



Site ID: 13

Site Name: Southcroft Football Park

*Condition of the Archaeological Resource*

Standing building and earthworks. Corrugated iron roofing over terraces at SW end is in poor condition, as are other ground fittings.

*Impact*

The motorway will pass directly across the central and southern parts of this site, impacting on terraces, the pitch itself, and the clubhouse site to the west.

*Significance*

This site is of local importance. More specifically, aspects of its importance relate to:

- Period and historical, cultural and social influences: this football ground was in place by the early 1890s and was, thus, an early development of recreational facilities related to the industrial development of the area. It is probably to be associated with the adjacent Shawfield Chemical Works (site 14 in the Phase 1 report) to the north and may, therefore, represent an early example of company-sponsored leisure facilities and, in terms of social history, represent an exercise in labour relations or a form of industrial philanthropy.
- Group value and relationship of the monument with its wider landscape and setting: such recreational/leisure facilities were an important late nineteenth century social development associated with the processes of industrialization and urbanisation, with ongoing significance, meaning, and use to communities up to and including the present time. The connection with industry is, rather exceptionally, symbolized in this case by the construction of the terraces from slag and other industrial by-products.

*Mitigation Recommendations*

Standing building survey. The site merits a rapid survey prior to destruction at Level 1, incorporating elements of Level 2 if deemed necessary (cf section 6.3 of Part 1 of this report). The record will comprise general photographs of the buildings/stands and any more detailed shots identified as relevant while undertaking the survey. A written record should be maintained to accompany and explain the photographs taken, their subjects, and any additional information relevant in understanding the selection of particular shots or the content of the photographs. A written description of the site and its development will also be necessary. Current and historic mapping should be checked with the remains on the ground; if this adequately represents the layout of the site then no further plan recording will be necessary. Amendments to the maps might be recorded in written form unless deemed particularly significant, in which case a plan survey should be undertaken.

*Summary History and Historical Context*

This football ground (of the Glencairn Juniors) is first shown on the second edition Ordnance Survey town plan of 1892-4. By the time of the third edition OS, just prior to the First World War, a small clubhouse had been added to the western side of the ground. The current terracing has been formed of slag and other industrial waste. The eastern boundary wall is of finely worked sandstone ashlar, and may pre-date the football club and be associated with Southcroft House, which stood to the west. Alternatively, facing the main road as it does, it may represent a later construction which is qualitatively finer due to its prominent visibility. The ground should probably be associated with the Shawfield Chemical Works to the north (site 14 in the Phase 1 report) and may, therefore, represent an early company-sponsored leisure development. Such company football grounds were once common in the area.

The Glencairn Juniors were apparently formed at a meeting held in Rutherglen jail in 1895, and after the club had been formally established the ground at Southcroft Park was rented (the evidence of the First Edition OS map confirming that the ground itself already existed by this point). The Juniors were relatively successful, winning the Scottish Junior Cup four times (1902, 1919, 1927, and 1939). The grandstand at the ground was burnt down in a fire just before the Juniors' last appearance in the Junior Cup final in 1974.

*Non-archaeological Sources*

*Documentary Sources*

None sourced.

*Plans*

None sourced.

*Photographs & Illustrations*

None sourced.

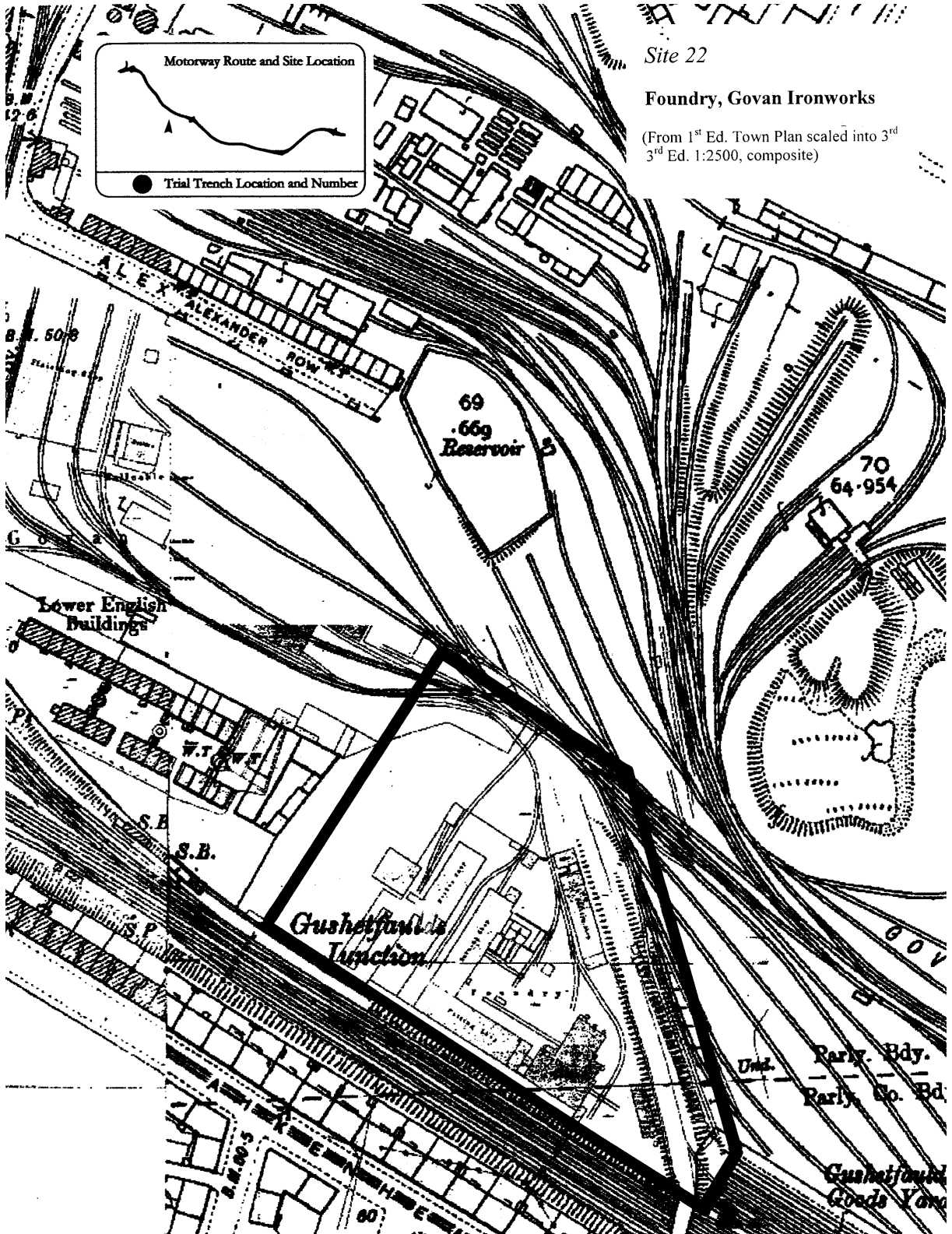
*Secondary Sources*

McColl, C 1995 'Junior choice', *When Saturday Comes* 96, 26-7.

