An Archaeological Desk-Based Assessment of Oppenheim's Glassworks, Snow Hill, Birmingham City Centre

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An Archaeological Desk-Based Assessment of Oppenheim's Glassworks, Snow Hill, Birmingham City Centre

by
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Contents

Illustrations

An Archaeological Desk-Based Assessment of Oppenheim's Glassworks, Snow Hill, Birmingham City Centre

Summary

A desk-based assessment was carried out by BUFAU in October 2001 in advance of the proposed development of a site adjacent to Snow Hill Station in Birmingham City Centre (NGR SP 0695/8760). BUFAU was commissioned to carry out this assessment by Sidell Gibson Partnership on behalf of Railtrack Property. This assessment was required as the development area was thought to include the site of Birmingham's first documented glassworks, belonging to Mayer Oppenheim, established around 1757. Material remains of glassworks are rare in Birmingham, although the city was a renowned centre of cut glass production from the later eighteenth century onwards. Established in the mid-eighteenth century Mayer Oppenheim's glassworks also dates from an important period of innovation in the glass industry in England that is poorly understood at present. Furthermore, this glassworks is also unusual in that it predates the explosion of glassmaking that followed the arrival of the canals in the later eighteenth century. The assessment concluded that the current development area is unlikely to contain remains of the glassworks, due to subsequent development of its site. The assessment further identified that the area most likely to contain any preserved remains of the glassworks lies under the current Snow Hill Station. However, given the importance of the site it is provisionally recommended that further limited fieldwork will be required on the development site in order to confirm the presence or absence of remains of the glassworks within this area.

1.0 Introduction

Birmingham University Field Archaeology Unit (BUFAU) was commissioned by Sidell Gibson Partnership to carry out a desk-based assessment on behalf of Railtrack Property, the assessment being carried out in October 2001. Railtrack Property propose to develop this area of land, hereafter known as the Study Area, between the northwest side of Snow Hill Station and Snow Hill Queensway (Figures 1 and 2). An assessment was required by the Planning Department of Birmingham City Council as the site of Oppenheim's Glassworks was thought to lie within the Study Area. The glassworks was established around 1757 by Mayer Oppenheim, but had gone out of business by 1777. The glassworks is significant on a local and national level - it is the first to be established in the city and was operational during a period of transition and change in English glass manufacture which remains poorly understood (Crossley, 1996, 8) . The specification for the archaeological assessment, issued by the council's planning department (BCC, 2001), envisages that the assessment will be the first stage of an archaeological response designed to mitigate the impact of the proposed development on any surviving remains of the glassworks.

The chief aim of this assessment was to establish the extent to which below-ground archaeological remains of the glassworks might survive within the Study Area, in order to identify the nature and extent of mitigation strategies required by the proposed development. The assessment was carried out in accordance with the *Standard and Guidance for Archaeological Desk-Based Assessments* issued by the Institute of Field Archaeologists (IFA 1999).

2.0 Location

The Study Area lies within the street block defined by Snow Hill Queensway, Great Charles Street, Livery Street and Colmore Row, being situated on the side of a gentle southwest-facing slope between the north-eastern side of the current Snow Hill Station and the southwest side of Snow Hill Queensway, within a roughly-surfaced carpark area (Figure 2). The Study Area lies on the southern boundary of an outcrop of upper mottled sandstone, adjacent to the deposits of sands and gravels which underlie much of Birmingham City Centre.

3.0 Present Character

The site was visited in early October 2001. The Study Area lies within an area which is currently used as a carpark. The carpark is surfaced with a variety of materials, comprising tarmac strips, compacted sand and gravel chippings. The surface of the carpark slopes gently downward from Snow Hill Queensway towards the edge of Snow Hill Station (Plates 1 and 2). The southwestern edge of the carpark and of the Study Area is occupied by a dense strip of trees and bushes. No remains of any structures which previously occupied the area are visible on the ground. A line of kerbing stones, however, is visible running northwest-southeast for around twenty metres through the centre of the southeastern portion of the carpark that may indicate the position of a former roadway or pavement.

4.0 Methods

In order to build up a picture of the Study Area, in terms of its relationship to the layout and development of the glassworks, the history of subsequent land use on the site and the development of the street block in which the Study Area lies, a variety of sources was consulted. Historic and modern maps, estate records, parish levy and rate books, trade directories, secondary sources and unpublished research were consulted during this assessment. Material within the Railway Collection and the Local Studies and Archives departments of the Birmingham Reference Library (BRL) proved to yield the most relevant information on the Study Area. No previous archaeological work seems to have been done within the Study Area, nor was any geotechnical information available for the Study Area.

5.0 Historical Background

5.1 Topographic Development of the Study Area

The Study Area lies outside the historic core of medieval Birmingham, within an area which began to be developed during the eighteenth century. The development sequence of the Study Area is well illustrated by historic mapping and is described below.

Westley's plan of Birmingham of 1731 (not illustrated) shows that the Study Area and surrounding street block was outside of the built-up area of the town. The beginnings of development of this area, however, can be seen. Westley's map shows that a handful of plots has been developed at the intersection of the roads later to become known as Colmore Row and Snow Hill. Snow Hill was an important arterial route from the centre of Birmingham to the Black Country and all the raw materials that were being increasingly exploited there, which must have been a major consideration in the choice that Mayer Oppenheim made concerning the site of his glassworks.

By the time of Bradford's map (1750) Livery Street had been cut, forming one of the defining elements of the street block in which the Study Area lies (Figure 3). More development is visible around the Study Area, characterised by regularly laid out plots, consisting of houses on the street frontage and gardens and outbuildings in the backplot. Much of the land within the later street block had been released for development by this date - indicated by the presence of regularly laid out empty plots on the map. Oppenheim established his glassworks here on a site at the edge of the town within the next five years. The land beyond the plots released for development remained undeveloped at this date.

Great Charles Street had been cut through by the time Hanson's map of1778 was produced and the map shows increasingly dense development in this part of Birmingham (Figure 4). By 1778 the street block defined by Snow Hill, Great Charles Street and Livery Street had been largely developed. The plots were all relatively densely infilled with housing, apart from two vacant plots on the northwest side of the alley later known as Brittle Street. Although Hanson's map was produced only a year after Oppenheim's Glassworks had gone out of business there is no obvious sign of the glassworks, and the two vacant plots are too close to Brittle Street to have been the site of the glassworks (Section 6.0, below). Hanson's map also shows that the Birmingham and Fazeley Canal had begun to be cut but had not yet reached the Snow Hill Area.

Various maps of varying quality depict the Study Area over the next sixty years. But it is clear that by the time of the next large-scale and detailed mapping in the late 1840s there had been increasingly heavy development of the backplots (Figures 5 and 6). Ackerman's Panoramic View of 1847 also shows the very dense industrial development, indicated by the proliferation of chimneys, which had occurred around Birmingham's canals by this date.

The detailed survey of Birmingham published by Pigott-Smith in 1855 (not illustrated) shows that the Study Area and surrounding street block had by then been completely remodelled. The building of the original Snow Hill Station on land previously belonging to the Inge Estate required the complete clearance of this street block for the construction of the station's platforms and rail viaducts. The station had been by completed by 1855.

