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The changing face of industry in west Edinburgh

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1. ABSTRACT

Excavations on a site at 19 West Tollcross, Edinburgh, produced evidence of activity in the area from the medieval period to the 20th century. The medieval remains are likely to relate to activity on the periphery of a settlement in the hinterland of Edinburgh, thus confirming the archaeological potential of settlements now subsumed under the modern city. Excavation through the deep stratigraphy, when supplemented with documentary evidence, offered a glimpse into evolution of the area from an 'agricultural landscape' to an 'industrial' area, constantly being transformed in line with contemporary technological innovations. More recent remains associated with Lochrin Distillery, slaughterhouses, Edinburgh Ice and Cold Storage Company's unit, an ice rink and a garage were uncovered.

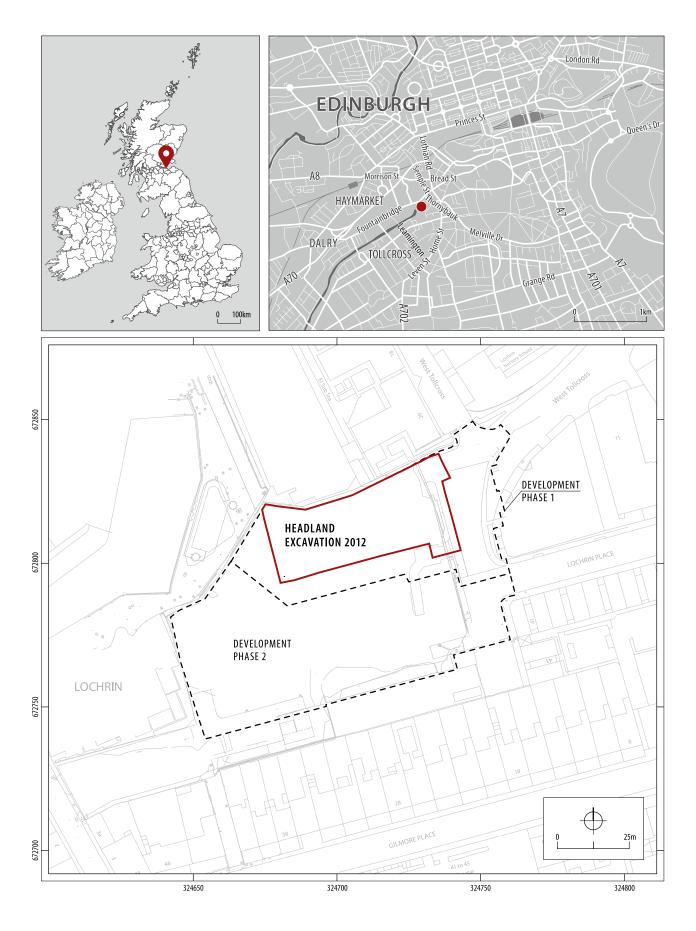
The archaeological potential of land at 19 West Tollcross, Edinburgh (NGR NT 2466 7276), was recognised due to its proximity to the former Lochrin Basin, which connected to the Union Canal, situated north-west of the excavation. The site fronted the western side of West Tollcross opposite its junction with Lochrin Place (Illus 1). The entire area examined covered c 7,844m². However, only the northern part was developed during this phase (Phase 1).

The complex planning history of the site has resulted in the production of at least 12 different archaeological reports, including two desk-based assessments (Barber et al 2002; Bradley-Lovekin 2011). Several phases of fieldwork both on site (detailed in Wilson 2005; Hunter-Blair 2009) and within the wider area, have ensured that its heritage has been thoroughly investigated. Extensive excavation within the development area was carried out by Headland Archaeology in 2012, on behalf of Watkin Jones Group, as a condition of the planning consent for the development of the site. Excavation revealed evidence of activity dating from the medieval period to the present day. Remains of buildings that formed part of Lochrin Distillery and features containing medieval pottery were uncovered together with remains of the slaughterhouse, Edinburgh Ice and Cold Storage Company, an ice rink and a garage. As the site had

been continuously developed over the years, many of the earlier structures had been heavily truncated by later activity. Therefore, only fragmentary remains of the various structures survived.

The historical background provides a more general reconsideration of the site as a whole, rather than focusing on the archaeological results, and provides a reference for future work. The early history of Lochrin Distillery is discussed by Heawood (2009), where he suggests that the distillery closed in 1848. In fact, further research has shown that distilling continued into the 1860s (see 3. 'Historical background' below) (*Caledonian Mercury*, 28 June 1849: 1; *Scotsman*, 14 July 1849: 3; Moss and Hume 2000: 315).

The land use of Lochrin Distillery and Canal Basin changed with technological innovation. Tenants included James 'Paraffin' Young, progenitor of the world's first 'oil rush', early wallpaper-printers, a cold store-turned ice rink and makers of Australian ranch fencing. In 1897–8, a development consortium infilled the disused dock with the old granaries. The shops and flats of Lochrin Buildings, Lochrin Place and Terrace were then built from south to north. The primary emphasis of the archive and documentary investigation was on the industrial development of the Lochrin site as a whole, including other areas previously dug, in order to combine multiple individual snapshots into a more comprehensive and overall picture.