Site 13 – Southcroft Football Park



Southcroft Football Park



Site ID: 22

Site Name: Foundry, Govan Iron Works

*Condition of the Archaeological Resource*

The work detailed in the 2003 report indicated that the site is overlain by up to 2.5 m of rubble and industrial waste overburden. This great depth of overburden precluded conducting trial trenching in 2003. Therefore all of the observations made in the Phase I evaluation report are based upon observations made in the geotechnical test pits.

The geotechnical test pits revealed large amounts of slag, some of which showed distinct tipping horizons, implying several episodes of dumping. Bricks and brickwork were also found, some of which is likely to represent the demolition of elements of the Iron Works. Test pitting also exposed a length of intact brick culvert, presumed to be part of the foundry complex and demonstrating that *in situ* remains do survive locally. The extent to which this material relates to the nineteenth century foundry or to the later operation of the northern part of the iron works (ie representing dumps of waste from that part of the site) is not known at present.

*Archaeological Trial Trenching 2004*

In order to improve our understanding of the nature and extent of the surviving archaeological resources a series of trial trenches were excavated in August 2004. In the area of the Foundry, nine trenches were mechanically excavated using a large, tracked excavator and cleaned by hand. The initial trenches were located with reference to the first edition Ordnance Survey town plan (1857/8) and positioned in order to examine specific structures. After the third trench had been opened, a prospective strategy was employed: gaps in the tree cover were exploited to obtain even coverage over the site. A more detailed account of these excavations is the subject of a freestanding Data Structure Report (Will and Kennedy 2004). Here the results are summarised:

- Tr 1 This curving trench ran through the position of two structures shown on the OS first edition. The trench was dominated by extensive dumps of coal ash, slag, and ironworking residues, and building materials were encountered in large quantities to a depth of between 2 and 3 m. Small portions of *in situ* building remains were encountered and these were explored in Tr 2 and Tr 9.
- Tr 2 In this trench, deep deposits of well-stratified ironworking waste sealed a series of brick- built structures – perhaps smithing forges. Associated with these structures was a brick-built conduit which showed evidence of having been exposed to intense heat (the conduit is possibly a hot-air duct associated with the ventilation of furnaces on this part of the site). To the south of these structures were vestigial remains of an external brick wall. The top of the conduit probably marks the approximate floor level of the workshop.
- Tr 3 This trench was located in order to examine the site of a bank of coke ovens shown on the OS first edition. Large quantities of ironworking waste and substantial building rubble were exposed, but no *in situ* remains were encountered.
- Tr 4 In this trench, a section of a large brick-built conduit was exposed approximately 1 m below ground level. The east end was truncated and all contemporary features (such as a building wall) had been swept away. Towards the west, the conduit ran downwards at a steep angle. The conduit was empty and showed signs of having been exposed to intense heat, perhaps from hot gasses or hot air associated with furnace ventilation. This feature probably lay below the working level of the foundry.
- Tr 5 This trench was also located in order to examine the site of a bank of coke ovens shown on the OS first edition. Large quantities of ironworking waste, building rubble and railway sleepers were exposed and ran to a depth of 2 m, but no *in situ* remains were encountered.
- Tr 6 A third trench located in order to examine the site of a bank of coke ovens shown on the OS first edition. Again quantities of ironworking waste, along with massive pieces of building rubble, were exposed, but no *in situ* remains were encountered.
- Tr 7 Fragments of a cobble surface were encountered. Below this were two small, brick-built drains. These deposits were located below quantities of ironworking waste. It is not clear whether these are interior or exterior features.

- Tr 8 This trench was located in order to establish the extent of a building marked on the OS town plan. Large quantities of ironworking waste and building rubble were exposed, but no *in situ* remains were encountered.
- Tr 9 This trench exposed a tarmac surface (probably an exterior yard) adjacent to a brick building with tile paving and a cobbled surface with drains and possible machine footings. The building exhibited much remodelling of its interior floors. The function of building is uncertain.

In summary, it appears that once the foundry ceased to function (sometime before 1892-4), the workshops and associated buildings were demolished. In places this demolition was thorough, while elsewhere portions of buildings and internal structures survive to a height of up to 0.5 m. In particular it appears that a complex set of sub-surface conduits, possibly relating to furnace operations, may survive largely intact. Once the site had been cleared it appears to have been kept open, probably as large-scale store yard. This storage resulted in the accumulation of substantial deposits of iron manufacturing waste, which seem to represent a wide range of manufacturing processes and materials. The final use of the site appears to have been as a general tip for the Govan Iron Works, with dumped material including substantial deposits of demolition rubble.

### *Impact*

The motorway route runs directly over the foundry site and the vast majority of the foundry buildings fall within the path of the motorway. The area of impact is approximately 13,300 m<sup>2</sup>.

The motorway will run in a cutting at this point on its route and it is anticipated that any surviving archaeological remains will be entirely removed during the construction phase. Even the originally sub-surface features are likely to be removed to provide a suitable surface for constructing the road. The likely impact on this site will be total destruction within the motorway corridor.

### *Significance*

Because of the historical significance of the Dixon enterprises, its ongoing and potential future interest to historians and the local and regional population, and the numerous ways in which the site may add to historical knowledge, the Govan Iron Works Foundry should be considered to be of national importance. The foundry has the potential to add significantly to historical understanding. The significance of the site as a whole has several related aspects:

- Historical association & period: the association with the Dixon dynasty is significant. The Dixon enterprises were at the forefront of the Scottish iron industry at its peak, in the period from the second quarter of the nineteenth century. The Dixons were recognised by contemporaries as amongst Glasgow's most notable industrialists. Their business was also key to the development of the West of Scotland and to Scotland as a whole, with the Scottish iron industry focusing in the west. The firm was also an international exporter. The Dixons continue as a major focus of interest for industrial, economic, and business historians.
- Contemporary consciousness: apart from the substantial historical interest in the Dixon enterprises, the Govan Iron Works continued in operation until the late 1950s and the history of the site may, therefore, be of great interest to any surviving members of the workforce and their families, as well as to those living locally and the inhabitants of Glasgow and region as a whole.
- Group value: the foundry groups with the other Dixon enterprise sites (23, 25, 42) and with the other foundry/engineering sites on the route (sites 35, 43, 47, 51, 57, 58, 80, 81, 83, 94).
- Multi-period/single period: the site was in operation as a foundry from the outset and operated under one firm (though this does not preclude the possibility that it may have several phases of use and alteration). This part of the site does not appear to have been redeveloped since its abandonment.
- Documentation: no documentary sources specific to the foundry and no plans beyond the OS maps have been identified. The archaeological resource is thus key to understanding the operation and history of the site. However, further research on the Dixon archive and previous historical research on the firm will allow any archaeological work to benefit from a good general understanding of the business as a whole. At the same time, archaeological work will usefully feed into our understanding of the history of the business, which is only partially understood at present. It should also be noted that the documentation for the blast furnace part of the iron works, to the north of the foundry site,

is relatively sparse for the nineteenth century. Archaeological work at the foundry site may enhance our understanding of production in the blast furnace operation (eg if unused pig iron or slags are recovered). Any archaeological information on this subject can then be considered alongside the more detailed technical records on pig production that exist for the period ca 1900-1958.