The first edition Ordnance Survey map of the area (published in 1889) shows very little change within the Study Area and surrounding street (Figure 7). The only change that had occurred in this area is that a new station building had been constructed along Colmore Row and was finished in 1871 (Mears, 1911, 218).

The third edition of the Ordnance Survey coverage for the area shows that the street block had been totally remodelled with the revamping of Snow Hill Station (Figure 8). The reconstruction of the station took place from 1906-12 and entailed the construction of internal modifications to the station building and a major redesign of the platform area. The work involved the construction of new platforms and the construction of extensive split-level under-platform cellaring along the street frontages of Snow Hill, Great Charles Street and Livery Street (Figure 10). This cellaring extended into the Study Area.

Little change was made to this area until after the Second World War. Snow Hill Station remained in use in the form established in 1912. Plans for Birmingham's inner ring road, of which Snow Hill Queensway is a part, were published in 1946 (not illustrated). The construction of the ring road was effected in the late 1950s. Snow Hill Queensway does not actually follow the line of the earlier Snow Hill road. Snow Hill Queensway lies roughly parallel to the original roadway, separated from the line of the original road by around 30 metres (see Figure 10). This shift in the course of Snow Hill means that the current Study Area actually takes in little of the southwest frontage of the original Snow Hill and more probably straddles the original roadway itself. Snow Hill Station was closed in 1964 and later demolished. The site of the station remained derelict for some time, until the 1980s when the current Snow Hill Station and a series of large office buildings were constructed. The carpark in which the Study Area lies remained as open land following the demolition of the station.

5.2 Industrial Background

The beginnings of glassmaking in Birmingham are obscure, but by the mid-eighteenth century it was an important component of what Edmund Burke in 1777 called 'the great toyshop of Europe'. These 'toys' were generally small articles whose value derived from their craftsmanship such as tools and utensils, household fittings and knick-knacks, trinkets and ornaments. Nationally, this was a time of increasing living standards that was reflected in a demand for luxury items, while the colonies were also becoming important markets for Birmingham products. It was a period too of great innovation. Birmingham's inventors were granted 90 patents down to 1800, over three times the number of Manchester, for example. It is a combination of factors like these that must have weighed on Oppenheim's mind when he made the choice to locate in Birmingham, and to offer red glass, hitherto imported from Europe, to the 'toymakers' of the town.

While the arrival of canals in Birmingham in the last quarter of the eighteenth century revolutionised the town's established industries and facilitated the development of new trades and industries in the area there was also a remarkable degree of continuity based upon small-scale manufacturing. It is important to note that the nature of Birmingham's glass production is not as well understood, or as fully documented as that of nearby Stourbridge. Mayer Oppenheim's glassworks at Snow Hill is highly important in this context, as it marks the first known glassworks in Birmingham and pre-dates the arrival of the canals in the city.

6.0 Mayer Oppenheim's Glassworks

A considerable amount of documentary research, has already been carried out on Oppenheim and the site of his glassworks. Mayer Oppenheim was a Hungarian Jew who was a scholar and an entrepreneur, in addition to being a glassmaker. Oppenheim seems to have arrived in London by 1755, where he obtained a patent for the manufacture of red glass from King George II in this year (Josephs, 1978, 83). Information from the St. Martin's Parish Levy Books shows that Oppenheim had established his glassworks at 94 Snow Hill by 1757. Oppenheim was probably attracted to Birmingham by the quality of the workforce, the freedom of trades, and the atmosphere of religious toleration prevalent in the city (Josephs, 1978, 83). An advert from *Aris's Birmingham Gazette* in 1762 for Oppenheim's Glassworks confirms that he was making his patented red glass at the site (Figure 9). Trade directories from 1767, 1770 and 1775 list Oppenheim at this location, but the Levy Books also chart a marked decline in the value of the concern over this period. Oppenheim's Glassworks is not listed in the trade directory for 1777 and Mayer Oppenheim is known to have petitioned for bankruptcy in 1777, so it is likely that he went out of business and that his Birmingham glassworks had folded by 1777. Following his bankruptcy, Oppenheim spent several years in a London debtors prison (Josephs, 1978, 85). On his release from prison Oppenheim relocated to France and tried to re-establish a glassworks there. He spent many years in a troublesome partnership with a M. Lemarcier and eventually failed in business and died around the close of the eighteenth century (Josephs, 1978, 85-6).

Research by Toni Demidowicz of Birmingham City Council has located the probable site of Oppenheim's Glassworks on the southwest side of Snow Hill using the information from the Levy Books and combining this with the 18th century mapping (Figures 4 and 11). As demonstrated in the preceding discussion of the development of the Study Area, no map actually shows the glassworks itself - Hanson's map comes the year after the glassworks had definitely closed and shows that the relevant plots had been developed as houses - so we have little idea as to the actual form of Oppenheim's works. The fact that the business is always described as a *glasshouse* indicates that glass was actually manufactured from raw materials on the site, for the term was not used for factories where glass was only cut or finished. It can be assumed, then, that some form of reverberating furnace existed on the site, most probably of the distinctive cone-type, but other kinds of reverberating furnace did exist at this point and may have been used by

Oppenheim. All of the furnace types current in the mid-eighteenth century required substantial underground flue systems. Such flue systems have been found preserved in urban locations where later development had been assumed to have destroyed all remains of the furnace (Crossley, 1996, 8). It is possible that the site of Oppenheim's Glassworks was taken over in the early 19th century by an iron foundary located on Livery Street that may possibly be the Phoenix Mill, producers of the roof of the Retort House in Gas Street (Demoidowicz *pers comm.*). However, documentary research on Parish Rate Books and trade directories for this period has been unable to confirm this.

The method in which the Edwardian Snow Hill Station was constructed makes it unlikely that any remains of Oppenheim's Glassworks survive. Plans of Snow Hill Station published in the *Great Western Railway Magazine* (Mears, 1911), partially reproduced in Figure 10, show the extent of the under-platform cellaring which was a feature of the rebuilding of the station. The cellaring extended along the northwestern half of the station's frontage onto Snow Hill, including the former position of Oppenheim's Glassworks. It is unclear how deep the cellaring was cut into the ground at this point, but it is probable that it will have disturbed much of the remains of the glassworks. Furthermore, Oppenheim's Glassworks, at 94 Snow Hill, lay on the southwestern side of the Snow Hill. The shift in the road course with the construction of the inner ring road means that the Study Area takes in a large portion of the former northeast street frontage and only a minimal part of the southwest street frontage. The Study Area is likely therefore to just clip the probable location of the glassworks, most of which lies underneath the platforms of the present Snow Hill station.

