another D section cast iron column immediately to the north of the accumulator tower of the Midland Goods Shed and, further north, onto three riveted compound I section stanchions.

3.17 As already noted, the west wall of the Midland Goods Shed is not parallel to the east wall of the Eastern Transit Shed. Consequently the trusses along the eastern side of the roof, set out parallel to the Eastern Transit Shed wall, intersect the western wall of the Shed at an acute angle. Where this occurs, the trusses are either supported on corbel stones, or are directly built into the brickwork.

3.18 Near the south-east corner of the roof, an embayment was made in the roof cladding to provide for a former loading door into the upper floor of the Midland Goods Shed. To avoid this door, the adjoining pitched-roof truss is stopped short, and supported forward of the wall on a cast iron bracket.

3.19 At the south end of the roof, the common trusses span onto the north wall of Regeneration House and onto the lattice girders either side of this building. These girders in turn are supported by cast iron columns at either corner of the north wall of Regeneration House.

3.20 The roof is drained either side of the east-west lattice girders by box-gutters of galvanised steel sheet. Down-pipes are present, but the connections between these and the gutters are deficient in many cases. The lattice girders have been boxed around at some time in the 20th century with roofing felt and corrugated iron on timber framing as a short-term measure to waterproof the roof. However, much of this is in
poor condition and clearly much water penetration has occurred, causing rotting of timber, corrosion of metalwork, and staining of surfaces.

3.21 Some corrosion of the trusses, in particular, can be seen from ground level, and defective roof drainage has also resulted in staining of brickwork in the walls flanking the roof.

3.22 Both north and south fascias of the roof have been reclad with coloured corrugated metal sheeting.

3.23 The west wall of the Midland Goods Shed is described with the Shed (Form Reference H2), while the east wall of the Eastern Transit Shed of the Granary group is described with the shed (Form Reference G3). There are no other walls within this roofed area.

3.24 The ground surface here retains granite sett paving with embedded but disused railway tracks, and later asphalt.

4 PHASING ANALYSIS

4.1 The roof was built in 1888, at the same time as the adjacent East Handyside Canopy.

4.2 The roof was reclad with corrugated asbestos sheeting in the mid 20th century, and the glazing has been largely replaced with metal sheeting and translucent plastic later in the 20th century. Apart from this, the roof appears little altered since it was built.

5 FUNCTIONAL AND RELATIONAL ANALYSIS

5.1 The roof’s function when built was to provide a covered area, initially for the market dealing with potatoes and other perishable traffic. Fish became an important trade, and the overall roof allowed direct unloading from railway vans to road vehicles in all weathers. Following the market’s demise the roof has more recently benefited occupants of the east side of the Granary group and the Midland Goods Shed.

5.2 The roof was built to fit between the east wall of the Eastern Transit Shed in the Granary group and the Midland Goods Shed, continuing northwards to abut the East Handyside Canopy. The east-west width to be spanned varied because these structures were not parallel to each other. It was a maximum at the southern end, reducing as it approached the northern end of the Midland Goods Shed, and then beyond this increasing again to reach the north-south lattice girders that supported both the Handyside canopy roofs.

5.3 The roof was supported on cast iron columns, introduced for the purpose, and butted against the adjacent brick walls. These were probably adopted for one or both of two reasons. Firstly, the long-span lattice girders would deliver quite heavy point loads onto their supports, and there might have been a view that this could locally over stressing the existing brickwork if the girders were built into it. Secondly, the necessary cutting-out of brickwork to accommodate the girder ends would have disrupted use of the two buildings. The introduction of new columns obviated both concerns.

5.4 The trusses span onto the girders just above the bottom flange, with the trusses projecting above the roof slopes. This is a logical arrangement for an inserted roof spanning between existing buildings. The alternative, of placing the girders below the trusses, would have either reduced the clear headroom under the roof or involved raising the pitched roof bays, which would have complicated the details where the roof
met the buildings on either side. However the top, compression, flanges of the trusses are not laterally restrained and as a result the trusses are heavier with wider flanges.

6 LISTING CITATION

6.1 Although within the curtilage of the Grade II listed Granary, the West Handyside Canopy is not described in the listing citation.

REFERENCES

**SUMMARY: THE HERITAGE IMPORTANCE OF THE WEST HANDYSIDE CANOPY**

<table>
<thead>
<tr>
<th>ARCHITECTURE AND FABRIC</th>
<th>The roof has simple and elegant wrought iron trusses very similar to those used in the adjoining East Handyside Canopy roof. The D shaped hollow cast iron columns used to support the roof are distinctive, as are the large-span lattice girders.</th>
</tr>
</thead>
<tbody>
<tr>
<td>SETTING</td>
<td>The roof frames north-south views between the Eastern Transit Shed and the Midland Goods Shed, and the adjacent East Handyside Canopy.</td>
</tr>
<tr>
<td>SIGNIFICANCE RELATED TO TYPE</td>
<td>The roof provided all-weather cover to a busy working area in the Goods Yard. Such a roof, standing in the open and not part of a building, was not uncommon on the railways but many have now been demolished. The roof is supported on cast iron columns placed against the walls of the Eastern Transit Shed and the Midland Goods Shed. It was more common to carry such roofs directly on the masonry walls of adjacent buildings (as in the adjoining East Handyside Canopy), but in this instance the wide and hence heavier spans necessitated the use of new structural supports. The roof trusses are a fine and relatively late example of the light and elegant king-rod design, originated 50 years earlier at Euston Station, that graced many Victorian station roofs of moderate span.</td>
</tr>
<tr>
<td>SIGNIFICANCE RELATED TO INTANGIBLES</td>
<td>The overall roof, flanked by large brick sheds but with open ends, evokes the atmosphere of a major freight handling area.</td>
</tr>
</tbody>
</table>
33 REGENERATION HOUSE
1 DESCRIPTIVE SUMMARY

1.1 Built 1850 as the principal goods office for King’s Cross Goods Yard. Three storeys plus a semi-basement. Pinkish-yellow multicoloured stock brick. Two-pile hipped roof. Restrained neo-Classical style as used for King’s Cross Station, with each elevation essentially symmetrical. (See Figure BD17 in Part 2.)

1.2 Refurbished in the late 1980s for continued use as offices, when given its present name.

2 HISTORICAL AND FUNCTIONAL SUMMARY

2.1 The building was designed by Lewis Cubitt to serve as the principal offices for the Goods Yard when King’s Cross was being developed as the London terminus of the Great Northern Railway (GNR). It is strategically located north of Wharf Road, quite near the main entrance to the Goods Yard off York Way.

2.2 The administration of rail freight required large numbers of clerical staff and generated much paperwork, so that each of the main sheds in the Goods Yard required its own integral offices. However, this building can be seen as the ‘nerve centre’ for freight operations.

2.3 It came into use in 1850 and served as railway offices for well over a century.
2.4 In 1888 the West Handyside Canopy was erected to cover the area to the north of Regeneration House, between the Eastern Transit Shed and the Midland Goods Shed. The south end of this roof aligns with the north wall of the building.

2.5 Regeneration House was refurbished in the late 1980s by the London Regeneration Consortium and given its present name. It is currently in multiple occupancy by Exel and others.

3 DESCRIPTION

3.1 Regeneration House is a plain but architecturally composed rectangular brick building of three storeys plus a semi-basement, some 30 m by 12 m on plan. Elevations are in pinkish-yellow multicoloured stock brick in English bond. (The bricks generally have a pinkish-yellow surface and a silty structure. The south-eastern quadrant has smoother, yellower bricks, suggesting possibly a discrete repair after wartime bomb damage (as is also probable in the Eastern Goods Offices flanking the Granary, qv).

3.2 The longer east and west elevations comprise five bays symmetrical about the centre. The central bay is narrower than the others, with ground floor entrance doorways front and back (east and west respectively) accessed up shallow flights of steps.

3.3 The north and south elevations are of three bays width. They too are symmetrical about the centre, with the central bay (topped by a chimney stack) again being narrower, and also stepped forward of the bays on either side. These central bays have been pierced awkwardly by later inserted windows. Doors are located in both side bays of the north elevation, which faces into the area covered by the 1888 West Handyside Canopy between the Granary group and the Midland Goods Shed. The south end of this roof aligns with the north wall of Regeneration House.