- Technological and scientific interest: the technical aspects of the foundry side of the iron industry have seen little previous investigation, both within British industrial archaeology and within Scottish industrial history. This site, therefore, has the potential to substantially increase knowledge of technical operations in the sector. The Govan foundry appears to have produced steam engines and other engineering products. This was the main focus of the sector in Glasgow, and information deriving from Govan will thus feed into an understanding of the city's main iron foundry products of the time.
- Social history: The Govan Iron Works is unusual for the foundry/engineering sites on the M74 route in that it is associated with company workers' housing (site 23; similar housing also lay within the northern part of the works). The presence of this housing implies that the firm was keen to attract and retain skilled workers by providing exceptional living conditions. A significant area of research will be to determine whether or not working conditions in the foundry differed from those in the other foundry/engineering firms on the route.

#### *Mitigation Recommendations*

Large excavation. As the route of the motorway passes squarely across the centre of the foundry site and takes in much of the extent of that site, there is a need and opportunity to investigate the site as a complex, analysing and recording most aspects of the production process. A large-scale, open-area excavation is recommended, to allow full comprehension of the remains and the layout and operation of the works, and to allow identification and full understanding of any individual components of the site. Part 1 of this report details the appropriate research aims for such a site and outlines a number of specific elements of an iron works that might be investigated archaeologically.

It should also be emphasised here that, alongside *in situ* remains relating to the operation of the works, 'overburden' might also be informative. A methodology should be developed to evaluate the significance of overburden deposits and identify where they relate to the previous operations of the foundry, the northern blast-furnace site, or where they have been imported from elsewhere. Should overburden deposits be considered to contain significant archaeological information, they should be recorded and sampled appropriately. Reference should be made to the general considerations in excavating industrial sites detailed in section 6.2 of Part 1 of this report.

Open area excavation on a large scale will involve significant earth movement, which will need to be co-ordinated with the recovery of appropriate technological samples.

#### *Health and Safety & Analysis of Industrial Waste*

The contamination studies undertaken for the Environmental Impact Assessment revealed a limited level of hazardous material on the site. However, having examined the site under controlled conditions, it is our opinion that the contamination studies were probably not targeted precisely enough to assess the potential risk posed by ironworking residues to archaeologists working on the site. In places, distinctive deposits are spread in relatively fine layers (0.1–0.2 m thick), which could easily have been missed when being sampled from the surface using a mechanical excavator. In addition, a wide range of visually distinctive deposits of ironworking residues were observed during the evaluation. These were examined in the field by Effie Photos-Jones, who recommended an integrated programme of scientific testing of samples to identify any hazardous substances and to assess the potential value of particular deposits for understanding the ironworking processes.

This programme of testing should take place prior to the set-piece excavation to allow for the development of an appropriate health and safety regime and an appropriate sampling strategy for the evidence of ironworking technology.

## *Summary History and Historical Context*

### *The Site*

The Govan Iron Works foundry is one part of a larger operation. Archive plans and OS maps show the overall Govan site as split into two main parts, separated by a branch railway line and an area of open space. The northern part of the site contains the blast-furnace operation, where raw materials would have been converted into pig iron. The southern part of the site is the foundry, where pig iron would have been re-melted and cast into end products. There is also a chance that cast iron would have been converted to wrought iron in the foundry and worked mechanically into end products. This said, the first edition OS also depicts a ‘malleable department’ forge in the northern part of the site, implying that wrought iron production was carried out there.

The first edition OS town plan (1857/8) shows the foundry part of the works as comprising:

- a smithy (for repairs to works machinery?)
- a boiler shop (where boilers would have been fabricated, or more generally where plates and sections would have been fabricated and formed)
- a pattern shop (where models/patterns, ie the shapes that give the moulds and cores their proper form, would have been made; this would have contained wood-working machinery, lathes, drilling machines, etc.)
- an office
- a turning shop (where turning operations would have smoothed the insides of finished products, cut threads, bored holes etc; turning is the machining operation that produces cylindrical parts and removes unwanted metal), with an associated engine house and boilers
- a fitting shop (where products would have been finished or ‘fitted’, ie assembled)
- a moulding shop (where castings would have been made, poured into moulds)
- and, a row of coke kilns and tanks (cupola furnaces for the re-melting of iron operated by feeding in alternate layers of metal, coke, and limestone; coke provides fuel for heat, limestone reacts with impurities in the metal, producing a limestone/impurities slag that floats to the top throughout the process).

By the time of the second edition OS town plan (1892-4), the foundry had ceased to operate and the site is shown as devoid of structures, implying that it had been cleared by this time. This is confirmed by a statement in the late 1950s that the bar iron, foundry, and engineering branches of the works had been closed down about 65 years previously, with only the blast furnaces and coke ovens continuing in operation (Iron and Coal Trades Review 1957, 32). The remaining, northern portion of the Govan Iron Works was cleared in the 1960s, partly to form a new industrial estate, and the works is now preserved in the local name for the estate: Dixon’s Blazes (Worsdall 1981, 131). A brief description of the northern part of the works was recorded by John Hume prior to the redevelopment of the site (Hume 1974, 251, 13). This was the last blast furnace to operate within the city boundary.

### *The Business*

William Dixon was born in Newcastle-upon-Tyne in 1753, and came to Scotland in 1771, aged 18, as a colliery manager (Slaven 1986, 33; Worsdall 1981, 131). With experience in coal working, he took leases on various coal fields, including the Govan colliery, and later purchased this and other coal lands (Maclehose 1886, 103; Slaven 1986, 33; Worsdall 1981, 131). With David Musket, he established the Calder Iron Works, and in 1821 he also purchased the Wilsontown Iron Works, which had been established in 1779 as the first iron works in Lanarkshire (Butt 1967, 110-111; Worsdall 1981, 131). Later in life, William Dixon returned to Glasgow and purchased the Govanhill estate (Worsdall 1981, 131).

On Dixon’s death in 1822, the business was inherited by his two sons, John and William, by which time it had become the largest coal and iron concern in Scotland (Maclehose 1886, 103; Slaven 1975, 120; 1986, 33). John sold his share to his brother, and William Dixon II extended the business and purchased numerous estates, but also poured over a quarter of a million pounds into litigation (Maclehose 1886, 103; Slaven 1986, 33). William Dixon II was lauded in the later nineteenth century as amongst Glasgow’s 100 greatest men, and was ‘ranked as one of the originators and controllers of the coal and iron trades of

Scotland', employing over 1000 people (Maclehose 1886, 103-104). He was active in efforts to reform Parliament, elected a member of the first reformed Town Council after the Burgh Reform Act, and stood for Parliament, although he was unsuccessful in this regard (Maclehose 1886, 105).

Under William Dixon II, the blast-furnace operation at the Govan Iron Works commenced in 1839 (Hume 1974, 251, 13). However, it has also been suggested that the iron works was established by Dixon some years previously, for the manufacture of bar iron and iron castings, and also for the manufacture of steam engines and other engineering products (Iron and Coal Trades Review 1957, 32).