7.0 Conclusions and Provisional Recommendations

This assessment has demonstrated that it is highly likely that very little remains of Mayer Oppenheim's Glassworks at Snow Hill. This is unfortunate since the site is of great importance in the development of glass manufacture and industry in Birmingham. The current development area actually takes in very little of the presumed location of Oppenheim's Glassworks, although it does include a small part of the street frontage of the glassworks site. While remains of the glassworks along the frontage have probably been disturbed by later development and the cellaring belonging to Snow Hill Station it is recommended that limited trial trenching be carried out to confirm this. This is justifiable because of the high potential archaeological value of any surviving remains, which fulfill many of the criteria outlined by the English Heritage Management Protection Programme report on the Glass Industry (Crossley 1996). However, the decision on the form of mitigation to be adopted for this development rests with Dr. Mike Hodder, Planning Archaeologist for Birmingham City Council.

It is possible that some remains of the glassworks may survive in the former backplot areas which escaped damage from the station cellaring. These areas, however, lie outside the current development area, underneath the platform and rail area of the current Snow Hill Station.

Acknowledgements

This report was written by Melissa Conway in close consultation with Steve Litherland who also managed the project. The illustrations were prepared by Mark Breedon and the report was edited by Iain Ferris. Thanks are due to Dr. Mike Hodder and Toni Demidowicz of Birmingham City Council's Conservation Group for their assistance during the preparation of this report and for sharing crucially important, unpublished research on the site of the glassworks. Thanks are also due to the keepers of the Railway Collection, the Archives Department and the Local Studies Department of Birmingham Reference Library.

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Sketchley's Directory of Birmingham 1770
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Pye's Birmingham Directory 1791
Chapman's Directory of Birmingham 1800
Wrightson's Birmingham Directory 1812
Wrightson's Birmingham Directory 1821
Pigott's Commercial Directory of Birmingham and Worcestershire 1830
Pigott's Commercial Directory of Birmingham and Environs 1842
Wrightson and Webb's Birmingham Directory 1843

Rate Books for 1845, 1860 and 1871

Cartographic

1731 Westley's Plan of Birmingham
1750 Bradford's Map of Birmingham
1847 Ackerman's Panoramic View of Birmingham
1849 Plan of Birmingham by an unnamed surveyor
1855 Pigott-Smith Plan of Birmingham
1889 First Edition Ordnance Survey
1918 Third Edition Ordnance Survey
1946 Proposals for the Ring Road

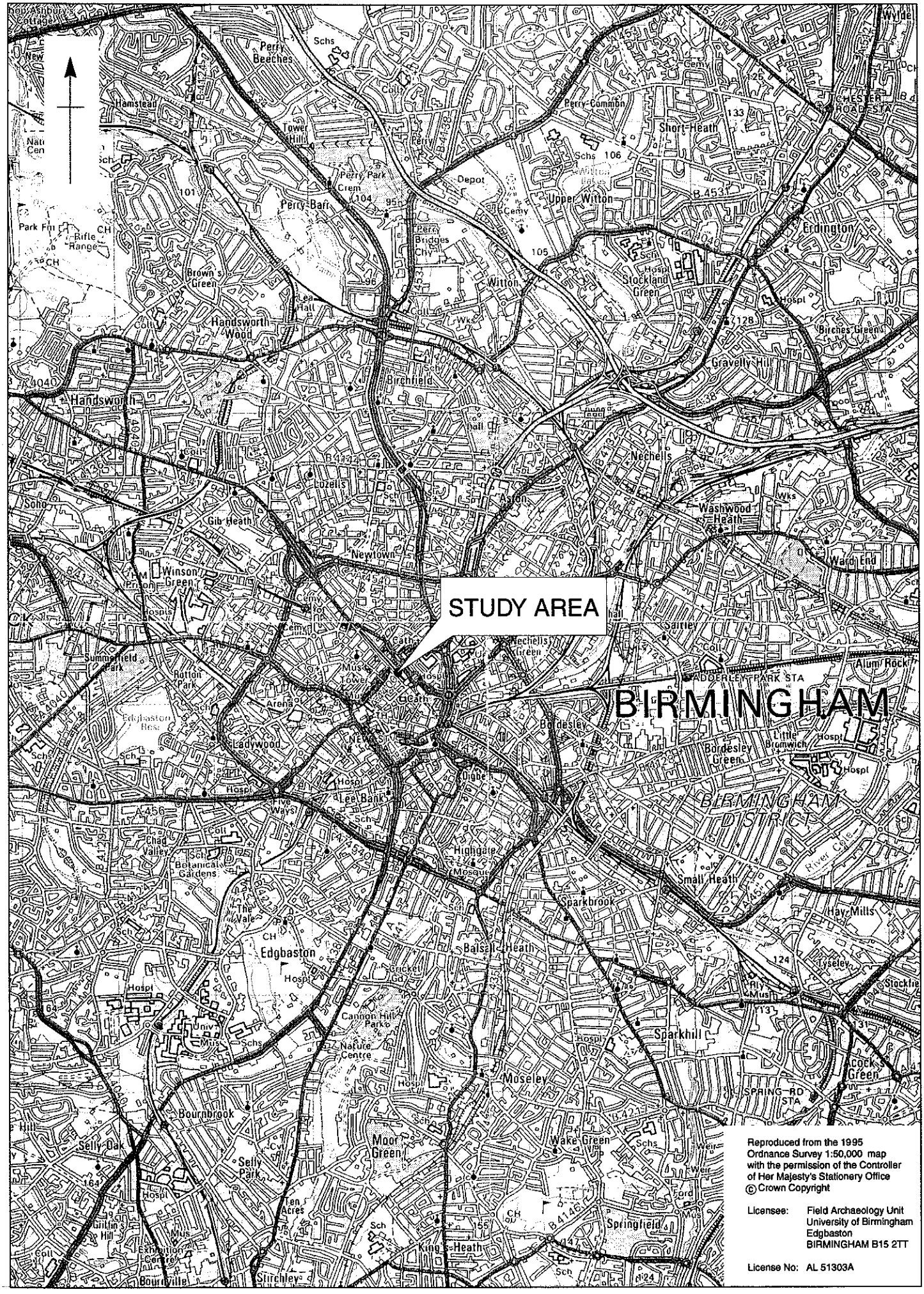
STUDY AREA
BIRMINGHAM
BIRMINGHAM DISTRICT
Perry Beeches
Perry Common
Short Heath
Perry Park
Perry Bar
Upper Witton
Erdington
Witton
Stockland Green
Handsworth Wood
Handsworth
Birchfield
Gravelly Hill
Aston
Nechells
Washwood Heath
Ward End
Soho
Gib Heath
Newtown
Winson Green
Lozells
Summerfield Park
Ladywood
Bordesley
Bordesley Green
Lee Bank
Five Ways
Digbeth
Highgate
Small Heath
Sparkbrook
Hay Mills
Edgbaston
Balsall Heath
Cannon Hill Park
Nature Centre
Moseley
Sparkhill
Bournbrook
Selly Oak
Selly Park
Moor Green
Wake Green
Springfield
King's Heath
Stirchley
Bournville
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Figure 1