3.4 The timber-framed sash windows and their openings decrease in height up the building following Classical principles. Windows are tripartite, with twin mullions dividing the five lines of panes (of four rows) in a 1:3:1 pattern. Pane sizes vary according to window size, to maintain this pattern. Door and window openings are generally spanned by segmental brick arches.

3.5 Balustrading to external steps and handrails around basement areas are generally of wrought iron of simple but elegant design. Basement areas have flush grilles at ground level allowing natural light into the basement rooms, those nearest the main entrances being neatly curved on plan. An elegantly placed arch spans the basement window under the back door.

3.6 The double-pile hipped roof is clad with corrugated asbestos sheeting. This is clearly not the original 1850 roofing, which was probably of slate. Six symmetrically-located brick chimney stacks indicate the location of fireplaces originally provided to warm the principal rooms below. Downpipes drain the perimeter roof gutters. There is very plain corbelling along the eaves, which have a ‘bald’ appearance suggesting that the original (slated) roof slopes might well have projected beyond the walls. Re-roofing with asbestos sheets failed to maintain this projection.

3.7 The internal layout is essentially symmetrical, with lobby, stone staircase, and landings located in the centre of the building. From here, central north-south corridors originally served single rooms to either side, and led to larger rooms the full width of the building at the north and south ends. Later sub-division with partition walls has resulted in more, smaller rooms in some areas. Ceiling heights on the ground floor
and upper floors are generous.

3.8 The semi-basement has a lower ceiling height, and is also now more extensively sub-divided, with toilets at the southern end. The rooms here have natural lighting from windows lit via the basement areas beyond.

3.9 The interior was substantially refurbished by the London Regeneration Consortium in the late 1980s, although its essential character has been retained. The basement flooring and the stairs from ground floor level are now generally pressed concrete paving slabs, although the original flagstones remain in basement services rooms. The upper levels of the ‘hanging’ stone staircase have been reinforced by light steelwork, although decorative cast iron balustrading has been retained. Cast iron beams supporting the staircase are visible in the basement.

3.10 Access to the roof space has not yet been obtained, and floor construction is concealed, so the roof and floor construction is not known. However, given the construction forms visible in other buildings of this period on the site it is quite probable that cast iron beams and wrought ironwork may be present, in addition to timber joists and rafters.

3.11 The front and rear entrances to Regeneration House are served by short flights of steps, with treads and risers of pressed concrete slabs. The same material surfaces the shallow ramp giving mobility-impaired access to the front entrance.

3.12 There are two storeys of temporary ‘Portacabin’-type buildings immediately to the east of Regeneration House, and a mid 20th century pink fletton brick, flat-roofed, security gatehouse south of the building.

3.13 Several items of street furniture are nearby. Of these, a small cast iron cover plate identified as “GNR Electric Light” clearly dates from before 1923 (when the GNR was absorbed into the London & North Eastern Railway). Near to the building stands one of the tall timber telegraph poles that survive on the Goods Yard site, although no longer in use.

4 PHASING ANALYSIS

4.1 The building appears to have been altered only modestly during its life. Visible changes include the inserted windows in the central bays of the north and south elevations, the replacement of the original roofing with corrugated asbestos sheeting, and the internal refurbishment of the late 1980s.

5 FUNCTIONAL AND RELATIONAL ANALYSIS

5.1 The building was designed as offices. The large windows provide good levels of natural light for clerical use, although this would have been impaired on the north side when the West Handyside Canopy was erected in 1888.

5.2 Its siting put the building in the centre of the Goods Yard, at the focus of activities, as was merited by its role as the yard’s principal office building.

5.3 The four entrance doorways (front, back, and two at the north end) anticipated the doubtless frequent comings and goings of customers and railway staff as a consequence of the building’s function.
6 LISTING CITATION

6.1 Not listed.

REFERENCES


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

Humber, W. On the design and arrangement of railway stations, repairing shops, engine sheds &c. Minutes of the Proceedings of the Institution of Civil Engineers, 1865-6, XXV, Plate 11.
## SUMMARY: THE HERITAGE IMPORTANCE OF REGENERATION HOUSE

### ARCHITECTURE AND FABRIC

Regeneration House is a good example of neo-Classical 1850s design. Its architect, Lewis Cubitt, adopted the same style for King’s Cross Station.

Its plain but architecturally composed yellow-brown stock brick elevations were designed to be symmetrical. Window heights decrease up the building, as commonly found in Georgian elevations, with pane sizes adjusted proportionately to maintain the pattern of five lines and four rows.

### SETTING

Regeneration House is a key element in the group of buildings around the Granary.

### SIGNIFICANCE RELATED TO TYPE

The offices are a good example of the functional tradition (verging on the polite) in industrial buildings, with elements of conscious aesthetic treatment of the elevations.

### SIGNIFICANCE RELATED TO INTANGIBLES

The offices when in railway use were the ‘nerve centre’ of the Goods Yard.
BUILDING NAME

MIDLAND GOODS SHED

LOCATION

To east of Granary group, linked to Eastern Transit Shed by West Handyside Canopy

CLIENT REF. | EH INVENTORY REF. | IHCM REF. | LINKED EH REFS.
---|---|---|---
34 | H2 | H2 | H1, H3

NATIONAL GRID REF.

TQ 3025 8361

REPORT BY

MNB, MTT

DATE

April 2004

Within curtilage of the Granary, listed Grade II
Within Regent’s Canal Conservation Area

1 DESCRIPTIVE SUMMARY

1.1 Large two-storey multicoloured stock brick building with symmetrically-pitched clear-span roof on modern steel trusses. Flanked on either side by West and East Handyside Canopies (qv). (See Figure BD16 in Part 2.)

1.2 On footprint of single-storey carriage shed of 1850 (some fabric of which appears to survive). Converted 1857 to goods shed for Midland Railway. Several major alterations, including addition of first floor. Remained in railway use for more than a century until Goods Yard closed.

1.3 Long east and west elevations have two tiers of panelled brickwork, with details illustrating interesting and complex history of construction and alteration as, variously, goods shed and warehouse.

1.4 Ground floor generally a raised timber platform, with embayments aligned with vehicular entrance doors on both long façades (location and size of openings altered in several campaigns). After conversion to goods shed, twin railway tracks entered Shed at north end only, with one transverse track through east wall linking to tracks in Potato Market. Platform extended over site of these tracks in later 20th century. Timber first floor carried on substantial riveted plate girders and cast iron columns inserted in later 19th century, possibly c.1870.

1.5 Currently in limited use within work site for Channel Tunnel Rail Link (CTRL).
1.6 Three-storey shallow range of yellow stock brick offices attached to south front of Shed built c.1870, with top storey being later addition. Currently out of use and boarded up.

1.7 Hydraulic accumulator tower built in brick at north-east corner c.1880 to augment hydraulic power supply in Goods Yard, and major surviving element of this utility. Disused.

2 HISTORICAL AND FUNCTIONAL SUMMARY

2.1 The Shed has a complex history of construction and alteration.

2.2 In 1850, the Great Northern Railway (GNR) built a carriage shed on the site, serving the temporary passenger terminus sited to the east between the building and York Way (then known as Maiden Lane). This probably had several tracks entering at the north end.

2.3 This shed continued in GNR use after the temporary terminus had ceased operations with the opening of King’s Cross Station in 1852, but in 1857 it was converted into a goods shed for the use of the Midland Railway. This company - before the construction of St Pancras Station and its facilities - ran trains for London over GNR tracks into King’s Cross. Five years later in 1862, when the Midland Railway had built its own first freight-handling depot at Agar Town, use of the building returned to the GNR. By this time, the layout of two tracks down the centre of the building had been established, with doorways for carts to enter through the side walls, as shown on an 1865 plan.

2.4 Shortly after this, the building was apparently raised in height and a first floor was added for warehousing. The southern end was converted to a bottle warehouse. These works appear to have taken place c.1870.