William II died in 1859 and the firm was taken over by his son, William S Dixon (Slaven 1986, 33). By this time, a pattern of outside involvement in the management of the business had been set by the involvement of trustees in the period up to William II's death (Slaven 1986, 33). At this time, the company was operating two iron works and eight collieries, and ranked fourth in Scotland (Slaven 1986, 34). The company took public form in 1873, with the largest part of the capital being held by Dixon, the hereditary owner, and by the main iron works and colliery management, most of whom were related to the family (Slaven 1986, 34). Thus, there was a clear separation of ownership from control of the business. William S Dixon died in 1880, leaving no children (Maclehose 1886, 105).

### *Historical Context*

Between 1759, when the modern Scottish coke-smelting pig-iron industry was established at Carron, and 1801, 10 iron works had been established in the country (Slaven 1975, 9). Seven of these lay in the West of Scotland.

From the 1790s, iron founding emerged as a business in its own right in Scotland, and from the 1820s Glasgow and environs, and Falkirk, rose to pre-eminence in the trade (Butt 1967, 115; Moss & Hume 1977, 12). In 1801, there were three iron founders in the city (Hume 1974, 64). By 1825, Glasgow was the leading centre with 18 foundries and the city largely concentrated on engineering castings, especially components for steam engines, although it also turned out rainwater goods, water mains, castings for the gas industry, stoves, and columns for mills and workshops (Moss & Hume 1977, 12). The dominance of engineering is seen in the fact that at least 13 of the 18 foundries of 1825 were also engineers, making equipment which contained a high proportion of castings, such as sugar mills, stationary and marine steam engines, water wheels, drive shafts for mills, and textile machinery (Moss & Hume 1977, 12). Beyond this general knowledge of Glasgow's products, it is hard to document the growth of specialisation in the industry in the West of Scotland, due to a lack of relevant archive material (Moss & Hume 1977, 19).

By 1840, there were 52 foundries in Glasgow, ranging from the small to the large (Moss & Hume 1977, 14), and from the 1830s Scottish ironmasters also became leading makers of pig iron (Moss & Hume 1977, 13).

Foundries and engineering works are essentially the same thing (Hume 1974, 64), and the Govan Iron Works foundry thus groups with the other engineering and foundry sites on the M74 route. Most firms turned out some of their products 'fitted', and fitting shops varied in size and complexity according to the product (Hume 1974, 67). As regards melting equipment, practice in Glasgow was probably the same as elsewhere in the use of cupola furnaces (Hume 1974, 67). Three methods of melting had developed by 1800: the blast furnace, air furnace, and cupola (Moss & Hume 1977, 13-14). The blast furnace was little used in iron founding, except perhaps to supply very large quantities of iron for heavy, rough castings. Air furnaces were widely used until the invention of the cupola about 1794, and were occasionally retained thereafter for melting large quantities of iron. The cupola was advantageous for its versatility, being capable of providing a steady flow of iron or a sizeable volume of metal at any one time. It was easy to design and build, cheap and simple to operate.

By the end of the eighteenth century, three materials were known for moulding (Moss & Hume 1977, 14-16). Loam was a mixture of sand, clay and fibrous material for moulding articles with circular sections like cannon, pots, sugar-boiling pans, cylinders, bells, and pipes. The normal procedure here was to make a rough, brick foundation, apply a coating of moist loam, and use a revolving template to sweep out the internal shape of the mould or the external shape of the core. Finished parts of the mould were then dried in a stove before final assembly. Loam moulding obviated the need for expensive wooden patterns. The second type was dry-sand moulding, where a sand-clay mixture was moulded when moist and dried in a stove. This could be used to make moulds without patterns, as it is plastic enough to be worked with a trowel or other tools. It is particularly suitable for large castings. Since the early nineteenth century, the

majority of castings have been made in greensand moulds (unbaked/unfired moulds comprising a mixture of sand with coal dust and a little water).

The foundry side of the Dixon enterprises has seen little research (there is a lack of archive material on this aspect of the business; see below). However, the role of the firm in the development of the hot-blast furnace process has seen much discussion, and this has implications for its role in the foundry sector. The hot-blast process was a Glasgow invention, put forward by J B Nielson in 1828 (Butt 1967, 20). The application of this process to smelting, and the common use of blackband ironstone resources that was thus made possible, greatly reduced production costs in the Scottish iron industry at a time when foreign and English demand for pig iron was increasing. Thus, in the 1830s and following from Nielson's work, 'outstanding entrepreneurs' including the later generations of the Dixon dynasty created a second generation of Scottish coke furnaces (Butt 1967, 112). Following this, by 1845 Scotland supplied 25% of Britain's pig iron output and Scottish cast-iron began to acquire a world reputation for quality ensuring 'a golden age for Scottish foundries and engineering shops' (Butt 1967, 113). The proportion of number one pig iron, especially suited to fine castings, increased significantly with the introduction and perfection of the hot blast (Hume 1974, 64).

William Dixon II had a major and pioneering role in this process, and one of his most famous bouts of litigation concerned a dispute over Nielson's patent of the hot blast, when Dixon combined with others to break that patent (Corrins 1970; Slaven 1975, 120). Under Dixon, considerable advances were made on earlier models of the apparatus and success was achieved in smelting iron using raw coal instead of coke, a significant boon for the Scottish industry (Corrins 1970, 240). It has often been overlooked that it was the development role of Dixon and others, who solved many of the practical problems, that allowed the hot blast to become an internationally important technology (Corrins 1970, 260; cf also Slaven 1975, 115-117).

One consequence of the rapid expansion of large-scale production with the hot blast was that the total product could not be absorbed by the Scottish economy and Scottish pig-iron featured prominently in export sales (Slaven 1975, 121). As a result of high exports, the development of the malleable iron or forge branch of the Scottish industry was particularly slow, and this was also partly attributable to the chemical constitution of Scottish pig, which was reputed to make it more suitable for recasting in the foundry than working into malleable iron for use in the forge (Slaven 1975, 121). There is little to indicate that the puddling of pig to produce malleable iron was much practised in Scotland up to 1836, and up to the 1840s puddling (where cast iron with its high carbon content was converted to wrought iron by decarburising) was only regularly practised at Calderbank, Govan, and Dundyvan (Slaven 1975, 121). This increased from the 1840s and the slow start of this branch of the industry was eventually overcome by 1870, with puddling concentrated in the West of Scotland (Slaven 1975, 122). The lag in malleable iron production had virtually disappeared by this time, but amongst the major pig iron producers, only the firms of Wilson, Dixon, and Baird were engaged in malleable production (Slaven 1975, 122). The expansion of the pig iron industry faltered in the early 1870s and the industry experienced difficulties for the next 30 years until around 1902 (Slaven 1975, 169). By the early twentieth century, the Scottish industry had come to focus on supplying home markets (Slaven 1975, 172). This general trend, together with the death of William S Dixon in 1880 without heirs and the previous change to professional management practice at Govan, presumably form the context for the cessation of operations at the Govan Iron Works foundry by the 1890s.

#### *Non-archaeological Sources*

##### *Documentary Sources*

Various business and personal papers are held by a variety of archives:

GUAS ref UGD/191 (Moncrieff, Warren, Paterson & Co legal papers 1732-1950).

GUL SpColl ref (1788-1859 Corresp of Wm Dixon; 12 letters).

NLCA ref U47 (Wm Dixon papers inc 1810-1836 financial records; mostly Calder Iron Works).