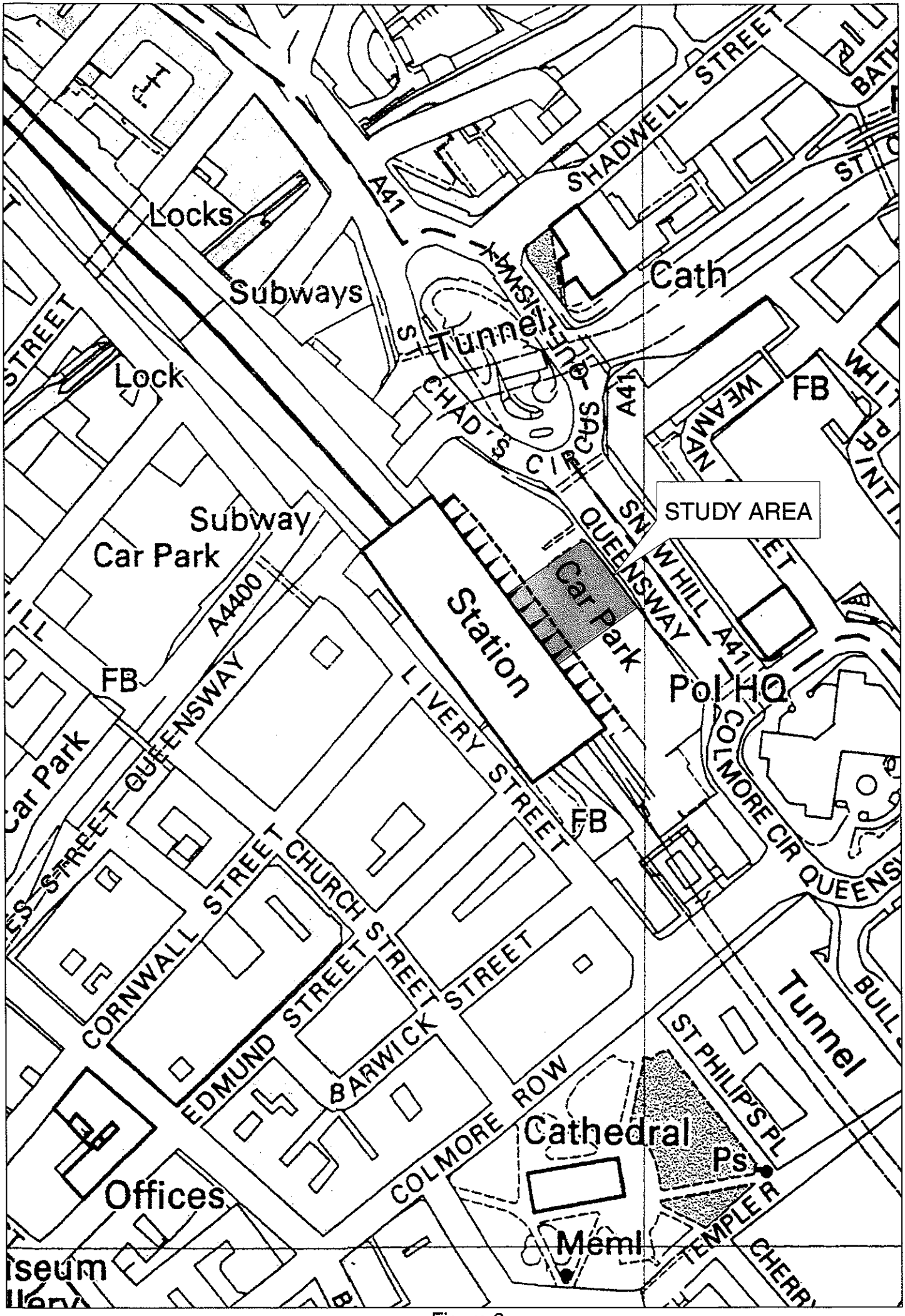
STUDY AREA
Locks
Subways
Tunnel
Cath
Lock
Subway
Car Park
Station
Car Park
Pol HQ
Tunnel
Cathedral
Offices
Meml
SHADWELL STREET
A41
QUEENSWAY
A4400
LIVERY STREET
CORNWALL STREET
CHURCH STREET
EDMUND STREET
BARWICK STREET
COLMORE ROW
COLMORE CIR
ST PHILIPS PL
TEMPLE R
FB
PS

Figure 2

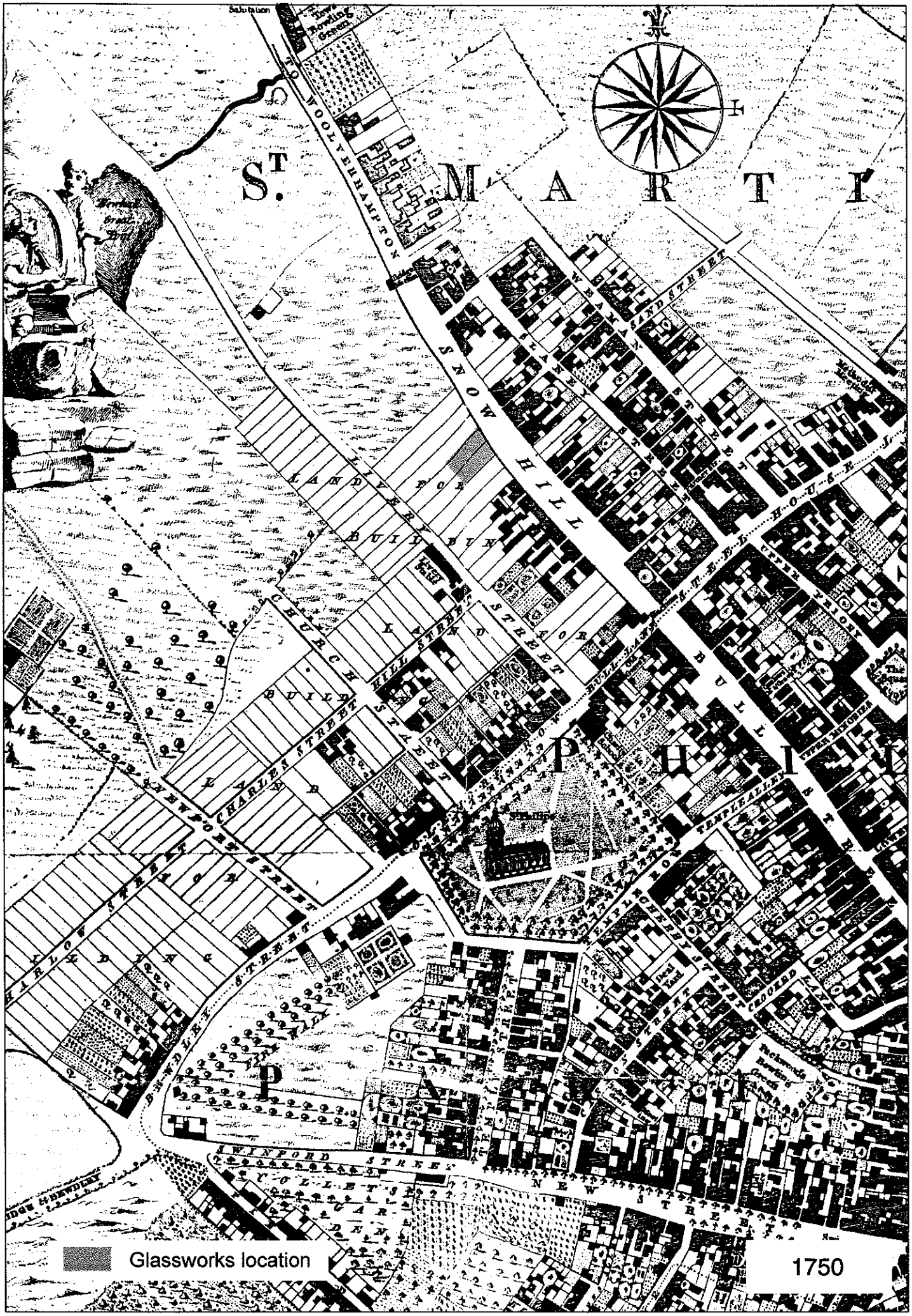
S.T. MARTI
TO WOOLVERHAMPTON
SNOW HILL
LIVERPOOL BUILDINGS
CHURCH BUILDINGS
CHARLES STREET
HILL STREET
STREET
HOUSE
PULLI
TEMPLE ALLEY
CROOKED LANE
NEW STREET
WINFORD STREET
Glassworks location
1750