2.5 The brick hydraulic accumulator tower was built c.1880 on the north-east corner of the Shed, to augment the hydraulic power supply in the Goods Yard, previously centred on a now-demolished site to the south-west of the Granary.

2.6 In 1888 the open yards on either side of the Shed were roofed over with the East and West Handyside Canopies (qv), to provide improved handling facilities in all weathers for perishable traffic, especially potatoes. The East Canopy roof trusses were supported on the east wall of the Shed, whereas the heavier lattice girders of the West Canopy roof were supported on new cast iron columns tied into the Shed west wall.

2.7 The front, southern end building was converted back to goods shed use probably c.1910. The building remained in goods shed use until the 1960s, and as a warehouse for some years longer.

2.8 The two-span roof over the first floor of the Shed was replaced c.1957 by clear-span steel trusses.

2.9 A brick-built range of offices was erected c.1870 attached to the south front of the Shed, replacing earlier offices. The third storey of these appears to be a later addition.
3 DESCRIPTION

3.1 The Midland Goods Shed

3.2 The Midland Goods Shed is rectangular on plan, with overall dimensions (including the attached offices and the hydraulic accumulator tower) of about 100 m north-south and 24 m east-west. The Shed itself is 300 feet (some 91 m) in length, of two storeys, while the attached offices (described further below) are of three storeys. The accumulator tower (also described further below, as is the Shed interior) is a single space, largely filled by the accumulator itself. There is no basement.

3.3 During most of the building’s life, after its first conversion to a goods shed, there were twin railway tracks entering the Shed through openings in its north wall. Wagon turntables on both of these tracks fed a third, transverse, track. This passed through an opening in the east wall and connected with tracks in the Potato Market. Around these tracks within the Shed the ground floor comprised a raised platform, with openings and inset loading bays for road vehicles - originally horse-drawn carts - on both long side elevations. This arrangement allowed both railway wagons and vans, and road vehicles, to be loaded or unloaded on the level and under cover, with a consequent greater efficiency in working.

3.4 The long east and west elevations are divided into 24 bays of brickwork of 12 feet 6 inches (3.8 m), with recessed panels at ground and first floor level (or openings at ground floor level) separated by brick pilasters and a horizontal ‘frieze’. The brickwork up to the top of the frieze is generally laid in Flemish bond, whereas above the frieze English bond is used, suggesting more than one phase of building. The upper panels are spanned by shallow segmental arches. Window openings are invariably quite small and spanned by segmental brick arches. Windows have cast iron frames and stone sills.

3.5 The early (post-carriage-shed) pattern of brick panels and vehicular openings at ground floor level on the west elevation was a rhythmic arrangement of five two-bay wide openings, alternating with three-bay wide panels. The southernmost two of these early openings are now infilled, but they retain the original cast iron beams spanning over them, with only the bottom flange of the beams visible and the remainder masked by brickwork.

3.6 On either side of these original loading bay openings are cast iron corbel brackets built into the wall at the level of the opening heads, to support what would have been horizontally sliding two-leaf doors to the loading bays.

3.7 The present-day pattern of panels and openings differs from this earlier arrangement, reflecting alterations carried out in several campaigns. This elevation has also been affected by the construction in 1888 of the West Handyside Canopy (qv). Its cast iron columns are set against the west wall of the Shed to support its lattice girders, while its secondary trusses - meeting this wall on the skew - span directly into the brickwork, with seatings built into the wall to support these trusses where necessary.

3.8 The present-day vehicular openings are spanned by plate girders. One opening has a vertical roller shutter door; the remainder are now boarded-up with timber of two periods. Whereas the three northern vehicular openings coincide with those on early plans, the two southern ones are relocated, and they are spanned by plate girders of a greater depth than those to the north. The insertion of the plate girders over the older openings was associated with a widening and raising of the door heads, and the corbels for the support of the former sliding doors have been re-set higher in these
instances. (This is discussed further in the Phasing Analysis in 4 below.)

3.9 There are several windows, both at ground floor level and at a higher level on this floor. The latter occur generally in every third bay. They are tight against the underside of the first floor internally, with the segmental arches of their heads rising above the level of the floorboards. The upper part of this wall, hidden from view by the West Handyside Canopy, has a segmental blind arcade below oversailing brickwork that supports an eaves gutter. There are no windows to the first floor, which is top-lit, but there are two former loading doors on each side (see 4). Some former window openings have been infilled at the north end of the Shed.

3.10 A plain string course at first floor level remains for the southernmost first nine bays of this west elevation.

3.11 The east elevation was originally similar to the west elevation with alternating panels and openings, but lacked its rhythmic pattern, with six two-bay wide openings instead of five, and the panels between them being from one to three bays wide. As in the west elevation, two of these early vehicular openings at the south end have been replaced by brickwork, but they both retain a cast iron beam, with its bottom flange visible but the remainder masked by brickwork.

3.12 The present-day east elevation bears more evidence of alterations than the west elevation, with inserted windows within panels, these sometimes having been infilled once or more. There are now only five vehicular openings (four on original locations, the fifth being a relocation), each two bays wide with horizontally-folding shutter doors and spanned by a plate girder. The southernmost two bays formerly contained a vehicular opening, now infilled. Both have windows on two levels; these serve what are by then shown as offices on the 1894 1:1056 OS plan.

3.13 The addition of the East Handyside Canopy in 1888 made it necessary to provide support along this wall for the east-west spanning roof trusses. This was achieved by the insertion of stone corbels to pick up I beams spanning between the pilasters across the now-blocked upper windows, but directly off the wall where there was no window. The upper part of this wall matches that of the west wall.

3.14 Two 20th century external steel stairs rise up on this elevation, passing through the East Handyside Canopy roof, to give access to the first floor of the Shed.

3.15 The north elevation of the Shed has seen many alterations, including the recent closure with timber walling of the two openings that originally brought railway tracks into the Shed, and also the addition of the accumulator tower.

3.16 The north elevation of the Shed is of brick in English bond throughout. The two central openings for railway tracks, now boarded-up, have been widened above platform level in the early 20th century, with engineering brick reveals corbelling to support mid 19th century cast iron I beams of shorter span. There are cast iron corbel brackets to support the previous sliding doors. Several windows occur at ground floor and higher level.

3.17 The later accumulator tower

3.18 The brick-built hydraulic accumulator tower abuts the Shed over the eastern quarter of its northern end. Access into the tower, via a door in the east side currently blocked by a storage tank, is hazardous, but it seems probable that much or all of the important accumulator machinery identified in the 1988 English Heritage survey still remains. Externally, the tower brickwork echoes the rhythm of the Shed brickwork, with upper and lower recessed panels divided by a plain brick string course, all in English bond. At its north-east recessed corner is a cast iron column onto which bears the southernmost lattice
spine girder carrying the East and West Handyside Canopies.

3.19 The south elevation of the Shed abuts the office block, and therefore has no visible external face. The office block is described below.

3.20 *The interior of the Shed*

3.21 The interior of the Shed, like the exterior, has been much altered.

3.22 The roof was formerly of two spans. The present roof structure is of riveted steel clear-span symmetrically-pitched trusses by Colvilles, erected in 1957. Booms are of double angles back-to-back, other members are single angles. Eight angle purlins on each face support corrugated asbestos sheeting and wired glass, some panels of which can be opened by mechanical linkages.

3.23 At first floor level the brick wall pilasters are, as on the exterior, typically at 3.8 m centres. The trusses are not always centred on these, indicating perhaps that the roof replacement was carried out bay by bay, installing one new clear-span truss before removing its predecessor (which was of two bays, spanning onto a central line of supports, see 4 below).

3.24 A timber stair in the south-west corner of the first floor has been removed. This was previously the only internal stair to serve the first floor, which is now accessed by two external steel stairways on the east side of the building, through doorways that were probably once loading doors. (Two more such doors are on the western side.)

3.25 The first floor is of timber boarding, spanning north-south onto east-west timber joists. These are carried on five rows of riveted plate girders which in turn span typically two bays (7.6 m) north-south onto deeper plate girders. These span east-west across half the width of the building, about 11 m, onto cast iron columns set against the east and west walls of the Shed, and onto a row of circular cast iron columns and brick piers down the centre of the building. The central columns have fancy corbelled heads to support the girders; the shallower girders sit on curved haunches.