Illus 1 Site location © Headland Archaeology

The earliest historical references for activity in the area that became Tollcross can be traced to the mid-12th century in the reign of David I, when the area was probably occupied by orchards or used for cultivation (Bradley-Lovekin 2011). The site lies within the area historically known as 'Wright's Houses'. The area was a triangular parcel of land bounded to the north by the former Lochrin Burn (which also formed the southern boundary for the historic lands of Dalry), and to the east by Leven and Home Street (A702), the western boundary of an area known as Drumdryan. The west was bounded by Leamington Terrace, Leamington Road and Gilmore Park. An extract of Kirkwood's 1817 plan has been reproduced and annotated in Easton (Easton 1988: 6) (not illustrated) to show historical land boundaries that include Wright's Houses, Dalry, Drumdryan and Tollcross.

The earliest discovered documentation of the name Tollcross does not appear until 1439. Tollcross and the lands which surround it were at this time part of the Barony of Inverleith, held in sergeanty by successive important people in the king's personal duty (Easton 1988: 2).

Between the 12th and 15th centuries the area around the castle to the west and south, which today corresponds to the bounds of West Port, King's Stables Road, the west end of Princes Street, Haymarket and Morrison Street (to the north of Lochrin Basin) were orchard lands (market gardens) belonging to the Crown and kept by serfs. The extent of these orchards varied over the centuries and may even have gone further south and east to the lands of Tollcross and High Riggs, whose borders were the Burgh Muir on the south and Potterrow on the east (Easton 1988: 3). There was extensive cultivation of grain crops on the lands of Dalry (historically to the north of the site, with the southern border partially following the line of the Lochrin Burn), bordering Orchardfield (now Bread Street) and Tollcross. Easton records that the name Dalry, meaning king's farm or fields, 'has its roots in Celtic times' (ibid). A small hamlet called Castlebarns grew during this time and housed labourers and farmworkers from the Dalry estate. It was located closer to Tollcross on the eastern corner of (and opposite) Semple Street and Morrison Street (ibid). By 1500, for various reasons,

the gardens had fallen into disrepair. Consequently, the lands were leased to private market gardeners, possibly former serfs, who were impelled by their superiors to maintain good standards of cultivation, or risk fines or imprisonment (Easton 1988: 5). The rural nature of the area persisted until the 18th century, when the lands were subdivided and held by the growing merchant classes who were leaving the Old Town in favour of country houses and the New Town (Easton 1988: 1). By the 18th century there were significant numbers of mansions, great and small, in the Tollcross area. One of the oldest mansions in the area was the ancient baronial home of William Napier (historically located to the south of the site, south of Gilmore Place) (Illus 1), whose lands adjoined those of Wrychis Housis (Wright's Houses). It was probably built around 1339.

Kincaid's 1784 map (not illustrated), although somewhat schematic, depicts the site as open ground bordered to the north by the 'Common Sewer' (the Dalry Burn). The presence of 'open ground' is confirmed in the *Sasine Register* where Lochrin is described as 'the north-east park ... bounded by the Thornybaulk' (or 'bank') (RoS, SS 37866: 259), a name ('thorny bank') which also references the former agricultural landscape. The site was developed from *c* 1785 by the Haigs, distillers from Clackmannanshire (RoS, SS 17506: 96; Moss and Hume 2000). The Haigs also operated Sunbury and Canonmills, the latter being sold to their relatives, the Steins, of Kilbagie and Kirkliston distilleries (Townsend 2004; Cross 2008).

During the 18th and 19th centuries this area was heavily dominated by breweries and distilleries. Brewers were attracted to the Fountainbridge/Tollcross area by the plentiful water supply as a result of the large quantities of pure water trapped within a geological fault underlying the district (Bradley-Lovekin 2011: 12). The first brewery in the area was established by Robert Gray in 1731 (Brown 1988: 49).

3.1 Lochrin Distillery

Lochrin Distillery was founded by John Haig *c* 1780. It first appears on Ainslie's 1804 map (not illustrated) and was located east of the excavation area. The Lochrin Burn, which runs east—west and lies to the north of the site, would have been an

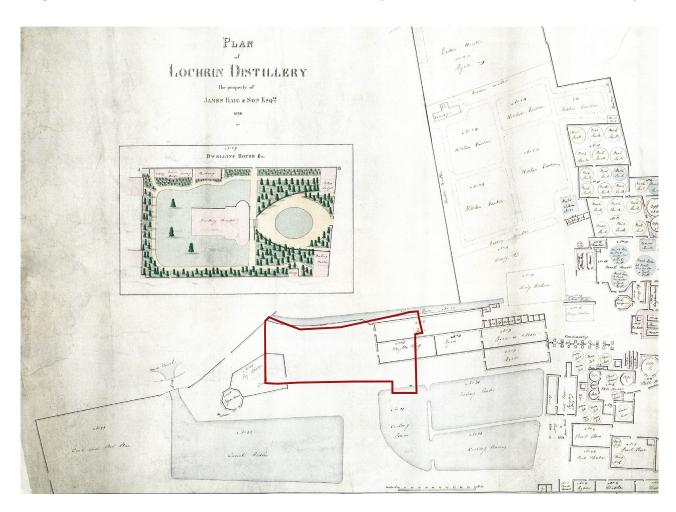
important factor influencing the location of the distillery. James Haig initially used Lochrin Burn 'for cooling his worms', or copper condensing tubes, and a steam engine is shown on its bank in Ainslie's 1804 map (Smith 2000: 22). The burn was of utmost importance in the distillation process and Haig took legal action from 1806 to 1812 to prevent the Council draining the South Loch, where the stream originated (Curr 1988: 145–6; Smith 2000: 22). Probably due to the lawsuit, Haig created three cooling-ponds to ensure his own independent water supply.