NAS ref SC96/4379-85 (1800-08 diary, waste and cash books of Wm Dixon); SC 6/44/42 (Inventory of W S Dixon); SC 6/46/14 (will of W S Dixon).

Corus Colors Regional Records Centre [Wales]: (1946-52 minutes and staff records & 1873-1960 corporate records).

Related records include those of the Govan Colliery and Pollok & Govan Railway:

GUAS ref UGD1 (Govan Colliery papers: 1849-1958 financial records, output, sales, and wages books, lists of shareholders, technical and legal papers etc).

NLS ref 8100 (Govan Colliery papers: 1813-19 cash books).

GUAS ref UGD 8/16 (Pollok & Govan Railway papers: 1830-1845 Act allowing the construction of the Clydesdale Junction Railway from the Pollok & Govan Railway at Rutherglen to Hamilton 1845; Act for making a railway from the Pollok & Govan Railway to the harbour at Broomielaw with amending act 1830-1831; Act for maintaining the Pollok & Govan Railway 1837).

GUAS ref UGD1 includes various technical analyses, some of which may relate to Calder Iron Works and some to the Govan Iron Works (analysis of supplies, blast furnace reports, analysis of pig iron, analysis of iron ore samples, analysis of fuels, analysis of samples of limestone, analysis of blast furnace slags, and others).

It includes various books: pig iron produce and production books, cash books, output, sales and stock books (Govan Iron Works), purchase books and goods received books, Govan Colliery day, cash, and pay books and journals, wages books (miners), misc. financial and mineral volumes, letter books, property records, accident books, abstracts of colliery pay sheets, weekly workmen's pay books, colliers price and oncost books (Pit No.5), colliers price and oncost books (Pit No.6), records of work and wages (waggoners), Govan Colliery oncost books and Pollock Colliery pay books, funeral fund roll books, register of preference members, journals, ledgers, wages books, time books, other misc records and loose papers, papers of industrial federations and associations, and plans (see below).

Most of the Govan Iron Works records in this collection seem to relate to the blast furnace part of the operation (which lay in the northern half of the site, and is distinct from the foundry site which is the present concern). Most of the technical reports and other documents on the blast furnaces fall in the period 1900-1958, with only occasional mid-to-late nineteenth century records (most of which are financial and sales records, rather than analyses of the iron itself).

UGD1 also contains various property records and staff management records. These sources have not been assessed in detail for this report. Many relate to the twentieth century, although there are occasional nineteenth century records which may allow some historical analysis of the workforce.

There are also various other miscellaneous technical papers, most of which are twentieth century in date.

GUAS ref UGD 191 includes numerous property records: chartularies, feuing plans, searches for incumbrances, sasines etc from the 1850s to 1970s (largely Govanhill); misc. titles and dispositions (1800-1939; none of which refers specifically to the Govan Iron Works in the catalogue entries); property sale papers, dispositions and titles, related correspondence, tacks.

Of some potential interest here are:

UGD191/3/9 (1891-1955) Bundle: dispositions and titles including concerning Govan Iron Works.

UGD191/3/14 (1947-1952) Files of corresp: sale of Govan Iron Works to Dixon Iron Works Ltd: directors' balance sheet and report for William Dixon, 1952.

UGD191/3/22 (1951) File of corresp: papers on transfer of company from William Dixon Ltd to Dixon Iron Works Ltd.

### *Plans*

Numerous plans of the Govan Iron Works are held in the Glasgow University archive:

GUAS ref UGD1/58/ . . . plans, including:

/1 Govan IW ground plans 1899, 1916

/2 Govan IW insurance plan 1956

/3 Govan IW Nos 2 and 3 furnaces proposed alterations, nd

UGD1/58/1 is an 1899 "Sketch plan of Govan Iron Works", with good detail of the northern part of the works (housing the blast furnaces), but showing nothing of the foundry site.

UGD1/58/1(6) is a 1916 “Plan shewing proposed boundary fence at Govan Iron Works”. This shows sketch detail of the works, but only relates to the northern part of the works (ie not the foundry site, which lies to the south).

UGD1/58/2 is a “Plan of Govan Iron Works”, again showing good detail, but also only showing the northern part of the site.

UGD1/58/3 shows “Proposed alterations to well and bosh of No.3 furnace”; a detailed section and plan with alterations annotated. No date. This relates to the northern, blast furnace part of the site.

UGD1/58/3(b) is a section of No.2 furnace. No date. A detailed drawing with dimensions. Again relates to the northern, blast furnace part of the site.

UGD1/58/7 is a 1934 drawing showing the “Layout of coking plant”. This is a very detailed plan of the coking plant and associated gas conversion plant (converting to oil, sulphates, acids, benzole, ‘motor spirit’ and others). Again relates to northern part of the site.

No plans or other drawings, beyond the OS maps detailed in the 2002 report, have been identified for the foundry site.

#### *Photographs & Illustrations*

Several illustrations are available on SCRAN (Scran ID: 000-000-114-434-C/000-000-124-068-C/000-000-095-843-C). These appear to relate to the northern part of the iron works, the blast furnace part of the operation and not the foundry.

NMRS: B 55467 PO (General view of Iron Works: October 1962); MS 100/15 (Copy of Luftwaffe AP 23/03/1941).

#### *Secondary Sources*

Butt, J 1967 *The industrial archaeology of Scotland*. Newton Abbott: David & Charles.

Corrins, R D 1970 ‘The great hot-blast affair’, *Industrial Archaeology* 7.3, 233-263.

Hume, J R 1974 *The industrial archaeology of Glasgow*. Glasgow: Blackie.

Iron and Coal Trades Review 1957 *A technical survey of the Colville Group of companies. The fifth of the industrial newspapers series of technical surveys*. London.

MacLehose, J (ed.) 1886 *Memoirs and portraits of one hundred Glasgow men who have died during the last thirty years, and in their lives did much to make the city what it now is*, volume 1. Glasgow: James MacLehose.

Simpson, W 1871 *Views and notices of Glasgow in former times*, scrapbooks. n.p.