3.26 The spacing of the central row of columns is three bays (about 11.4 m) in two adjacent spans in the middle of the building and two bays (7.6 m) elsewhere. The longer-span girders are, naturally, deeper.

3.27 The hollow cast iron columns against the side walls are of unusual profile, having a cross-section like a rectangular version of the Greek capital letter Ω rather than a closed hollow section.

3.28 This heavy construction stylistically appears to date from about the time of the Handyside Canopies or a little earlier.

3.29 On the centre-line of the Shed at the north end of the ground floor is a longitudinal brick wall two bays in length, with integral piers at one-bay spacing. This probably dates from the original building construction in 1850, and was intended to stabilise the previous central row of columns. A similar wall was formerly at the southern end of the Shed. These walls and their function may be compared with the north-south brick wall added at the north-east corner of the East Handyside Canopy (qv).

3.30 The present ground floor is generally the original loading platforms, raised above ground level. Local breaking-through has exposed rubble filling, but also shows timber boards on joists making up the original platform construction. Loading bay edges are
dwarf brick walls with stone and concrete facing.

3.31 Between the girders supporting the first floor, on the east side of the Shed, is a timber beam with a central mortice and horizontal bracing members, to hold the top of a swivelling platform crane.

3.32 Past water penetration is evident within the Shed in staining of first floor timbers, which may perhaps explain the replacement of the roof in the 1950s if its predecessor was past repair. Water penetration from the adjacent yard roofs has stained and weathered the external brickwork of the Shed, and led to the establishment of plant growth in mortar joints. Remedial action against damp, removal of later accretions, and cleaning of brickwork would render the elevations more intelligible.

3.33 The office block abutting the south end of the Shed

3.34 This brick building is of seven bays width and one bay depth, with three storeys. The third storey brickwork is of lighter hue than that on the lower floors, suggesting a later addition.

3.35 This view is reinforced by the presence of two attached brick pilasters on the exposed south elevation, also of lighter hue and extending to about mid-height on the third storey. These are located asymmetrically, being one bay in from the west end and two bays in from the east end of the block. The 1871 OS 1:1056 plan shows these to be the only pier positions between windows that are not backed by cross walls, so it may be surmised that the pilasters were added to stiffen the south wall when it was raised a further storey.

3.36 The brickwork junctions between the office block and Shed are straight jointed, and the south end of the Shed brickwork is corbelled out as if to form a gable end. Plans indicate that the office block was rebuilt on the site of a smaller block, c.1870.

3.37 The west elevation has a single window at second floor level, while the east elevation has stone sills at first and second floor levels.

3.38 Door and window openings are spanned by segmental brick arches with stone window sills.

3.39 The office block roof is symmetrically-pitched and slated, with the 1 in 2 roof slope, and the plain eaves and gable ends, that are characteristic of the Great Northern Railway’s smaller buildings, derived from an Italianate model.

3.40 The office block is currently out of use and boarded up.

4 PHASING ANALYSIS

4.1 The phasing of the Midland Goods Shed is complex, as was recognised in the RCHME report (Falconer and Burgess), and calls for detailed consideration. Some additional description of the building is included here in support of the analysis, rather than in 3 above, to avoid extensive repetition.

4.2 The building began life as a carriage shed built by the GNR for use with the adjacent 1850 temporary passenger terminus. A report on the proposals for this terminus was put to the GNR Board in 1849 by Joseph Cubitt, its Engineer (quoted in Kay, 40). This proposed that the building “was to be arranged for removal elsewhere later” and - like the other buildings here - was to be built as cheaply as possible. This suggests a light
structure of timber and possibly iron. On the other hand, a report in The Observer in 1851 describes a carriage shed whose plan dimensions of 300 feet by 80 feet (some 91 m by 24 m) are the same as those of the present-day footprint of the Shed. It recounts that the building will be used for workshops and goods traffic when no longer required as a carriage shed. This suggests that the building had actually been constructed in a rather more substantial and permanent form. The footprint is confirmed by Lewis Cubitt’s layout plan for the roofs of the adjoining temporary passenger terminus in 1850.

4.3 Both reports quote the shed’s capacity as 80 carriages, at a time when the typical railway carriage was a relatively short four-wheeled vehicle of 20-27 feet in length. At Bricklayers’ Arms Station in south London, Cubitt’s brick-built carriage shed of 1844 had four tracks in its 51 feet width (Tucker, 6-9). The King’s Cross shed could, by proportion, have accommodated six tracks entering from the north, which - at a pinch - could have housed the intended 80 carriages.

4.4 The building was then adapted for use by the Midland Railway as a goods shed from 1857 to 1862. The 1865 1:1200 Humber plan and a 1:600 1890 GNR plan prepared for the third bore of Gasworks Tunnel both show a building of 24 bays - as can be seen today, and again scaling 295-300 feet by 80 feet (as it does also on the 1871 1:1056 Ordnance Survey plan). It does seem probable therefore that the building footprint has remained the same since 1850, although it was initially a single-storey shed.

4.5 The 1865 Humber plan, which presumably reflects the changes made to the building during its conversion from carriage shed to the Midland Goods Shed, shows now only two tracks entering from the north. These are close to, and either side of, a central line of columns and the two-bay longitudinal brick wall at the north end that can be seen today. The evidence for the infilling of the previously entirely open north end - six tracks wide - is discussed in 4.11 below.

4.6 Humber shows five openings in the west wall and six in the east wall, which would have been unnecessary in a carriage shed but were essential for the transfer of goods between rail and road vehicles. This plan does not indicate the raised platform that would have been necessary for loading and unloading the railway wagons and vans, although one embayment is shown on the east side. This may simply be an omission from the survey, or may suggest that the Midland’s fittings such as the platform had already been stripped out.

4.7 However, the 1871 Ordnance Survey plan clearly shows three embayments on the west side, and four on the east side of the Shed, in the northern two-thirds of the building. By this time the southern portion of the Shed had been converted to a warehouse, in use by 1882 as the London depot on a bottle manufacturer based in Yorkshire.

4.8 Humber’s 1865 plan also shows an office block attached to the south face of the Shed, although it is smaller than the block shown on the 1871 Ordnance Survey plan, and with a south elevation stepped on plan rather than the simple rectangular footprint to be seen today. The first offices were probably single-storey, as was the Shed when used by the Midland Railway.

4.9 Cast iron girders, consistent with an 1857 date for the goods shed conversion, remain over the two openings provided in the north wall for rail tracks and in the side walls at the south end of the Shed. In the latter case there were 6.9 m span openings for carts, shown on Humber’s 1865 plan but bricked up and obliterated many years ago. Their
level, within the depth of the brick frieze, is compatible with an original (single-storey) eaves line immediately above the frieze. The girders have cast iron brackets either side of the former openings for sliding door rails.

4.10 As part of the conversion work for the bottle warehouse in the southern part of the Shed, four openings for cart entry had been bricked up and replaced by windows.

4.11 By 1871 the single-storey Shed had been raised to two storeys, probably accompanied by the rebuilding of the offices also, although to only two of its present three storeys. Strong evidence that the side walls were retained and raised, rather than being rebuilt, is provided by the use of Flemish bond in the brickwork of the side walls up to and including the ‘frieze’, and English bond above. Similarly, the use of English bond throughout the brickwork of the north wall, and a straight joint between this brickwork and the Flemish-bonded side wall corner piers, point to infilling of the previous full-width opening provided for railway tracks entering into the carriage shed from the north.

4.12 The upper line of windows is set considerably below the arcaded eaves line, with their sills some 0.7 m above the top of the mid-level frieze. They are below the present upper floor (which is windowless, being top-lit). But it would be curious if they had lit a previous floor set close to the level of their sills. There is also no evidence of an earlier upper floor below the windows, unless wholly masked by later work and whitewash.