Kirkwood's 1817 map (not illustrated) depicts the three cooling-ponds together with a pond-side steam-engine. The latter probably filled the ponds, whose large surface area dispelled excess heat, allowing the water's reuse in cooling condensors and 'worts' (malt liquor) (Ainslie 1804; Kirkwood 1817; RHP1382). These reservoirs were destroyed by the slaughterhouse extension of 1876 (discussed below),

but any residual waterproof clay lining possibly contributed to the 'rubble bricks and clay' found filling the basin in 2005 (Sulman 1868; Wilson 2005: 4; Bradley-Lovekin 2011: 15; Roy 2014: 16). The distillery expanded during this period and various new buildings were constructed.

The Edinburgh and Glasgow Union Canal was constructed between 1818 and 1822. The cooling pond was adapted into a private canal basin (Wood 1823; RHP1382; Paterson 2006: 3–7). Wood's map of 1823 (not illustrated) records the basin as a large rectangular body of water connected to the canal via a channel cut from its north-west corner. This was probably done as an integral part of the excavation of the rest of the canal, to enable immediate delivery of bulk materials such as coal and grain to the distillery.

The 1830s and 1840s were difficult for the Haigs. During a fire in 1834, 'the iron columns supporting the [mill] roof ... literally melted' (*Preston Chronicle*, 6 September 1834: 1; *Caledonian Mercury*, 1



Illus 2 Plan of Lochrin Distillery 1838. The red line indicates the site boundary (reproduced by kind permission of Brodies LLP. National Archives of Scotland (RHP1383))

September 1834: 3). In 1837, the over-loading of the five-storey granary's floors caused structural failure, killing four men (Standard, 17 April 1837: 2; Scotsman, 15 April 1837: 3). The Haigs tried, unsuccessfully, to sell their Sunbury, Lochrin and Canonmills premises in 1838.1 Detailed plans of Lochrin Distillery (Illus 2), were drawn up for this sale, showing distillery buildings, including granaries, malting and kilns, located to the east of the site, outwith the development area.² The distillery's northern boundary was the Lochrin Burn, which was partially culverted at the eastern end, and extensive kitchen gardens lay still further north. The distillery complex included byres, a 'Wright's shop' (to the north of the cooling ponds), pig houses and a large octagonal structure, labelled 'pigeon house' with an attached 'pig shade [old Scots for shed] and court'. Although the 'pigeon house' appears to occupy the site of the 1817 and 1822 steam-engine, its industrial scale suggests it is unlikely to be the reused engine-house. Given the large dimensions of the two-storey polygonal structure and the stock enclosures attached, it is likely that its primary purpose was as a piggery or cattle byre (on the ground floor), with an ancillary dovecote/pigeon house above.

Alcohol production results in large amounts of spent grain, a nutritious animal feed. Since the disposal of distillery waste in a city environment was a major expense, feeding draff (or waste fermented grain) to cows and pigs penned nearby provided well-fed animals to sell for additional profit (Otto 1994: 2). Lochrin Distillery had '300 head of cattle, and innumerable pigs [which] were fed with the refuse' (draff) (*Scotsman*, 16 November 1850: 4). Canal barges, moored at the adjacent quayside, were used to remove the manure for sale as fertiliser (*Scotsman*, 1 February 1897: 10; 3 February 1910: 9; Laxton and Rodger 2013: 55).

3.2 Slaughterhouse

Under the Edinburgh Slaughter-Houses Act of 1850, Edinburgh Corporation rationalised the city's 78 private abattoirs into one site; the land was feued from Alexander Haig.³ Work on the slaughterhouse, designed by city architect David Cousins, had begun by April 1851, and it was opened in May 1852 (*Scotsman*, 2 April 1851: 3). The area was 'almost

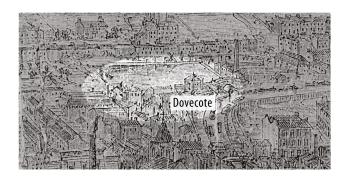
entirely screened from public view' by the distillery's extant 'lofty granaries' (*Scotsman*, 19 October 1850: 2; 16 November 1850: 4). A southern boundary wall was erected in 1850, 'sufficiently high to conceal [the abattoir] from the view of the Gilmore Place windows' (*Scotsman*, 20 November 1850: 3). The gate pier of the 'private road from [the] manure depot to the ... Canal', was recorded in 2005 (Wilson 2005: 5, fig 2, plate 14).

The 1853 Ordnance Survey map (Illus 5) shows that the slaughterhouse, following its opening in 1852, occupied the northern half of the site incorporating the former byres, 'wright's shop', wash backs and mash tuns. Part of the still-house remained but was labelled as 'ruins'. The octagonal pigeon house and pig shade are also extant.

3.3 The 1860s

The distillery's later history was largely unrecorded (Moss and Hume 2000: 325; Townsend 2004: 138). However, whisky production apparently continued under Andrew Stein (c 1790–1874, son of Hattonburn Distillery's owner, and nephew of Kilbagie's and Kennetpan's founders). Andrew and his son John Stein (1821–88) leased space from Alexander Haig (*Val Roll* 1885a: 609, no. 14). After their manager died in 1858 (*Paisley Herald*, 12 June 1858: 5), the Steins came to live at Lochrin around 1860–1, as agents for Cameron Bridge and Seggie Distilleries, both Haig/Stein concerns (*Post Office Directory* 1860–1: 253; 1861–2: 270).