Figure 3

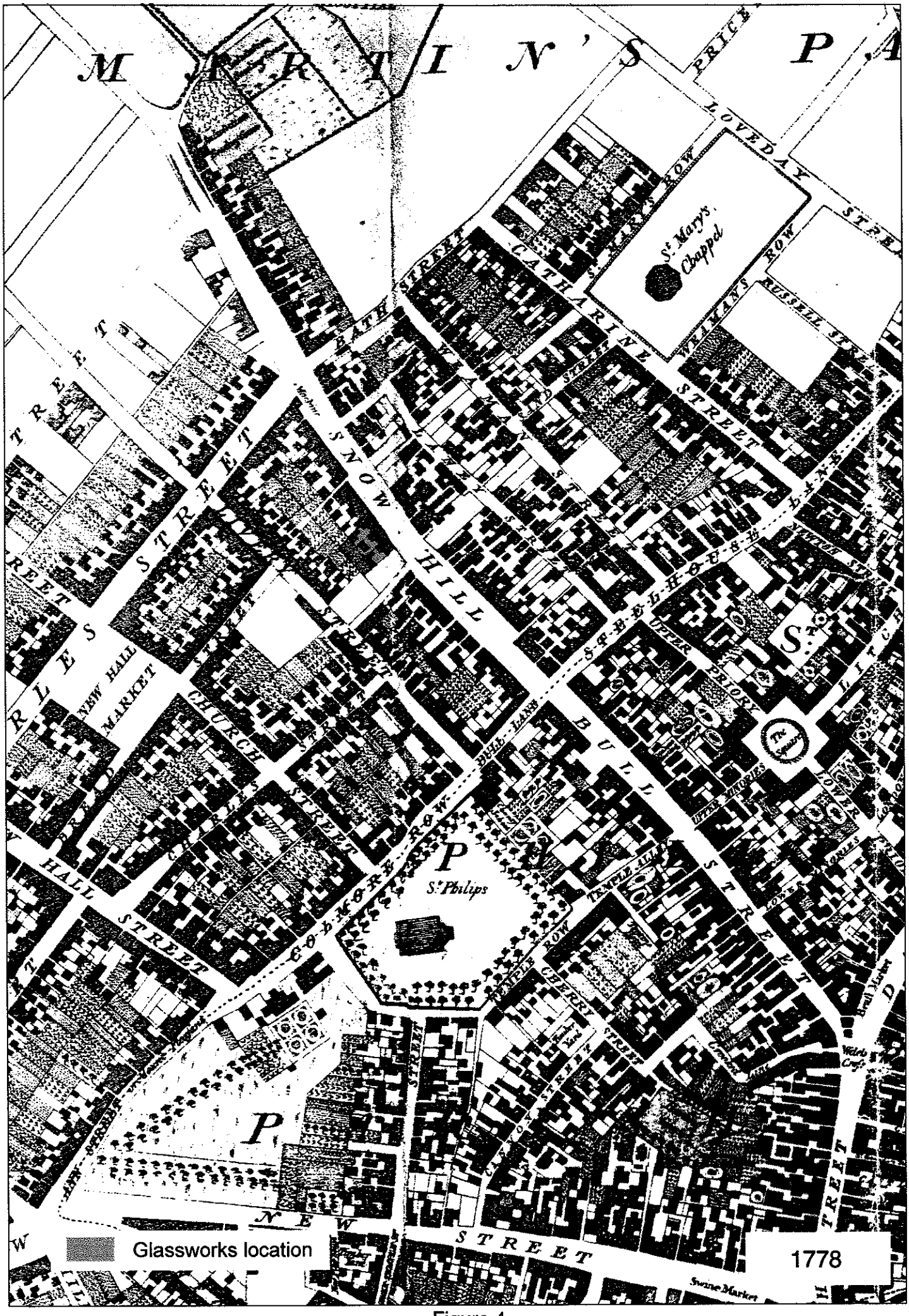

Figure 4

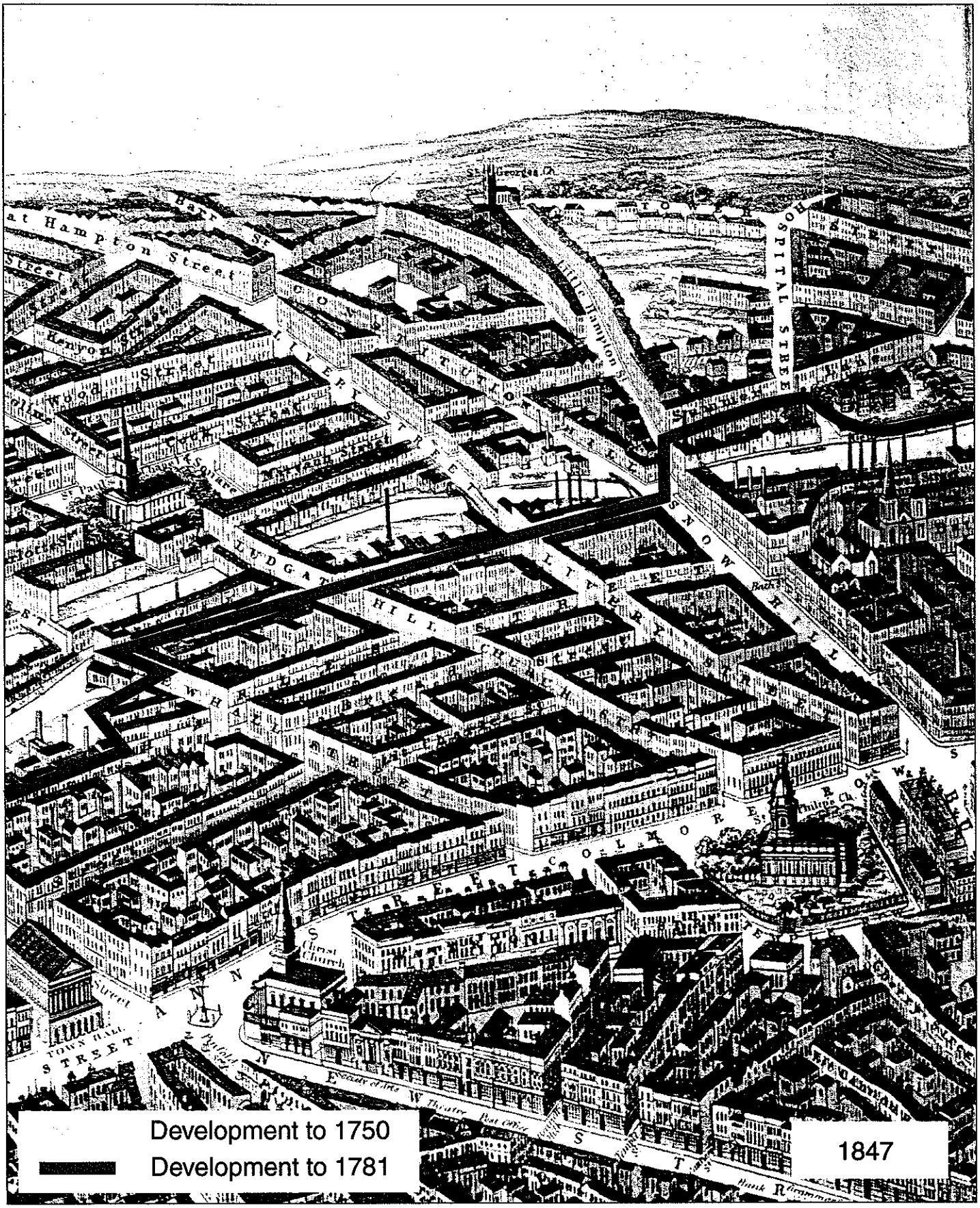

Figure 5

Figure 6

Figure 7

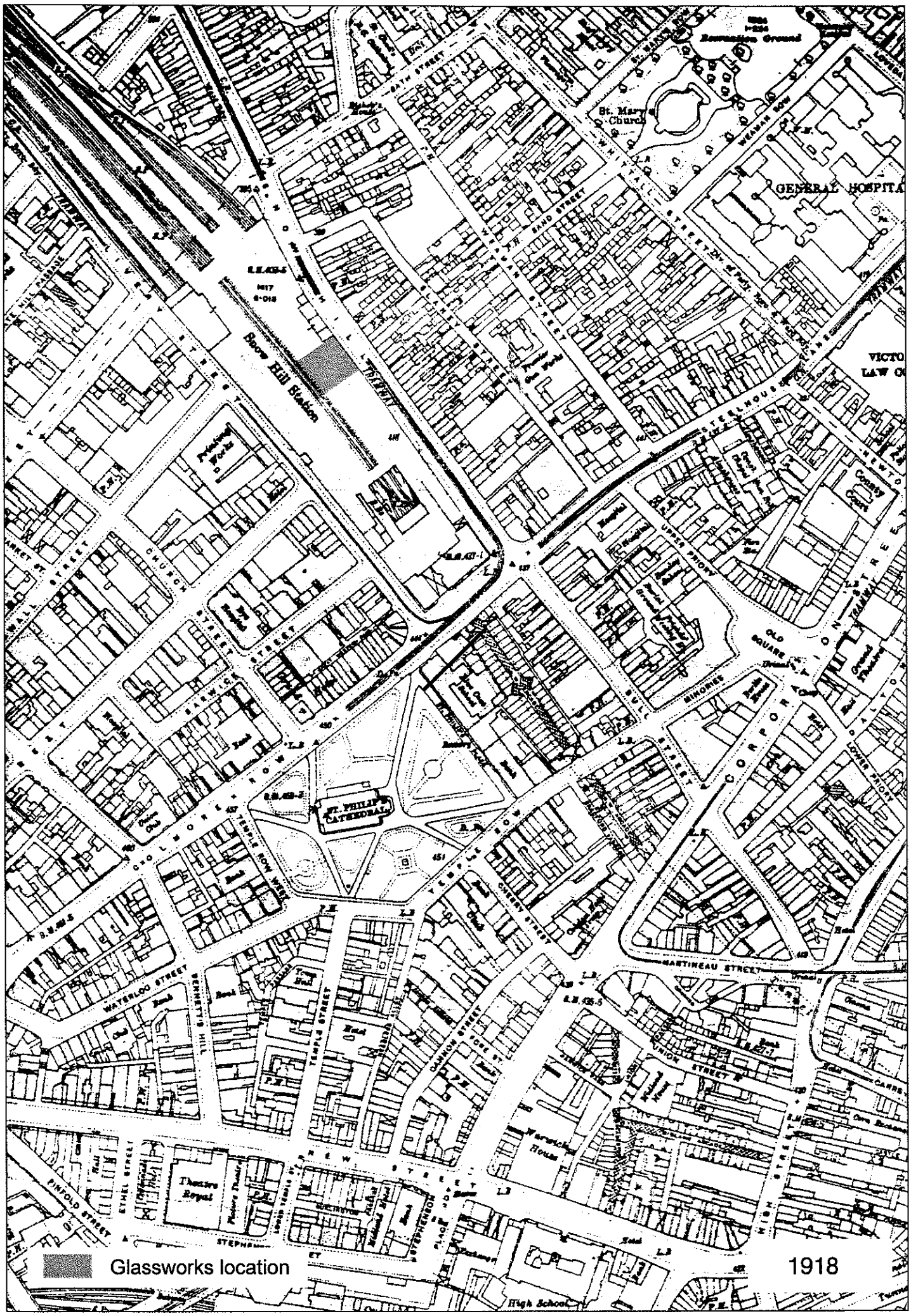

Figure 8

MAYER OPNAIM, at his Glaſs-Houſe on Snow-Hill, Birmingham, being willing to leave off the Retail Hard-Ware-Trade, or the Inland Glaſs Manufactory; any Perſon that is diſpoſed to carry on either of the above Trades, may, by allowing him a reaſonable Premium, (with a Capital of One Thouſand Pounds) be put in ſuch a Way, as to clear Five Hundred Pounds a-Year; or, with a leſs Sum, in Proportion. The Above Glaſs-Houſe, and the Dwelling-Houſe, or Part of the ſaid Buildings, to be let for a Term, as can be agreed upon. Enquire of the ſaid Mayer Opnaim, who has to ſell a large Parcel of Lynn Sand, and fine White Arſenick, ſeveral Hundred Weight of fine German Steel, alſo a Caſt-Iron Trough, 45 Inches long, 14 wide, and 10 in Depth.