4.13 It is possible that the building was raised in height to accommodate pillar cranes during its conversion for goods shed use, to provide good clearance for their jibs over the wagons and vans. There were very tall pillar cranes in the GNR’s own nearby sheds, provided with a generous 7.5 m of headroom. However, the Midland Goods Shed is even taller than these nearby sheds, and is unlikely to have been built to its full height as an uninterrupted space, while there is no evidence in the fabric of the brickwork for its having been raised to an intermediate level.

4.14 A more probable alternative is that the raising of the walls and the construction of the present-day first floor were part of a single campaign of alterations. Supporting evidence for this may come from the loading doors to the first floor. The surrounds to these doorways interrupt the arcaded upper frieze supporting the eaves, and substitute a square-headed panel. The RCHME report (Falconer and Burgess) considers this to be original, and not a later alteration.

4.15 This ‘single campaign’ hypothesis is considered in more detail, as follows.

4.16 There are some inserted windows also at ground floor level, which may have been used to augment daylighting before the walls were raised. They would be rather inadequate on their own if an upper floor had been inserted below the upper windows, cutting off toplighting.

4.17 The present first floor construction is just above the upper windows described above. The underside of the timber floor joists is just below the crown of the window heads, with joists being carried past the windows on bearing joists.

4.18 The east-west wrought iron main girders that carry the first floor are supported on a central line of cast iron columns and brick piers, and at the side walls on section cast iron columns attached to the wall face (and evidently inserted), presumably standing on locally-widened foundations. The cast iron columns are of a style not earlier than the 1860s. In four locations, however, where a column would interfere with a cart entrance, the beams are longer and are built into the wall above the centre of the
girder that spans the opening, which has additional flange plates for this increased duty. The need to provide such stronger girders implies that these door girders are contemporary with the insertion of the floor. The load is then shared between the two brick door jambs, which were presumably judged adequate for this purpose.

4.19 The door girders (except for those at the southern end of the Shed - see 4.26) are in the same style as the floor girders, and - although not directly fixed to them - are presumed to be contemporary by the reasoning just given. Their soffit is five brick courses (0.4 m) higher than that of the earlier cast iron girders that remain elsewhere, as described above, giving improved headroom for road vehicles entering the building (approximately 4.5 m high). An incidental effect of this was that the sliding door gear had to be raised to the top of the brick frieze, with the removal of the oversailing cornices here, although they remain at the south end.

4.20 The first floor is at an unexpectedly high level compared with the external appearance of the Shed. The first floor boards are 1.8 m above the top of the frieze that appears to demarcate two storeys. This creates a conventionally tall transit shed, with an estimated 4.5 m clearance between the platform and the underside of the main first floor girders, below a warehouse upper floor of mean but nevertheless adequate height (some 2.1 m clear below the roof truss bearings).

4.21 The first floor is entirely top-lit through the roof. The main windows in the side walls (most of them blocked up probably in the later 20th century) formerly lit the ground floor level goods shed, from a favourably high angle (since there were other buildings nearby to impair the quality of daylight).

4.22 It is therefore concluded that the raising of the walls to two storeys, and the construction of the first floor as it is today, were both carried out in a single campaign.

4.23 All these elements were in place by 1888, when the Potato Market Extension roofs (the West and East Handyside Canopies, qv) were built by Handyside, and tailored to accommodate existing building features. This is confirmed by the blocking-off of the first floor loading doors by the canopies (except for one near the south-west corner, where an opening was left in the roof). Further evidence for this sequencing comes from the ad hoc manner of the strengthening of the girder of the northernmost opening in the west wall, enabling it to support one of the canopy trusses by means of an inserted cast iron post and bracket (with additional web stiffeners). It may be that the office block on the south side of the Shed was enlarged at the same time, by the addition of a third storey.

4.24 The heavy wrought iron plate girders supporting the first floor of the Shed are too sophisticated, and the cast iron columns too ornate, to belong to the alterations of 1857 for the Midland Railway. However, the unified completion of the building envelope is likely to have preceded - yet to have taken account of - the dividing-off of the southern end of the Shed as a bottle warehouse. This suggests a dating of c.1870 for the raising of the existing walls and the insertion of the first floor.

4.25 A later alteration took place at the southern end of the Shed, at some time between 1906 and 1921. Three cart entrance doorways have been relocated there since the original building, leaving behind the cast iron girders of the four previous ones, embedded in brick infilling that made good the original style of frieze and pilasters. This can be firmly dated to after 1890, since the GNR 1:600 plan of that year for the third bore of the Gasworks Tunnel shows the openings in the east wall of the Shed located as in 1865, and those in the west wall blocked up. This drawing should have been up-to-date, as it shows the angled brickwork that was inserted in 1888 behind
the cast iron columns supporting the West Handyside Canopy on the western side of
the Shed, and the underpinning of new footings to piers over the tunnel on the eastern
side. (As it happened, these new footings were only for the alternate piers that
supported the two-bay long door girders, allowing the new eastern opening to be
made subsequently in the gap between the piers of the previous two openings, without
the need for further underpinning.)

4.26 A goods shed plan of 1906 shows the bottle warehouse still in place, with closely-
spaced internal columns probably supporting a mezzanine floor for additional storage,
but a Goad fire insurance plan updated to 1921 shows the present arrangement of
vehicular doorways, so the change may have occurred c.1910. Part of this mezzanine
might have remained until relatively recently in the south-west corner, where two
levels of inserted windows suggest the presence of offices here.

4.27 The plate girders over the new cart entrances are of the same span as those to the
north, but they are deeper and of different detailing, with heavy web stiffeners in pairs.
The use of more robust construction for the later girders is surprising, considering that
they will be of mild steel rather than the earlier, somewhat weaker, wrought iron; but it
reflects a greater attention to the stiffness of structures and the standardisation of
design procedures in the 20th century.

4.28 There are no external brackets for roller door guides to these new doorways. The east
one is fitted with hinge brackets.

4.29 The original carriage shed roof is presumed to have been of two equal spans of some
12 m, carried on the side walls and the central row of columns and brickwork. Its main
elements might well have been either light wrought iron trusses, or composite timber
and iron trusses. These might have been lifted off and re-used when the building was
raised and the first floor added. The Goad 1942 insurance plan shows that the roof
was then still two symmetrically-pitched bays, with longitudinal bands of glazing.

4.30 The present clear-span roof trusses date from 1957. It is a matter of speculation
whether the roof was replaced as a result of deterioration (for example, water
penetration and damage at the eaves and/or in the valley gutter) or simply to provide a
clear span. Other re-roofing work was being carried out in the Goods Yard at the time,
which was the period when the railway modernisation plans introduced by British
Railways in 1955 were being implemented. Replacement of a ‘tired’ roof seems the
more probable explanation, but taking advantage of modern economical fabricated
trusses to span 24 m clear, not by then a challenging demand..

5 FUNCTIONAL AND RELATIONAL ANALYSIS

5.1 The lengthy phasing analysis above illustrates the complex history of the Shed.

5.2 Initially, a single-storey carriage shed was built of brick, probably with six tracks, three
either side of the central line of columns and brickwork that supported the valley of a
two-span roof. This shed provided covered storage for these wood and iron passenger
vehicles, serving the adjacent temporary passenger terminus. It seems reasonably
certain that the lower areas of brickwork on the long east and west elevations are from
this building, although much altered. They would originally have had only small door
openings and some windows, whereas the north elevation would have been largely
pierced by openings for the tracks.

5.3 Conversion to a goods shed for use by the Midland Railway in 1857 required the
forming of numerous openings in these elevations to give access for horse-drawn
carts and wagons into embayments set within the building to provide dry cover.

5.4 A raised platform was inserted to facilitate the transfer of goods between road and rail vehicles. It also provided short-term storage of goods prior to loading and dispatch. This required a reasonable amount of working and storage space, so the number of tracks entering the shed was reduced to two, one either side of the central line of columns, maximising the area of platforms between the tracks and the cart loading bays.

5.5 It is not entirely clear whether the walls were raised at the same time as the first floor was inserted, but on balance this is probably the case. The addition of a first floor, carried on heavy plate girders, was clearly intended to increase storage capacity for goods. This however denied the ground floor the natural light it had previously enjoyed from rooflights, so it would have been logical to provide new windows at high level.