In August 1860 'Mr Stein of Lochrin Distillery offered ... the large ... granaries used by him', as temporary military barracks⁴ and he advertised for distilling vessels in 1862, which suggests that whisky was still being produced (Scotsman, 20 September 1862: 1). Rental lists from 1865 to 1866 show numerous tenants that included Charles and David Gray of Glasgow's Adelphi Distillery, although their precise activities at Lochrin are unspecified (Fell 1865: 878; Haig 1865: 1321; Fell 1866: 57). As they neither owned the site nor advertised any whisky production there, they possibly used it for storage or distribution (Townsend 2004; Moss and Hume 2000; Heawood 2009). The other main renters were Andrew Usher, brewers, with three bonded warehouses (recorded in The Gazette, issue 6,347, 30 December 1853: 1047; issue 6,899, 8 April 1859:



Illus 3 Site viewed from north, extract from panoramic view of Edinburgh, J Sulman 1868 (reproduced by kind permission of the National Library of Scotland)

501), and the Paraffin Light Company's works (Fell 1865: 878; Haig 1865: 1321; Post Office Directory 1859–60: 208). The famous James 'Paraffin' Young's Bathgate-based shale-oil firm bought out this rival in 1866.⁵

In 1863, established ironfounder William Bain opened the Lochrin Iron and Wire Works, making stable fittings and patented post and strained-wire agricultural fencing. Large contracts from Australian sheep-ranches caused a move to larger premises in Coatbridge in 1888, while retaining the 'Lochrin' name (House 1959: 16–21).

Artist Thomas Sulman produced a cartographically accurate panorama of Edinburgh in 1868 (Illus 3), showing the cooling-ponds (as on the 1853 Ordnance Survey map) and distinctive 'pagoda' kiln-roofs. The pigeon house is also apparent in this image, albeit no longer as a 'garden feature'.

3.4 The 1870s and 1890s

The open-air cooling ponds were infilled between 1875 and 1876, during an abattoir extension.⁷ They were built over by two blocks of killing booths designed by architect Robert Morham (*Scotsman*, 10 April 1875: 6; 6 November 1876: 3), which are depicted on the 1877 Ordnance Survey map (Illus 8). The pigeon house was still standing, with a small addition on the southern (canal) side. In short, the distillery was rented out as wholesale warehousing, to tradesmen and anyone requiring storage for bulk products and wheeled vehicles.

By this time, the canal was a safety hazard. In 1892, a hansom-cab owner from Thornybauk had his vehicle repaired at Lochrin Basin smithy. His children were in the coach while the driver was turning and 'part of the roadway subsided and the horse fell into the water dragging the cab after it'. The children and the horse drowned in the 15ft-deep water.⁸ The quayside was described as both narrow and poorly maintained, which probably led to the partial infilling of the basin depicted on the 1894 Ordnance Survey map (not illustrated). This would have enlarged the area for carts to manoeuvre. The pigeon house was used as a builder's store between 1885 and 1895, surrounded by workshops.⁹ The former distillery workshops and maltings were rented to multiple small tradesmen, coachbuilders, corn merchants and the brewers William McEwan & Co. (of neighbouring Fountainbridge).

The houses around Thornybauk, Home Street and Ponton Street had, by 1892, become a slum area 'inhabited by wooden shanties ... containing ... a couple of acres of water, stagnant ... and stinking' (Scotsman, 14 November 1892: 9). The narrow streets, filled with cattle herded to the slaughterhouse, also inhibited essential access for Edinburgh's new tram system (Scotsman, 16 February 1893: 7; 17 February 1893: 3; 11 October 1893: 8; 6 September 1894: 7). J R Haig advertised the site in 1895 as 'about 5 acres, with valuable frontage to Home Street' (Glasgow Herald, 26 August 1895: 3). Lochrin House and Distillery were purchased by the 'Lochrin Buildings Syndicate' (including lawyer Lewis Bilton and investor George MacLennan, the sitting tenant of Lochrin House). They borrowed £31,000 in May 1896, using the land as security, and then built and sold off the various building plots and feu duties to private investors and trusts. 10 The syndicate 'reserved the power to feu', thus controlling the overall style and layout of the planned new tenements. One of the earliest buyers was the City Council itself, which acquired 1,700 square yards (just over 1,421 square metres) to extend the slaughterhouses. The Lord Provost proudly referred to 'the success of the Lochrin feuing plan' as a means of redeveloping the area (Scotsman, 18 March 1897: 8).

It seems highly probable that, following demolition, Lochrin House (recently an Episcopalian children's home and then let to grain merchant MacLennan) and the granaries fronting Home Street were dumped straight into Lochrin Basin, which was now being reclaimed to redevelop the ground.¹¹ Lochrin Place was adjacent to the

canal basin, and tipping building debris straight over the now-obsolete quayside would also have saved transport costs. The 2005 excavation showed the basin packed with 'mixed demolition material including bricks ... iron slag and clinker' (Wilson 2005: 4).

3.5 Cold store

In the late 19th century, food preservation was a continuing problem; storm-delayed ships arrived simultaneously, causing Canadian cattle to accumulate at landing-depots, and regulations demanded slaughter within ten days (Maxwell 1909: 4). Scandinavian ice was imported for chilling compartments but proved very expensive. Consequently, once technology allowed, port authorities began opening mechanised commercial cold stores from the mid-1890s.¹²

In October 1898, several prosperous city butchers formed the Edinburgh Ice and Cold Storage Company.¹³ They stated that 'Ice-making ... on the Linde system ... by ammonia compression' would avoid 'the heavy losses suffered by ... butchers ... in such hot seasons' as summer 1898 (*Scotsman*, 31 January 1899: 4).