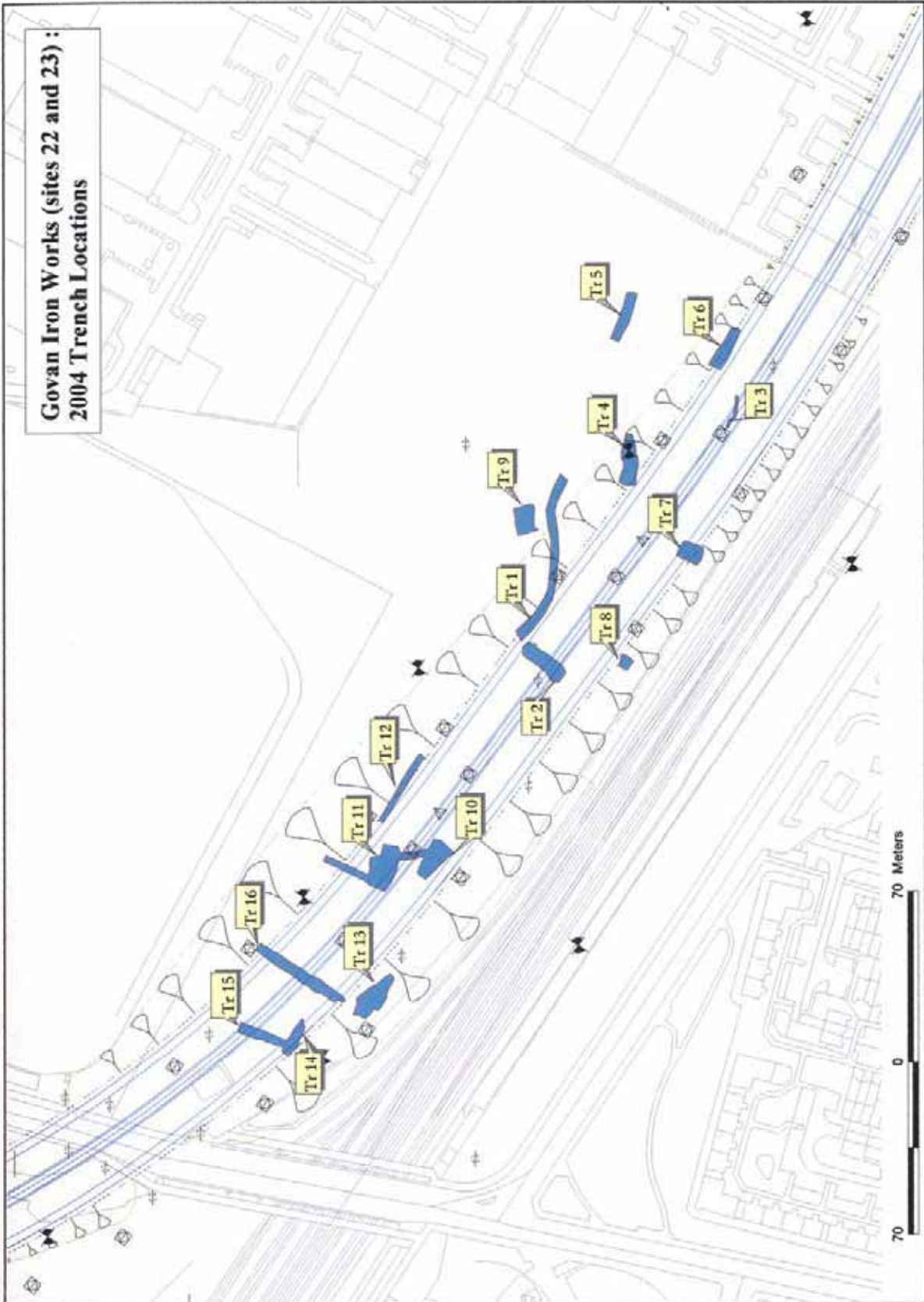
Slaven, A 1967 *Coalmining in the West of Scotland in the nineteenth century: The Dixon Enterprises*. B Litt thesis, University of Glasgow.

Slaven, A 1975 *The development of the West of Scotland: 1750-1960*. London: Routledge & Kegan Paul.

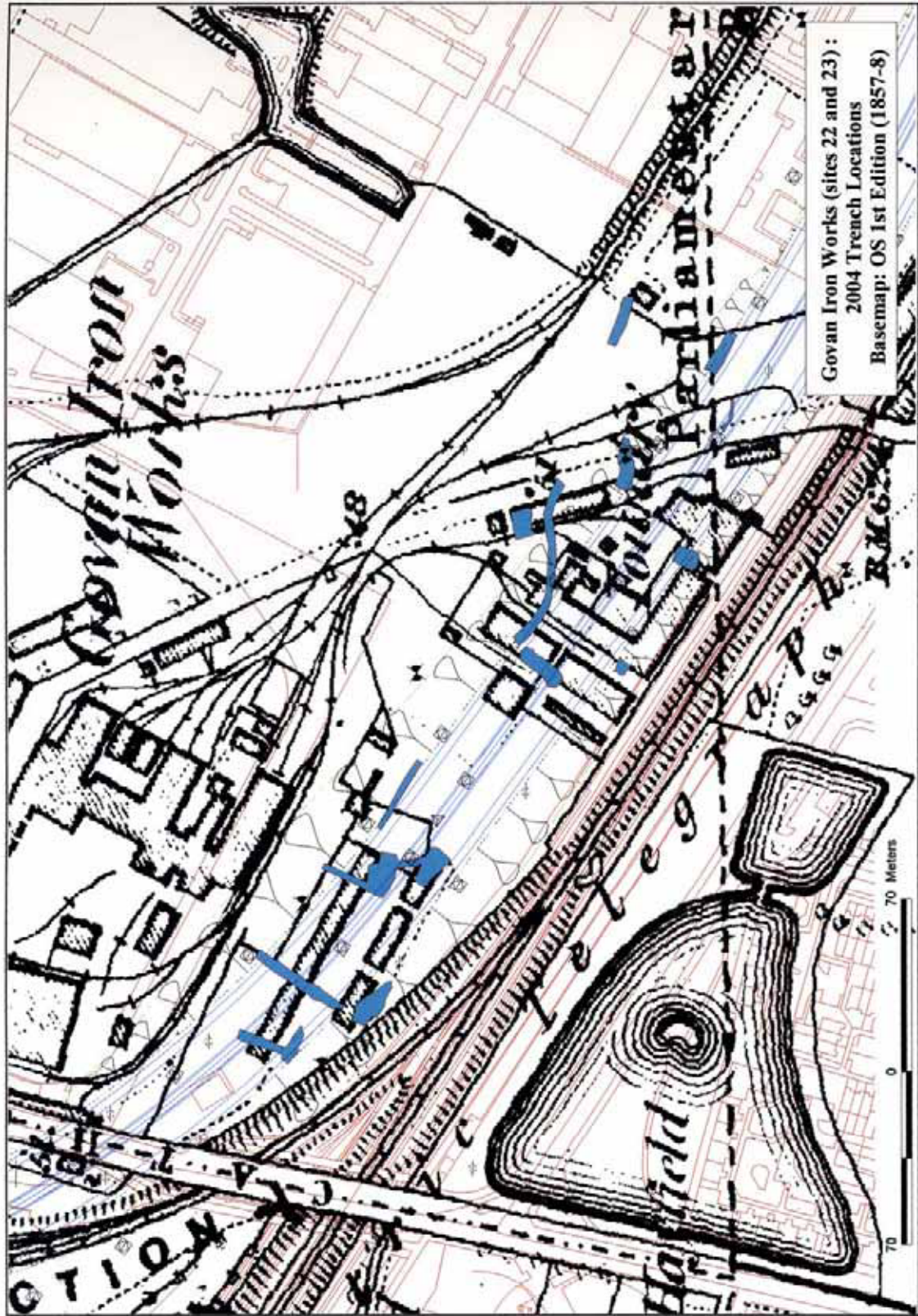
Slaven, A 1986 ‘William Smith Dixon’, in Slaven, A & Checkland, S (eds) *Dictionary of Scottish business biography, 1860-1960: volume 1, the staple industries*. Aberdeen: Aberdeen University Press.

Will, R S & Kennedy, P 2004 *Govan Iron Works: Phase II Evaluation*. GUARD report.

Worsdall, F 1981 *The city that disappeared: Glasgow’s demolished architecture*. Glasgow: Molendinar Press.