5.6 The ground floor headroom remained generous after the insertion of the first floor. It seems probable that a mezzanine was inserted at the southern end of the Shed, under the first floor, while this part was in use as a bottle warehouse. This would have potentially doubled the useful storage area available there, with crates being readily accessible no higher than head height.

5.7 The cessation of railborne traffic led to the removal c.1982 of railway tracks from the Shed and the infilling of their footprints.

5.8 In both its original and its altered form the Shed is in stylistic harmony with Lewis Cubitt’s other buildings for the King’s Cross terminus, with its plain stock brickwork and segmental arches. The additional frieze at mid-height of the walls is less typical, but arose from the enlargement process.

5.9 The hydraulic accumulator tower was built to augment the yard’s hydraulic power supply c.1880, reflecting the increase in rail traffic. Hydraulic power was much used in such yards for operating cranes and shunting capstans, and other heavy tasks. Distributed across the yard in thick-walled mains pipes, the high-pressure water was instantly available for use. It was a more practical alternative to steam power, and remained in wide use through much of the 20th century although challenged and eventually displaced by electric power.

5.10 The office block on the south elevation of the Shed provided the necessary space for the heavy clerical workload associated with Midland Railway freight. Initially perhaps single-storey, it was later rebuilt to a larger plan and with two floors, later raised to three. It too employed the plain functional style used in the adjoining buildings, in particular the flanking offices of the Granary.

6 LISTING CITATION

6.1 Although within the curtilage of the Grade II listed Granary, the Midland Goods Shed is not described in the listing citation.
REFERENCES

Anon. The Great Northern Railway. *The Observer*, 27 April 1851. (In Camden Local Studies and Archives Centre, Heal Collection, BI 74.)

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   First edition surveyed 1871, published 1874

   Second edition revised 1894, published 1895

SUMMARY: THE HERITAGE IMPORTANCE OF THE MIDLAND GOODS SHED

ARCHITECTURE AND FABRIC

The building has a complex history, which is reflected in the physical evidence of changes to be seen, particularly in the walls. It probably incorporates some fabric from its initial use as a GNR carriage shed, and certainly retains much of its early fabric.

The later, modified, and infilled openings in the side walls for the interchange of freight between rail and road, in particular, exhibit the changes made during various periods.

However, the roof structure has been replaced with conventional clear-span steel trusses c.1957.

The attached offices are stylistically similar to the offices flanking the Granary.

SETTING

The building is an important component of the Goods Yard group, particularly when seen from the south and east (including the canal towpath).

SIGNIFICANCE RELATED TO TYPE

The Midland Goods Shed is a substantial building typical of the expansive period of railway development.

It is functional, being built to serve its purpose as a rail and road interchange facility for freight.

The later hydraulic accumulator tower is a rare survivor of a once-common source of power widely used in railway yards, warehouses, docks, and other industrial sites.

SIGNIFICANCE RELATED TO INTANGIBLES

The evidence of numerous alterations as its function and the needs of its users changed is clear in the fabric, illustrating that change throughout the life of a building is inevitable.

The attached offices were a response to the increasing demand for clerical workspace as traffic in the Goods Yard expanded.
35A EAST HANDYSIDE CANOPY
(POTATO MARKET EXTENSION ROOF)
**BUILDING NAME**

**EAST HANDYSIDE CANOPY (POTATO MARKET EXTENSION ROOF)**

**LOCATION**

On east side of Midland Goods Shed

**CLIENT REF.**

35A

**EH INVENTORY REF.**

H3

**IHCM REF.**

H3

**LINKED EH REFS.**

H1, H2, I

**NATIONAL GRID REF.**

TQ 3026 8363

**REPORT BY**

MNB, MTT

**DATE**

April 2004

Within curtilage of the Granary, listed Grade II

Within Regent’s Canal Conservation Area

1. **DESCRIPTIVE SUMMARY**

1.1 Canopy roof constructed 1888, at same time as West Handyside Canopy between Midland Goods Shed and Granary group. Provided covered area for potato traffic, extending westwards the existing Potato Market to the east. Roof open at both ends. (See Figure BD16 in Part 2.)

1.2 Symmetrically-pitched roof, clad with corrugated asbestos sheeting and wired glass, carried on east-west triangular wrought iron trusses of some 16 m span. Gentle and elegant curve on plan followed curve of 1850 temporary Maiden Lane passenger terminus building to east.

1.3 Trusses supported along western edge on Midland Goods Shed wall and, further north on lattice girders and compound I section stanchions that also support adjacent section of West Handyside Canopy. Along eastern edge, trusses supported on haunched cast iron beams from 1850 terminus, these now supported on later steel stanchions.

1.4 Roof survived demolition of adjacent Potato Market area; space beneath then used for various purposes, currently occupied by contractors for the Channel Tunnel Rail Link (CTRL) works.
2 HISTORICAL AND FUNCTIONAL SUMMARY

2.1 The area to the east was used as a potato market after the temporary Maiden Lane passenger terminus went out of use in 1852 when the King's Cross terminus was opened. The 1850 terminus roof remained, with buildings being added beneath it in 1864.

2.2 The space between the covered Potato Market and the Midland Goods Shed was formerly open to the sky. It comprised a roadway, and two lines of rails which were part of the access system to the Potato Market and the Midland Goods Shed.

2.3 In 1888 the space was roofed over by the East Handyside Canopy, to provide better operating conditions in all weathers. At the same time, the West Handyside Canopy was likewise erected to cover the space between the Midland Goods Shed and the Eastern Transit Shed.

2.4 The East Handyside Canopy was retained when the adjacent Potato Market, including the 1850 roof, was demolished c.1970, and it continued thereafter to provide cover for the vehicles and loading activities of later tenants of the Midland Goods Shed.

2.5 Railway sidings remained in use in this area for empty stock storage until they were lifted in the 1980s.

2.6 The area below the roof is currently occupied by contractors for the Channel Tunnel Rail Link (CTRL) works.

2.7 Four tall timber telegraph poles, taken through the eastern side of the roof, are disused and are relatively rare survivors of a once-common feature.

3 DESCRIPTION

3.1 The East Handyside Canopy, about 130 m in length, is a single-bay symmetrically-pitched roof structure running north-south on the east side of the Midland Goods Shed, curving on plan to the west as it continues north of the Shed, where it abuts the West Handyside Canopy. Both roofs extend as far north as the north gable of the Granary group, so that the Midland Goods Shed is surrounded by an overall roof on three sides. The East Handyside Canopy is now open on its east side, as well as at both ends.

3.2 The southern gable of the East Handyside Canopy is located four bays north of the southern end of the Midland Goods Shed. The roof covered approximately half the length of the access way on the west side of the Potato Market.

3.3 Both roofs were designed by the Great Northern Railway's engineer Richard Johnson, and were fabricated by the well-known ironworking firm of Andrew Handyside & Co. of Derby.

3.4 However, different structural solutions were chosen for the two roofs, in response to the different widths to be spanned and different support conditions along the sides of the roofs. Both roofs made use of triangular trusses, of the same design and of similar spans, but differing in their orientation.

3.5 For the West Handyside Canopy, with varying but significantly longer spans, the roof
structure comprises north-south triangular trusses spanning onto east-west lattice girders. These girders deliver quite substantial loads into their supports at either end, and are carried on cast iron columns introduced for the purpose, standing against the walls of the Eastern Transit Shed and the Midland Goods Shed.

3.6 The East Handyside Canopy, in contrast, spans a virtually constant width of some 16 m, and its structure is a series of closely-spaced clear-spanning east-west triangular trusses. Each truss delivers a smaller load into its supporting structure than do the girders of the wider-spanning West Handyside Canopy roof. Consequently, each truss can be supported on the west side directly by the brickwork of the Midland Goods Shed, and on the east side by the cast iron beams of the 1850 temporary passenger terminus.

3.7 The northern nine bays of these beams are chords to a gentle curve, reflecting the S-curved plan of the former passenger station. The nine straight bays span 7.6 m (25 feet), and the bays on the curve 7.2 m (about 24 feet). The roof trusses span 16 m (52 feet), with minor variations to fit the geometry.