In November 1898, Bilton sold to the Cold Storage Company '1132 sq yards' (or '112 feet ... by 95 feet') (RoS, SS 37866: 272; Scotsman 31 Jan 1899: 4), where ground was 'to be formed to the width of ... 15ft into a continuation of ... Lochrin Place' (RoS, SS 37866: 272). This would have led straight into the canal basin, which must therefore have been obliterated by this date.

Planning consent was granted in January 1899, and the building was begun at once. Half the space, 100,000 cubic feet, was compartments insulated by silicate cotton, for perishables, the remainder being ice-making machinery. Rails ran from the slaughterhouse for conveying freshly killed carcasses straight into the freezer (*Scotsman*, 31 January 1899: 4).

William Beattie & Sons, builders, of nearby Fountainbridge were contracted in February 1899 'to drive between 700 and 900 cubic feet of pitch pine piles in the foundation[s]', and finished four months later (*Scotsman*, 23 June 1899: 5; *Glasgow Herald*, 23 June 1899: 10). The piles were uncovered during excavation in 2005 (Wilson 2005: 4, 6), suggesting that they were required to stabilise the

canal landfill. The architects were W Beattie Taylor, the contractor's grandson, and J H Cooper of the Burgh Engineer's Office (who was responsible for all construction work at the slaughterhouse) (*Scotsman*, 26 August 1899: 6; DSA, Cooper & Taylor Practice).

By August 1899, ice was being made from mains water distilled in galvanised pipes, poured into moulds and frozen in brine tanks at 15° Fahrenheit over 48 hours. 'The [ice] blocks weigh 360lbs each', the stores held 250 tons of ice, along with '200 sheep ... all hard frozen', showing why the massive wooden piling had been required (*Scotsman*, 26 August 1899: 6). Only the ground floor was refrigerated, with rails and running pulleys for carcasses, the upper two storeys being air-chilled. Liquid ammonia was 'cooled by a flow of water over the pipes in an open container on the roof' and passed to cool the salt-water tanks (*Scotsman*, 26 August 1899: 6).

Edinburgh College of Agriculture used the Ice Company's stores for practical demonstrations to students, assisted by the Swift Meat Packing Co. of Chicago. The variety of imported provisions at Lochrin included Argentine beef, US pork and Australian rabbits, because 'refrigerating ... annihilated distance' (*Scotsman*, 23 December 1908: 5). The facilities were of such a high standard that a fact-finding deputation from London's markets visited in 1908 (*Scotsman*, 12 April 1908: 6).

The dovecote, its yard and sheds still appear on the 1905 valuation roll but were 'vacant' and presumably 'derelict' (*Val Roll* 1905: no. 20). Neither the pigeon house nor the pig shade is recorded on the 1908 Ordnance Survey map (Illus 10), suggesting that they were demolished between 1905 and 1908, and replaced by additions to the Ice and Cold Storage Company's premises.

The timing of the Ice Company's foundation (1898) was unfortunate, because the slaughterhouse's urgent need to find larger premises was already under discussion in 1900–2¹⁴ and was authorised by a Provisional Order Act of 1903.¹⁵ The Ice Company's directors initially opposed their prime customer's removal to outlying Gorgie¹⁶ but eventually dropped their objections.¹⁷ The slaughterhouse in Slateford Road, Gorgie, was ceremonially opened in June 1910, and business there commenced in September 1910.¹⁸

The Ice Company was forced to diversify to keep trading. The 'Grand Rink', a roller-skating rink, had

opened beside the slaughterhouse in 1909 (replacing an iron foundry). At the end of the contemporary roller-skating craze in 1911 (Creighton 2012a; Creighton 2012b) it became a cinema (Baird 1963: 337–41, 495), but this former rink possibly inspired the Ice Company's next venture. The Company's partners especially enjoyed curling, which traditionally had an enormous popular following in Scotland (O'Brien 2010: 158–71; Haynes 2014: 43–7). Scotland's first purpose-built (rather than converted) indoor ice-rink had opened at Crossmyloof, Glasgow in 1907 and doing likewise would be a natural extension of the Ice Company's facilities (O'Brien 2010: 167–9).

3.6 Ice rink

Lochrin became Edinburgh's first indoor rink, opened the day before its bigger competitor at nearby Haymarket.²⁰ A building warrant was granted in August 1911, for 'a large rink 160ft long by 80ft (1,422yds²), with 'ample tea and smoking rooms' on the north side. The ice, large enough for four curling rinks, was to be frozen by '22,000 feet of pipes' (6.7km) which were 'arranged in grids' and powered by the refrigerator plant (*Scotsman*, 25 August 1911: 4).

Edinburgh Masonic Curling Club formally inaugurated Lochrin rink on 2 February 1912; the ice was 'excellent', and 'constructed on the same principle as Crossmyloof', and Haymarket (*Glasgow Herald*, 3 February 1912: 12; *Scotsman*, 3 February 1912: 13). Haymarket, like Lochrin, had an elliptical arched roof to provide unobstructed playing space. The flooring, consisting of 'brieze [sic], cork and asphalt was flooded with 6ins of water', frozen by piped brine and ammonia (*Scotsman*, 3 February 1912: 13).