GIW Tr1 Machine dug trench (TR1) through build up of iron working debris over the natural subsoil.



GIW Tr2 Machine dug trench (TR2) in the area of the fitting shop showing the base of a forge with a white brick air intake in the foreground.



GIW Tr4 Machine dug trench (TR4) revealing large white brick air intake approximately 1 m in diameter.

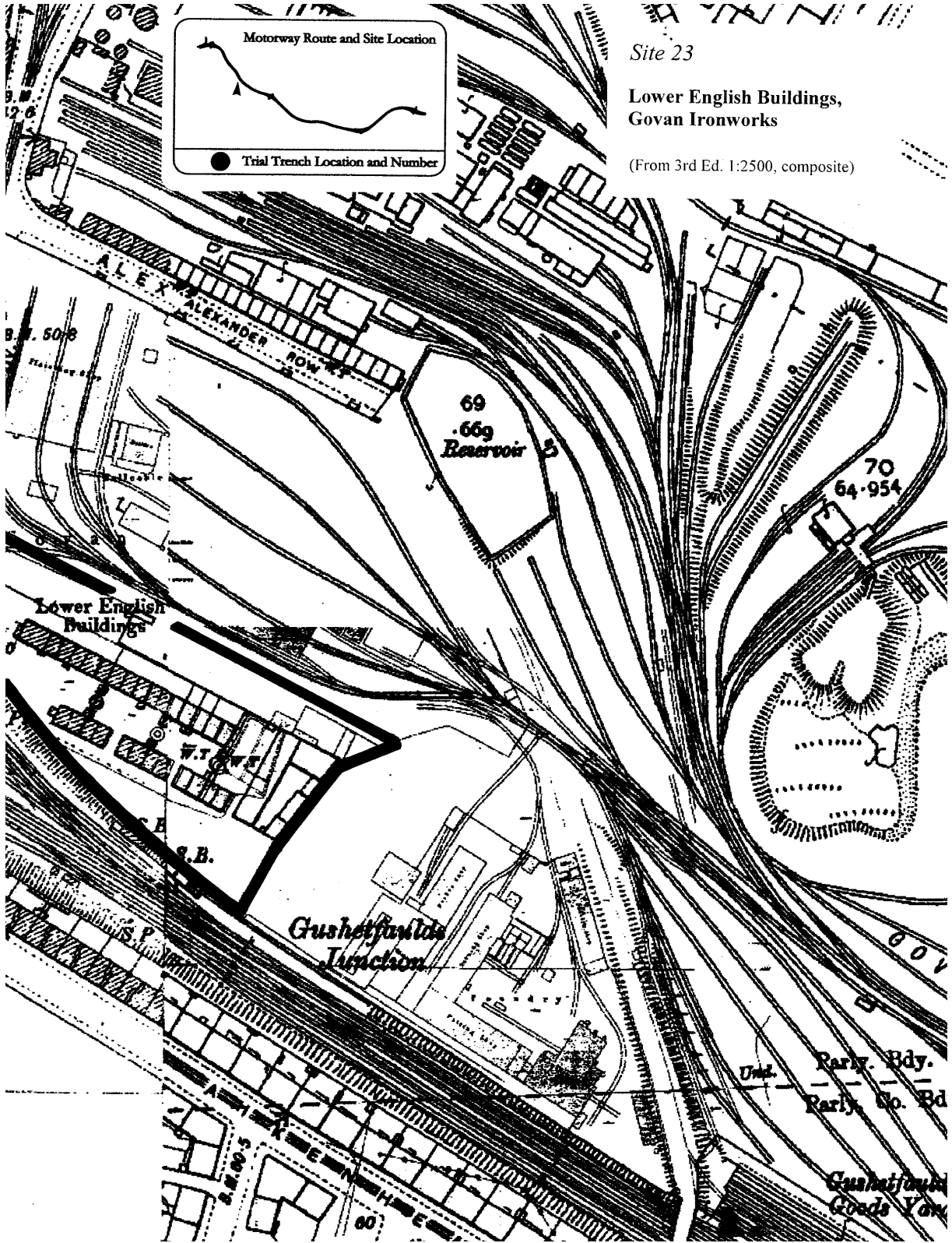


GIW Tr7 Machine dug trench (TR7) revealing cobbled surface (in left section), above brick floor and brick-built drain.





GIW Tr9 Machine dug trench (TR9) showing paved interior of workshop (right) and tarmac surface exterior.



Site 23

Lower English Buildings,  
Govan Ironworks

(From 3rd Ed. 1:2500, composite)

Site ID: 23

Site Name: Lower English Buildings, Govan Ironworks

*Condition of the Archaeological Resource*

No upstanding remains. Currently waste ground covered by grass, scrub, and trees. Several of the evaluation trenches detailed in the 2003 report encountered between 1 and 1.5 m of rubble deposits down on to the natural. In one trench, the *in situ* remains of substantial stone footings for brick buildings were found. Test pits encountered further sandstone blocks and brickwork, as well as a drain.

*Archaeological Trial Trenching 2004*

In order to improve our understanding of the nature and extent of the surviving archaeological resources a series of trial trenches were excavated in August 2004. In the area of the Lower English Buildings seven trenches were mechanically excavated using a large tracked excavator and cleaned by hand. The trenches were positioned to examine various features within the settlement complex, on the basis of historic Ordnance Survey mapping information. A more detailed account of these excavations is the subject of a free-standing Data Structure Report (Will and Kennedy 2004). Here, the results are summarised:

- Tr 10 East end of southern row exposed under 1.0–1.5 m of overburden. The floor and lower courses of the brick walls survive. Clear evidence of internal modification was observed. Extension of the trench to locate a series of round structures recorded on OS maps was unsuccessful.
- Tr 11 In the central area of trench, the northern row was exposed, including evidence for the addition of modern sanitation. Northern perimeter boundary wall exposed in northern extension.
- Tr 12 Located in order to recover evidence for the eastern boundary of the settlement, but no *in situ* remains were encountered.
- Tr 13 Located at the western end of the southern row. Here, the interior had a tile floor and had been modified. One partition wall between the units appears to have collapsed, and the collapsed wall remains *in situ*, sealing interior deposits.
- Tr 14 Few archaeological traces here. Ground heavily disturbed, though elements of concrete and brick surface do survive.
- Tr 15 Although the ground here had been disturbed, some *in situ* building remains were encountered. These are probably part of the northern row (including various surfaces such as a brick floor, and wall foundations).
- Tr 16 Here the walls of the northern row were exposed. Evidence for a paved road surface was uncovered, and this road possibly ran in between the two rows.

In summary, it appears that significant remains of the majority of the dwellings which made up the Lower English Buildings survive. Preservation is variable, but most of the floor area appears to be intact. Walls have been demolished to within 0.5 m of the floor level. There is evidence for considerable modification to the interiors during the period of their use. Some features outside the dwellings were encountered, but no midden deposits were located. Interestingly, relatively little ironworking waste was encountered, although some was present in the overburden which capped the demolished buildings.

*Impact*

The motorway route runs through the entire extent of the two rows of dwellings and construction will certainly remove all traces of the buildings and associated external yards and features. The size of the area of archaeological interest is approximately 6300 m<sup>2</sup>.