N. B. The Red-Tranſparent Glaſs is to be had at the above Glaſs-Houſe, either in a light Roſe or deep Ruby Colour.

*** Wanted immediately, 1200 Groce of Metal Children's Buckles of

Figure 9

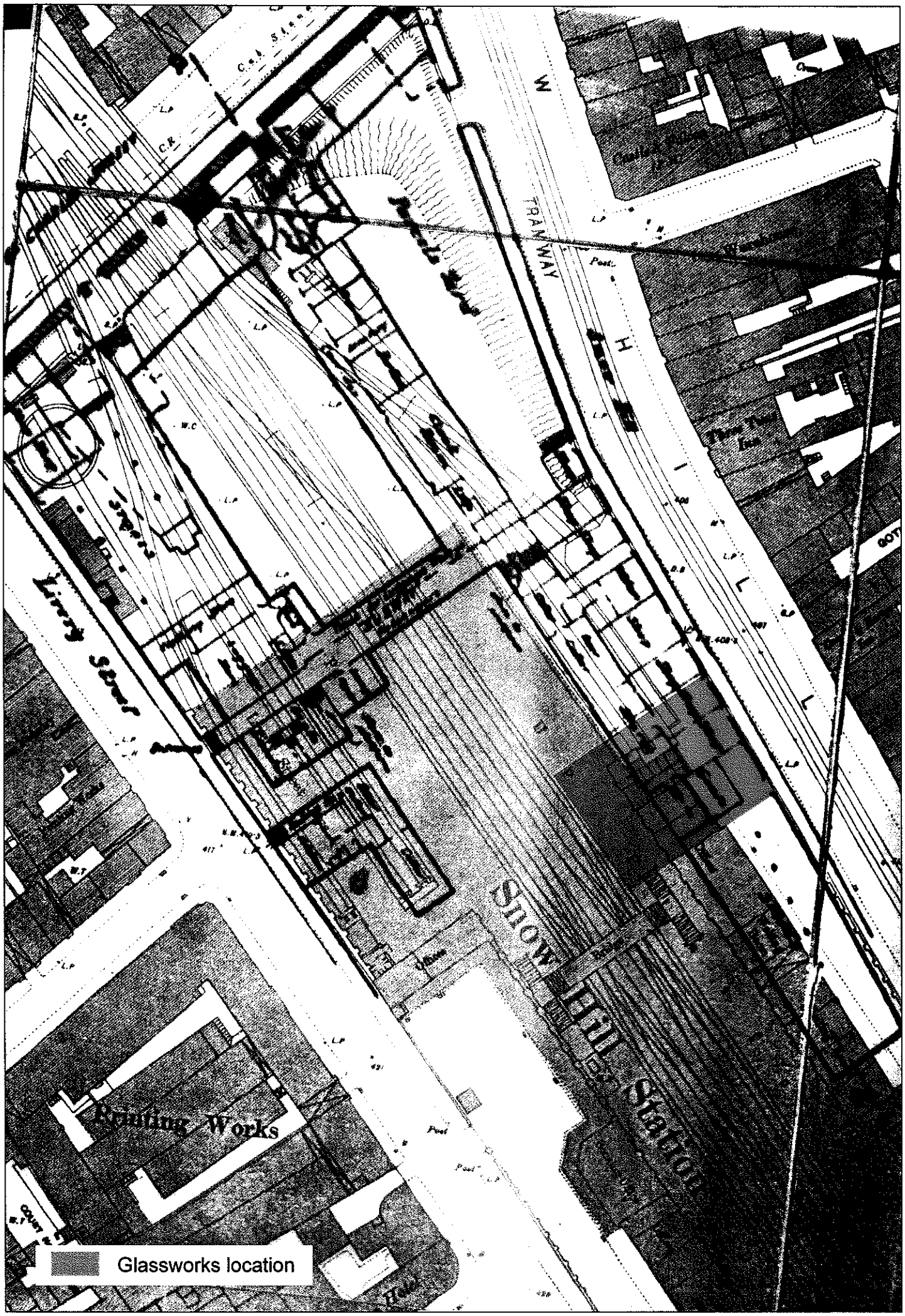
TRAMWAY
Snow Hill Station
Roofing Works
Glassworks location

Figure 10

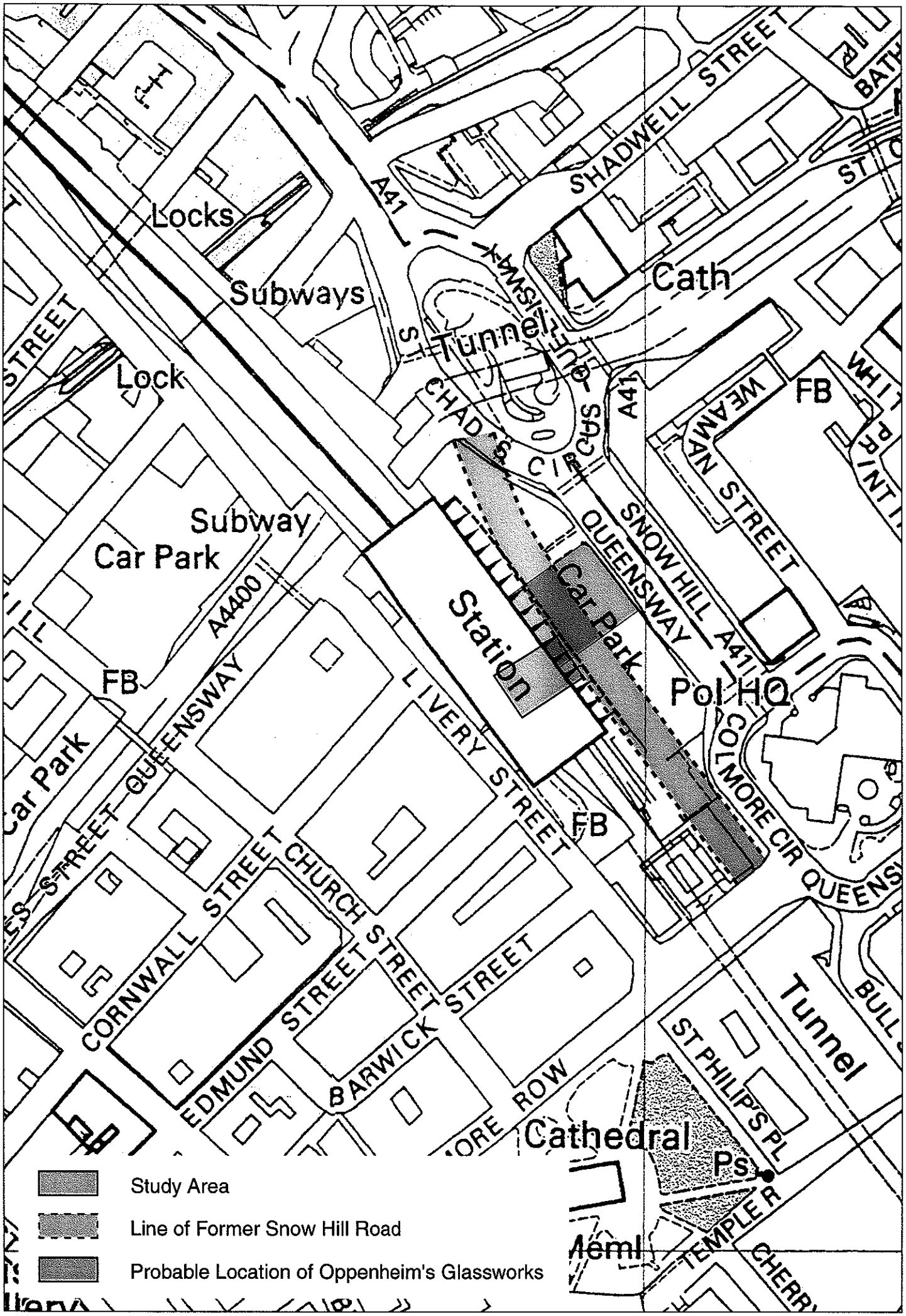
SHADWELL STREET
A41
Locks
Subways
Tunnel
Cath
Lock
Subway
Car Park
A4400
FB
Station
Car Park
QUEENSWAY
SNOW HILL
A41
WEAMAN STREET
FB
PoI HQ
COLMORE CIR
LIVERY STREET
FB
CORNWALL STREET
CHURCH STREET
EDMUND STREET
BARWICK STREET
Cathedral
ST PHILIP'S PL
Tunnel
TEMPLE R
Study Area
Line of Former Snow Hill Road
Probable Location of Oppenheim's Glassworks