Lochrin's popularity is shown by young men's teams booking curling space in February 1914, for the October season, nine months away (*Scotsman*, 24 February 1914: 10). The outbreak of war in August 1914 saw many of those bookings go sadly unfulfilled. Like many sports venues, Lochrin

'suffered badly from falling usage' during the war, and this is likely to be the primary reason that the rink closed in 1915.²¹

In December 1920, the Edinburgh Ice and Cold Storage Co. Ltd sold 0.45 acres with 'an artificial ice skating and curling rink thereon' to 'James Ross & Son, Automobile Engineers' of Lochrin Buildings, for £10,000 (RoS, SS 17506: 97). The now-subdivided site underwent considerable redevelopment by the two companies in 1921–3. The Ice Company refocused on the growing refrigeration market, and after lawsuits in 1920 over food spoiling 'due to the defective condition of the ... store' they invested in updated machinery (Scotsman, 19 December 1921: 2). Their new plant was opened in July 1923, by the City Treasurer. 'At a cost of nearly £10,000 a spacious building has been erected', producing 25 tons of ice daily (Scotsman, 5 July 1923: 5). 'The ice-box was now a feature of every high-class food establishment', and 'the first ton of ice manufactured [was] presented to Edinburgh Royal Infirmary' (Scotsman, 5 July 1923: 5; Glasgow Herald, 5 July 1923: 11).

3.7 Garages

There were minor alterations to garages and access roads during the 1930s and '40s.22 However, the major change was the sale of the Ice Company's own premises to James Ross & Sons in 1965 (RoS, SS 17506: 100; RoS, SS 18707a: 344). This property faced onto both Lochrin Place and Lochrin Lane. James Ross then promptly sold it to Shell & BP Scotland Ltd (RoS, SS 17506: 100-1; RoS, SS 18707b: 155). Garage owners 'James Ross & Sons' entered voluntary liquidation in 1977 (recorded in The Gazette, issue 20,167, 11 October 1977: 1128; 12 August 1980: 1010). Their successors, Ross of Lochrin, were purchased by Arnold Clark's nationwide car dealership in February 1982, who 'regarded [the garages] as the jewel in the crown' (RoS, SS 18707b: 156; Glasgow Herald, 21 October 1982: 14; 6 August 1984: 9).

4. RESULTS OF THE EXCAVATION

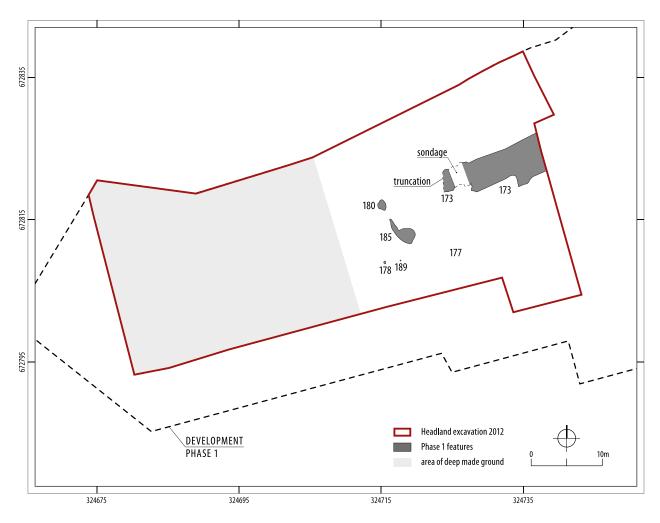
A detailed description of the excavation methods, as well as full descriptions of all excavated contexts and lists of photos and drawings, is given in the Data Structure Report which has been deposited within the archive in the National Record of the Historic Environment (NRHE) (NT27SW 64) (Bailey 2013).

The excavation indicated variable levels of archaeological preservation within the site. The central area was disturbed by trenches from previous archaeological excavations (Wilson 2005), where parts of Lochrin Basin wall, building walls and pitch pine piles, used to stabilise landfill before the construction of the Cold Storage Company, were uncovered. The excavated remains have been grouped into six phases: Phase 1 relates to activity from the 12th to the 15th century, Phase 2 relates to Lochrin Distillery in the 19th century, Phase 3 relates to activity on site after

1838. Phase 4 relates to the Slaughterhouse extension, Phase 5 relates to the infilling of the area and the construction of the Ice and Cold Storage Company's unit. Phasing is based on stratigraphic relationships supplemented with documentary and map evidence. Given the distribution of the remains in two separate areas, exact contemporaneity between structures could only tentatively be established. Therefore, similarities in construction technique and materials were used to identify contemporary horizons within the site and finds evidence was used to support this where possible.

4.1 General stratigraphy

In the north-western area of the site sloping bands of ash, mudstone and crushed brick were encountered some 3.55m beneath present ground level. The deposits probably represent material dumped to raise the ground level prior to the construction of



Illus 4 Phase 1 medieval features © Headland Archaeology

the Union Canal and Lochrin Basin. Due to the deep stratigraphy and volume of this made ground deposit, a series of test trenches were excavated to establish whether any archaeology was present beneath this. A deposit of dark brown homogeneous loam existed beneath the made ground deposit described above. It was interpreted as a former ground surface though was devoid of features and dating evidence.

4.2 Phase 1: Pits and ditch - 12th-15th century

A possible ditch, post holes and pits dated to the 12th–15th century, by pottery within them, were located in the eastern area of the site (Illus 4). The features were cut through a thick loam deposit (177), also containing pottery dating from the 12th to 15th century, to the sandy clay geological subsoil. Many of the features were partially truncated by features associated with the distillery and slaughterhouse. As the pottery sherds were small and residual they do not provide firm dating evidence for the deposits in which they were found (Franklin 2013) and it is possible that some of the features such as the pits and post holes might relate to later activity that disturbed the loam deposit (177).