*Significance*

Because of the historical significance of the Dixon enterprises, its ongoing and potential future interest to historians and the local and regional population, and the numerous ways in which the site may add to historical knowledge, this site should be considered to be of national importance.

The Lower English Buildings have the potential to add significantly to historical understanding. The significance of the site has several related aspects:

- Historical association: the association with the Dixon dynasty is significant. The Dixon enterprises were at the forefront of the Scottish iron industry at its peak, in the period from the second quarter of the nineteenth century. The Dixons were recognised by contemporaries as amongst Glasgow's most notable industrialists. Their business was also key to the development of the West of Scotland and to Scotland as a whole, with the Scottish iron industry focusing in the West. The firm was also an international exporter. The Dixons continue as a major focus of interest for industrial, economic, and business historians. This site will allow investigation of a purpose-built company workers' housing complex, and so allow a greater understanding of labour relations in the firm.
- Contemporary consciousness: apart from the substantial historical interest in the Dixon enterprises, the Govan Iron Works continued in operation until the late 1950s and the history of the site may, therefore, be of great interest to any surviving members of the workforce and their families, as well as to those living locally and the inhabitants of Glasgow and region as a whole.
- Group value: this site groups with the other Dixon enterprise sites (22, 25, 42) and with the other domestic sites on the M74 route to allow a comparative investigation of domestic life across a relatively representative profile of the population. Specifically, comparison of this site with others on the route will facilitate greater understanding of the differences and similarities between daily life in a company 'village' and in surrounding, rented, tenement accommodation.
- Multi-period/single period: the site was built by the Dixon firm and probably remained as company workers' housing throughout its life (though this does not preclude the possibility that it may have several phases of use and alteration).
- Documentation: no documentary sources specific to the site have been identified. A few plans have been sourced, but these only give outline detail of the site at certain, specific points in time. The archaeological resource is thus key to an understanding of the use of the site. However, further research on the Dixon archive and previous historical research on the firm will allow any archaeological work to benefit from a good general understanding of the business as a whole. At the same time, archaeological work will usefully feed into our understanding of the history of the business, which is only partially understood at present.
- Social history: The Govan Iron Works is unusual for the foundry/engineering sites on the M74 route in that it is associated with this company workers' housing (similar housing also lay within the northern part of the Govan Iron Works). The presence of this housing implies that the firm was keen to attract and retain skilled workers by providing exceptional living conditions. This issue, in comparison with other workers' residences (eg tenements) on the route, can be investigated archaeologically.

#### *Mitigation Recommendations*

Large excavation. As the route of the motorway passes across the centre of the site and takes in much of its extent, there is a need and opportunity to investigate most aspects of the site (the buildings, the back lots, any backland structures, middens, gardens, etc.). Reference should be made to the general considerations in excavating domestic sites detailed in section 6.2 of Part 1 of this report. The most effective way to address the research strategy objectives at this site will be through an open-area excavation following mechanical removal of any overburden.

Although no deposits thought likely to shed light on the technology of iron making were encountered in these trenches, the programme of detailed sampling for contamination (discussed under site 22) should be extended to this area to meet health and safety requirements.

#### *Summary History and Historical Context*

cf Foundry, Govan Iron Works (site 22) for general historical context re: the Dixon family and business. The Lower English Buildings were presumably built around the same time as the adjacent and associated foundry of the Govan Iron Works (1830s). They are shown in relatively good detail on the first edition OS town plan of 1857/8. This shows three main groups of buildings. There are two main rows of buildings, aligned roughly east-west, that run parallel. The northern row comprises at least 10 end-to-end units, probably cottages but also perhaps including outbuildings. The southern row comprises three detached units of two cottages each. The space between the two rows is occupied by a number of pumps and by several circular structures (wells? privies? refuse disposal?). The eastern end of this complex of buildings is defined by a wall, and a probable garden lies to the east of this. On the northern side of the

garden is a small group of buildings, slightly detached from the workers' rows and perhaps representing a manager's house or similar.

On the second edition OS town plan (1892-4), the putative manager's house has gone, but the two main rows remain. The individual units within the rows appear to have been subdivided and additional structures have been built in the backlot space (perhaps WCs). The name 'Lower English Buildings' appears for the first time on this map.

A building control plan of 1896, relating to the erection of a temporary workshop to the west of the workers' rows, shows the buildings as described above. The rows are annotated as 'one-storey workmen's cottages'.

The buildings also appear on the third and fourth edition OS maps, demonstrating that they continued to stand until at least the mid-twentieth century. It is probable that their time of demolition coincides with the closure of the iron works to the north in the 1960s.

### *Non-archaeological Sources*

#### *Documentary Sources*

cf site 22 (Foundry, Govan Iron Works) for fuller description of archive sources relating to the Dixon enterprises. Papers of possible specific interest here:

#### GUAS ref:

UGD1/26/. . . various property records  
 UGD1/27 1928-1946 Govan IW accident book, safety committee minutes  
 UGD1/29/. . . weekly workmen's pay books 1871-1903  
 UDS1/34/. . . 1905-1920 accident report books  
 UGD1/35/. . . funeral fund roll books 1841, 1845, 1859, 1866  
 UGD1/36/. . . register of preference members 1906-1930s  
 UGD1/50/. . . journals 1931-1952  
 UGD1/51/. . . ledgers 1932-1952  
 UGD1/52/. . . wages books 1944-1952  
 UGD1/53/. . . time books 1948-1950

#### GUAS ref:

UGD191/3/9 1891-1955 Bundle: dispositions and titles including concerning Govan IW  
 UGD191/3/14 1947-1952 Files of corresp: sale of Govan IW to Dixon Iron Works Ltd: directors' balance sheet and report for William Dixon, 1952  
 UGD191/3/22 1951 File of corresp: papers on transfer of company from William Dixon Ltd to Dixon Iron Works Ltd

#### *Plans*

Building Control Plans (3 sheets) for a proposed workshop to the west of the site, dated 1896, contain an annotated location plan showing the site as 'a row of one-storey workmen's cottages'. Mitchell Library Archives building control plan ref 1/4336.

UGD191/20/7 1890 "Govan Colliery Lands: Plan Shewing how the various properties have been acquired by Mr Dixon or his representatives": shows this site, but only as an unannotated shaded rectangle (ie very little detail).

#### *Photographs & Illustrations*

NMRS: B 55467 PO (General view of Iron Works: 10/1962)/MS 100/15 (Copy of Luftwaffe AP 23/03/1941)

#### *Secondary Sources*

Simpson, W 1871 *Views and notices of Glasgow in former times*, scrapbooks. n.p.

Will, R S & Kennedy, P 2004 *Govan Iron Works: Phase II Evaluation*. GUARD report.

Worsdall, F 1981 *The City that Disappeared: Glasgow's Demolished Architecture*. Glasgow: Molendinar Press.



Trench 11 showing stone built wall of southern row with brick-built additions.



Trench 13 showing stone walls of southern row and tile floor paving.



Trench 15 showing stone built foundations and cement surfaces.





Trench 16 Various structures within northern row including stone foundations, brick floors, cement surfaces.



Trench 16 Various structures associated with northern row. Stone foundations (left) and brick road.