Figure 11

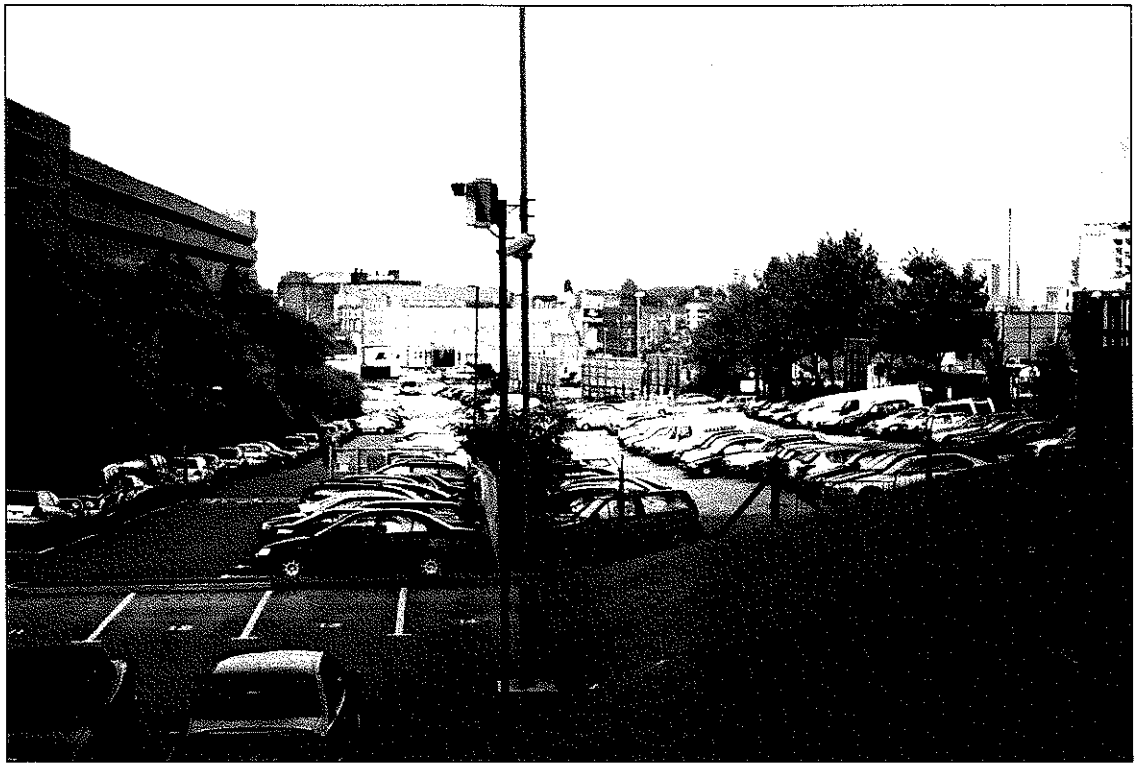

Plate 1

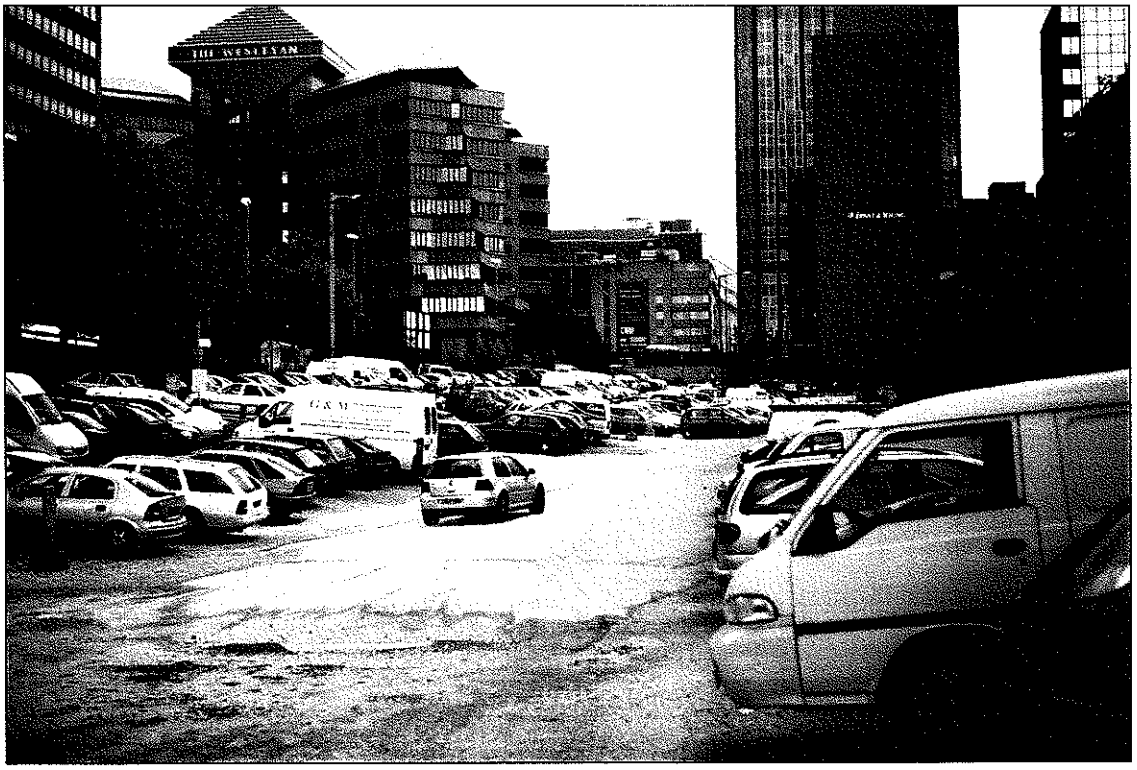

Plate 2