Ditch [173] extended east beyond the excavation area and was truncated on the western side by a later cut containing wood-lined drains (see 4.3 'Phase 2: Lochrin Distillery 19th century' below). It contained two fills, the basal fill comprised a sterile sandy clay and the upper fill contained burnt bone fragments and pottery. The pottery assemblage comprised a few sooted sherds of Scottish White Gritty Ware which derive from cooking pots that disappear from the ceramic record during the 14th century, suggesting that there was activity in the area from at least this date (Franklin 2013). Pottery and glass fragments dating from the 17th or 18th centuries were also present but are likely to be intrusive and incorporated into the fill during the later activity in the area. A rubble land-drain was cut through the upper ditch fill, suggesting that it must have been an open, muddy channel. The presence of related rubble drains and upwelling, pooling water during the excavation indicates that drainage in the area has always been problematic. If the ditch was a drainage feature, it was not clear in which direction the feature drained.

Two post holes, [178] and [189] (Illus 4), of unknown function were also located in the eastern area of the site. A handful of pottery sherds suggest that these date to the 12th or 13th centuries.

Four pits, [180], [185], [196] and [199] were also located in the eastern area. Pit [180] contained mixed finds dating between the 12th and 14th centuries, bottle glass dating to the 20th century and a black bead of uncertain date. The bead was made from either jet or cannel coal, however, given the mixed date of the material recovered from the pit, it was unclear whether the bead is from 19th-century mourning jewellery or part of a medieval rosary (Franklin 2013). It is likely that bottle glass was introduced into the features during later activity. Pits [185], [196] and [199] contained no datable finds and have been tentatively dated to the medieval period as they were cut from the same level as the other medieval features in the area.

No further evidence for activity dating to the medieval period was present. However, a deep deposit of homogeneous loam, containing pottery dating from the 17th to 18th centuries, covered the area. Whether these soils were introduced to the site or a result of natural soil development reworked on site is unclear, although the paucity of finds suggests that it is not the result of manuring. Cultivation and associated activities would have mixed these deposits and broken down any distinct stratigraphic relationships. The gardens shown on early 19th-century maps of the site could have given rise to these conditions.

4.3 Phase 2: Lochrin Distillery - 19th century

A deposit of compact silty clay (165) directly overlay the loam. A similar deposit of silty clay was identified during the excavation of the eastern extent of Lochrin Distillery (Heawood 2009). The deposit was stratified below the distillery structures and was interpreted as a levelling deposit. This suggests that a 'raft' of levelling material had been dumped over the entire area prior to the construction of the distillery. Wood-lined drains were cut through the silty clay. The drains lay beneath the fragmentary remains of a wooden floor [140/164], which comprised six timber planks nailed to an underlying joist. It is likely that this may have been the 'Wright's shop'



Illus 5 Phase 2 and 3 features overlain on 1853 Ordnance Survey 1st edition map (reproduced by kind permission of the National Library of Scotland)

floor depicted on the 1838 plan of Lochrin Distillery (Illus 2). Fragments of the degraded wooden floor [164] also survived on the eastern side of the site (Illus 5).

Fragmentary remains of a wall [142], which correspond closely with the wall of the Wright's shop depicted on the 1838 Plan of Lochrin Distillery (Illus 2), were uncovered, and are superimposed on the 1853 Ordnance Survey map in order to show the relationship with later Phase 3 features (Illus 5). The Wall [142] was constructed from large sandstone blocks bonded with lime mortar. A doorway, possibly the south-western entrance to the Wright's shop, depicted on the 1838 plan of Lochrin Distillery, was apparent. The doorway was blocked in and a 0.50m-thick lime mortar floor layer (141) overlay

the wooden floor, indicating later modifications to the building.

The corner [101] of the 'pig-shade and court' depicted on the 1838 plan of Lochrin Distillery was also uncovered (Illus 5 and 6). It comprised several large stone foundation blocks, up to 0.90m wide and 0.45m deep [101], overlain by a course of smaller stone blocks, up to 0.50m wide and bonded with lime mortar. No 'court' or original ground surface remained, the interior being filled with crushed stone and rubble.

4.3.1 Structure [109]

A square structure [109] was located directly to the east of the pig-shade and court [101] (Illus 6), however, its orientation was at slight variance to the wall, perhaps hinting at an earlier origin. It



Illus 6 Building [101] and Structure [109], from north © Headland Archaeology

was constructed from handmade red bricks, triple-bonded with lime mortar. The structure was sealed with clay externally, possibly in order to make it watertight. A partially vitrified brick covered in industrial waste was recovered from the wall of the structure. The floor of the structure was constructed from 0.05m thick sandstone slabs. Finds recovered from the fill included a creamware transfer-printed handle sherd dating from the late 18th to mid-19th century. Extensive disturbance precludes detailed interpretation.

4.4 Phase 3: Post-1838 activity

Many of the walls ([195], [151], [126] and [136]) located in the eastern area align well with buildings depicted on the first edition Ordnance Survey map (1853) (Illus 5). The buildings relate to the construction and expansion of the Edinburgh Slaughter-House.