3.8 The roof is currently clad with corrugated asbestos sheeting and wired glass on light timber purlins. These are supported on light and elegant wrought iron triangular trusses, of multiple-panel king-rod configuration, at 1.7-1.9 m spacings. The truss rafters are of T section, and the bottom tie-bars are circular rods with forged eyes at connection points, as were commonly formed in such structures. These tie-bars have a slight upward camber from eaves to midspan, and are anchored in U-shaped shoes, loosely clasping the webs of the rafter feet and pinned to them by bolts. The internal elements of the truss follow a standard king-rod arrangement, with two pairs of T section struts (compression members) and five vertical circular hanger rods including the central king-rod. The connections of these rods to the truss rafters are clasped between paired gusset plates.

3.9 Along their western edge the trusses are supported over the length of the Midland Goods Shed and the attached hydraulic accumulator tower to the north. The trusses either sit directly onto corbels built into the brickwork of the wall, or else are carried on rolled I section beams resting on corbels where the wall face was interrupted by now-blocked window openings. Further north along this edge, the trusses span onto three bays of riveted lattice girders, which also support the trusses of the West Handyside Canopy north of the Shed. These girders span onto a D section cast iron column immediately to the north of the accumulator tower and, further north, onto three riveted compound I section stanchions. This construction is described more fully under the West Handyside Canopy (qv).

3.10 Along their eastern edge the trusses are supported on 18 bays of haunched cast iron beams with open spandrels, forming an arcade. These are the only elements to survive from the 1850 Maiden Lane temporary passenger terminus. Such cast iron beams were commonly used in roofs until c.1860, after which wrought iron trusses became the norm.

3.11 There are brackets on the east face of these beams at quarter-points, indicating where the 1850 roof to the east had spanned onto them until it was demolished c.1970.

3.12 However, these cast iron beams are supported on rolled 390 by 154 mm steel I section stanchions that have clearly been inserted under the beams. The columns supporting these beams were originally of cast iron. A perception of the increased risk of fracture of the slender and brittle cast iron columns from vehicle impact, and the advent of the motor lorry and reduction in rail use, is the most likely reason for their
replacement. The steel stanchion dimensions indicate a Universal Beam section, first rolled in 1959. The Potato Market roof was demolished c.1970, and it is quite possible that the replacement steel columns were installed at that time.

3.13 The risk of progressive collapse of relatively flimsy trainshed roofs, as a result of trains colliding with their fragile cast iron columns, had been of concern earlier. The classic case occurred in 1850 at Bricklayers’ Arms Station in south London. This structure was an earlier design of 1844 by Lewis Cubitt, the architect also responsible for the GNR building works at King’s Cross. After Cubitt had expressed his concern to the GNR Board, the outcome was the provision of longitudinal buttress walls in each arcade, not shown on the original drawing. One of these remains at the north end of the present arcade, where the 19th bay was replaced by a stock brick wall of equivalent, 7½ m length. The East Handyside Canopy is one bay shorter than the 1850 roof, so it is supported by only the south end of this buttress wall (inside which may be embedded an original cast iron column).

3.14 Both end gables are in poor condition. The south gable has been reclad with sheets of painted plywood, while the north gable has lost its cladding, exposing the timbers that supported it. The gables retain the saw-tooth valancing that is a distinctive feature of railway station canopies.

3.15 The roof is drained along both edges by box-gutters of galvanised steel sheet. Down-pipes are present, but the connections between these and the gutters are deficient in many cases. There are remains of earlier cast iron guttering, of inadequate section for a valley, against the wall of the Midland Goods Shed.

3.16 The external walls of the Midland Goods Shed are described in the report on that building (qv). There are no other walls within this roofed area.

3.17 The ground surface here is largely covered by concrete, with no obvious evidence of the railway tracks and wagon turntables that once served both the Potato Market and the Midland Goods Shed. Recent clearance and resurfacing in this area as part of the CTRL works will have reduced surviving evidence within the ground.

3.18 Four disused timber telegraph poles are located in the eastern slope of the roof. These were installed when telephone cables were normally run in the open - and particularly alongside railway lines - rather than underground as at present. They would have served the railway’s trunk telegraph and telephone systems, extending up the main line and here passing overground above the Gasworks Tunnel.

4 PHASING ANALYSIS

4.1 The roof was built in 1888, at the same time as the adjacent West Handyside Canopy. It was mostly supported by already-present adjacent structures - the Midland Goods Shed on its west side, and on its east side by the cast iron beams and columns of the arcade that had formed the western face of the temporary 1850 passenger terminus, later the Potato Market, which already supported that building’s roof.

4.2 Around 1970 the roof of the Potato Market, formerly the temporary passenger terminus, was demolished, but the arcade was left in place to maintain support to the East Handyside Canopy. Possibly it was at this time also that the 1850 cast iron columns here were removed and replaced by more robust steel stanchions, although the cast iron roof beams were retained.
4.3 Apart from the replacement of original roof cladding by corrugated asbestos sheeting and wired glass during the 20th century, the roof appears little altered since it was built.

5 FUNCTIONAL AND RELATIONAL ANALYSIS

5.1 The roof’s function when built was to provide a covered area to improve operating conditions in the Potato Market in all weathers. The area comprised a roadway accessed from the south, and two rail lines entering from the north, primarily connecting both the premises on either side but with the capability of occasional transfer of perishable goods between road and rail vehicles.

5.2 The roof has continued to serve this purpose, although following the market’s demise the roof has more recently benefited occupants of the Midland Goods Shed.

5.3 The roof was built to fit between the curved plan form of the 1850 temporary passenger terminus and the Midland Goods Shed.

6 LISTING CITATION

6.1 Although within the curtilage of the Grade II listed Granary, the East Handyside Canopy is not described in the listing citation.

REFERENCES

Kay, P. The first King’s Cross - the 1850 GNR terminus in Maiden Lane and its subsequent fate. *London’s Industrial Archaeology No. 7*, 2000, 39-54.

### SUMMARY: THE HERITAGE IMPORTANCE OF THE EAST HANDYSIDE CANOPY

#### ARCHITECTURE AND FABRIC
The roof has simple but elegant wrought iron trusses on a pleasing curved plan form, which was dictated by the similar layout of the 1850 temporary passenger terminus immediately to the east. This therefore perpetuates the plan and form of the now-demolished passenger station roofs.

The distinctive haunched cast iron beams and the brick buttress wall supporting the eastern edge of the roof are the only surviving elements from the 1850 passenger terminus.

#### SETTING
The curved end to the plan of the roof adds a memorable termination to the vista of repeated trusses.

#### SIGNIFICANCE RELATED TO TYPE
The roof provided all-weather cover to a busy working area in the Goods Yard. Such a roof, standing in the open and not part of a building, was not uncommon on the railways but many have now been demolished.

The cast iron beams, vestigial elements of the 1850 temporary passenger terminus, are also relatively uncommon survivors.

The brick buttress wall, introduced to provide additional stability to the roof structure following the partial collapse of Cubitt’s earlier Bricklayers’ Arms station roof, was a major structural innovation here.

The roof trusses are a fine and relatively late example of the light and elegant king-rod design, originated 50 years earlier at Euston Station, that graced many Victorian station roofs of moderate span.

The disused trunk telegraph poles are now uncommon, especially as part of a railway system.

#### SIGNIFICANCE RELATED TO INTANGIBLES
The roof provides vestigial evidence of the 1850 temporary passenger terminus that remains a century and a half after this was superseded by the opening of King’s Cross Station on Euston Road.
35B  SITE OF FORMER POTATO MARKET
FEATURE NAME

SITE OF FORMER POTATO MARKET

LOCATION

On the west side of York Way north of Wharf Road, and to the east of the East Handyside Canopy

CLIENT REF. | EH INVENTORY REF. | IHCM REF. | LINKED EH REFS.
---|---|---|---
35B | I | H4, I1-I4 | H3

NATIONAL GRID REF.

TQ 3028 8363

REPORT BY

MNB, MTT

DATE

April 2004

Not listed

Western boundary of the former Potato Market site forms the eastern boundary of the Regent’s Canal Conservation Area

1 DEScriptive SUMMARY

1.1 Site formerly occupied by temporary 1850 Great Northern Railway (GNR) passenger terminus, used for short period prior to opening of its King’s Cross terminus. From 1852 adapted as market to serve substantial rail-borne potato trade, but also handled other vegetables. (See Figure BD2 in Part 2.)

1.2 Site largely cleared of buildings in several stages from c.1970 onwards, although a row of haunched cast iron beams survives from original terminus buildings at eastern edge of East Handyside Canopy, supported on later steel stanchions.

1.3 Two red-brick ventilation shafts stand within site, serving second bore of Gasworks Tunnel (1876-8); third vent with covering grille located in retaining wall to York Way.

1.4 Much of site resurfaced in 2001-2 for use as haulage road for Channel Tunnel Rail Link (CTRL) works, and remainder currently in CTRL possession.

2 HISTORICAL AND FUNCTIONAL SUMMARY

2.1 The Maiden Lane temporary passenger terminus was opened by the GNR in 1850 within its Goods Yard site, to provide covered accommodation for passengers while construction of its King’s Cross passenger terminus was proceeding. (York Way to its
east was formerly called Maiden Lane.) The first train served the temporary terminus on 7 August 1850.

2.2 The King's Cross terminus opened on 14 October 1852, and passenger use of the Maiden Lane terminus consequently ceased. The Potato Market was established in 1852 under the shelter of the 1850 roof and in makeshift merchants' timber sheds. A north-south range of brick warehousing was erected in 1853 but demolished in 1864. A small gatekeeper's lodge was provided immediately north of the main entrance into the Goods Yard at its south-east corner, off Maiden Lane.

2.3 More substantial single-storey warehouses and offices were constructed 1864-5 for use by potato merchants.

2.4 The partly-glazed open-sided East Handyside Canopy was built along the east side of the Midland Goods Shed in 1888. Further roofs were added to the north-west, and on the east side over the internal roadway next to York Way, in 1896.

2.5 The first double-track Gasworks Tunnel was constructed beneath the site in 1849-51. The second bore, to the east of the first, was constructed in 1876-8. Two brick ventilation shafts for this tunnel were formed, penetrating the 1850 building's roof. A third bore was added to the west of the first tunnel in 1890-2. The second, easternmost, bore was abandoned in 1977 following electrification of the East Coast Main Line and resignalling of the remaining two tunnel bores. However, the ventilation shafts remain as this tunnel provides emergency access to the section of the line north of Gasworks Tunnel.

2.6 The carriage by rail of potatoes and similar traffic declined during the middle of the 20th century and the market eventually ceased operations. Buildings on the site were demolished in several stages c.1970, c.1975, and in 1988-91.

2.7 The site is now in use for the CTRL works, and much of it has been resurfaced.

3 DESCRIPTION

(As at the date of this report: CTRL works may result in subsequent alterations.)

3.1 The site, some 350 m north-south and 40-50 m east-west, is on the eastern edge of the Goods Yard with York Way to the east and the three bores of the Gasworks Tunnel passing under the site.

3.2 To the north and west the site was originally bounded by the railway tracks running north from the Granary and the Midland Goods Shed. At its south end the site was and is bounded by Wharf Road, which originally provided controlled access into and out of the Goods Yard. The abutment pier of a pedestrian side gate survives as a small section of rendered wall on the south side of Wharf Road at its junction with York Way. The gatekeeper's lodge that stood on the north side of this junction was demolished in the mid-1970s.

3.3 Temporary timber hoardings and fencing encloses the southern end of the site and runs northwards alongside York Way until the boundary becomes a brick wall. Two hollow cylindrical cast iron columns flank a second entrance to the site further to the north along York Way. These appear to be the only surviving elements of a glazed canopy of the 1890s covering the former internal roadway running north-south on the west side of York Way.
3.4 There is no difference between ground level in the Goods Yard and the level of York Way at Wharf Road, but further north this difference steadily increases as York Way approaches the viaduct that carries it over the railway lines serving the Goods Yard. Brick retaining wall construction is used to accommodate this difference in level between York Way and the Goods Yard, with buttresses (some with a battered sloped face) alternating with recessed bays spanned by brick arches.

3.5 These bay spaces have clearly found use in the past where there is sufficient headroom, both under the ramp and under York Way at the north end of the site. Some doors and brick infilling survive, while some bays have been blocked off more recently by infilling with blockwork. One bay houses a ventilation shaft for the Gasworks Tunnel, capped by an iron grille, with the bay itself secured by a further grille.

3.6 At a third entrance, further north, a ramp paved with setts diverges from York Way, and descends northwards to join the former internal roadway near the beginning of the York Way viaduct. The entrance, now sealed by a concrete block wall, is flanked by two granite ‘glinters’ (squat rounded stones) protecting adjacent masonry from damage by vehicles.

3.7 On the west side of the ramp, the drop to the internal roadway is protected by a shallow brick parapet. Additional blue brick buttressing appears to have been added later to uphold York Way over the northern end of the ramp and towards the viaduct, presumably following movement in the retaining wall.

3.8 The York Way site boundary is formed generally of a low brick wall with taller piers, between which are panels of cast iron ‘spear’ railings (some replaced by steel railings). Copings were originally of sandstone, but are now mostly of concrete. Some of this wall has been removed and replaced with fencing or hoardings, for the CTRL works or less recently. As York Way approaches the viaduct, from about halfway down the setted ramp northwards, the boundary is formed of solid brickwork to about 2 m height, with piers alternating with recessed panels.

3.9 Very little remains on the site itself following the clearance that began c.1970, continuing in stages up to the recent CTRL works.

3.10 The only surviving features above ground within the site are two ventilation shafts for the eastern bore of Gasworks Tunnel, both being cylindrical red-brick shells although one has the remains of additional brickwork still attached to it, presumably from a now-demolished building. Although this bore is no longer used by trains and its tracks have been lifted, it is kept open for emergency access by road vehicles to the section of railway to the north, between Gasworks Tunnel and Copenhagen Tunnels. Consequently the ventilation shafts must presumably be retained.

3.11 The haunched cast iron beams along the eastern edge of the East Handyside Canopy are described in the report for that feature (qv).

4 PHASING ANALYSIS

4.1 Of the surviving features, it may be noted that the haunched cast iron beams along the eastern edge of the East Handyside Canopy appear to be the only elements from the 1850 temporary passenger terminus, while the brick ventilation shafts were constructed when the second Gasworks Tunnel bore was built in 1876-8.
4.2 The York Way boundary wall, including the retaining works, appears to date from the construction of the Goods Yard in 1849-50, with later alterations including additional buttressing.

5 FUNCTIONAL AND RELATIONAL ANALYSIS

5.1 Nothing of significance survives.

6 LISTING CITATION

6.1 Not listed.

REFERENCES


Kay, P. The first King’s Cross - the 1850 GNR terminus in Maiden Lane and its subsequent fate. London’s Industrial Archaeology No. 7, 2000, 39-54.
### SUMMARY: THE HERITAGE IMPORTANCE OF THE FORMER POTATO MARKET SITE

**ARCHITECTURE AND FABRIC**

The effectively total demolition of the Potato Market structures in recent decades has unfortunately removed a very important component of the original 1850s King’s Cross complex. Only a row of haunched cast iron beams supporting the eastern edge of the East Handyside Canopy remain as evidence of this construction, supported on later steel stanchions.

Two brick ventilation shafts still stand on the site, serving Gasworks Tunnel. A third shaft is within the York Way boundary wall.

**SETTING**

The Potato Market area is flanked on its western side by the Midland Goods Shed and the East Handyside Canopy. CTRL construction work has included clearance of this area, so that no features remain of the original setting.

**SIGNIFICANCE RELATED TO TYPE**

The original temporary passenger terminus and the later large rail-served potato market were both rare and significant examples of their types.

**SIGNIFICANCE RELATED TO INTANGIBLES**

The loss of virtually all above-ground evidence makes meaningful interpretation impossible.