4.4.1 External boundary walls

Remains of the western and southern boundary walls [136], [126] and [169], constructed in 1850 from stone blocks bonded with mortar in order to 'shield the activities of the abattoir from the view of the Gilmore Place windows', and depicted on the 1853 OS map, survived.

The walls of the north-eastern group of buildings [151] and [197] stood to heights of 1.65m in places. Although the upper portions of the buildings had been modified during later phases of activity, the lower portions largely remained intact.

4.4.2 Building [195]

Building [195] (Illus 5) was constructed from large, faced sandstone blocks bonded with lime mortar. Two rooms were identified, one of which contained remnants of a wooden floor. The rooms had been backfilled with clay and clinker material and capped with a 0.30m-thick concrete floor.

4.4.3 Building [151]

Building [151] was located to the west of Building [195]. Like Building [195], it was constructed



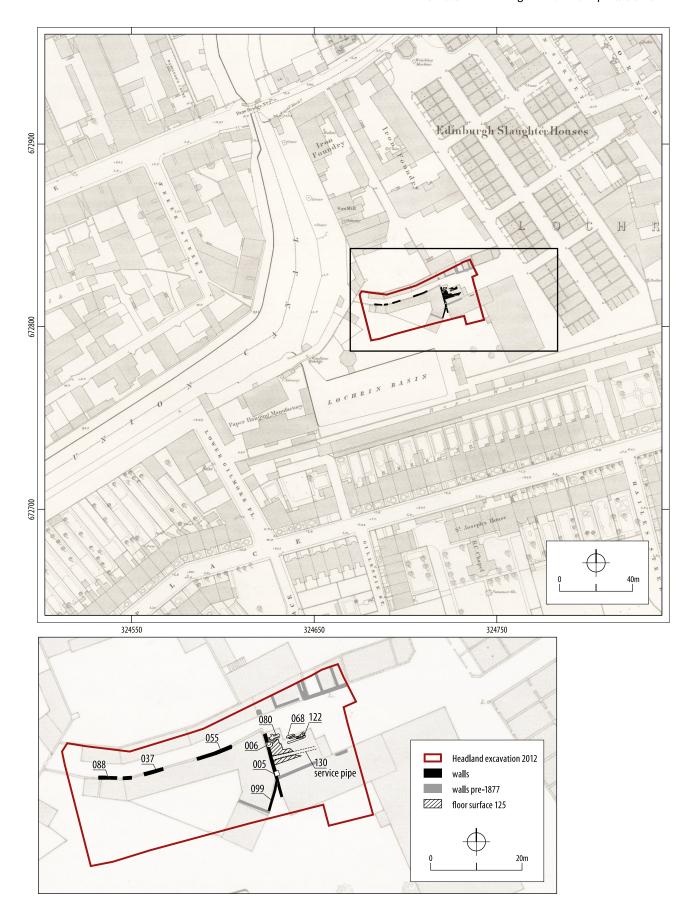
Illus 7 Building [151], Floor [167] and Structure [161], from west © Headland Archaeology

from large, faced sandstone blocks, and had a flagstone floor (Illus 5 and 7). The spring base of a vaulted roof was apparent on the eastern and western walls of the structure. This building was subject to at least three phases of modification. The cellar was backfilled with clay and a deposit of ash and clinker-rich material prior to the construction of a stone sett floor surface; presumably some time in the 19th or early 20th century, as a fragment of clay pipe stem was recovered from the floor surface. The entire structure was backfilled with clay and capped with a concrete floor prior to the construction of Structure [161], which is discussed further below.

A large culvert [135], 1.15m wide, constructed from sandstone and containing a large ceramic pipe, ran along the western side of Wall [126].

4.5 Phase 4: Slaughterhouse extension

Prior to the extension of the slaughterhouse the ground level in the eastern area had been substantially raised with the dumping of rubble



Illus 8 Phase 4 features overlain on 1877 Ordnance Survey map (reproduced by kind permission of the National Library of Scotland)

and loam (139) over the wooden floor surfaces associated with Lochrin Distillery.

Many structural remains [055], [037], [088] and [099] correspond well with the buildings shown on the 1877 Ordnance Survey map (Illus 8), following the expansion of the slaughterhouse during 1875 and 1876, when the cooling ponds were infilled, and slaughter-booths constructed. Fragmentary foundations of the external wall ([055], [037] and [088]) of the northern building remained, together with interior features from the eastern building, including possible machine bases and floor surfaces.

4.5.1 Structure [080]

Structure [080] was a 'key-hole'-shaped feature with a possible flue and a rounded terminus (Illus 9). Its base was constructed from stone slabs and its walls from red brick. The interior was lined with clay. The fragmented nature of the feature precludes any detailed interpretation.

4.5.2 Stone structure [068]

The fragmentary remains of a stone structure [068] of two parallel sandstone walls with a flagstone base and curved terminus were located to the east of Structure [080] (Illus 9). It was backfilled with brick and slag fragments, none of which gave any indication as to the function of the feature.

Three square concrete and brick surfaces with protruding bars [122], [005] and [006], were also located in the area, all were heavily truncated. It is possible that they could have functioned as the base for heavy machinery, however, it is not known what the machinery may have been.

Remains of a possible flue/culvert [120], constructed from machine-made bricks, were located on the eastern side of the site. Although the feature is outwith the extents of the northern building depicted on the 1877 Ordnance Survey map, it is possible that it may have been an external, underground or unmapped feature.



Illus 9 Features [005], [080], [068], [122] and floor surface (125), from north-west Headland Archaeology



Illus 10 Phase 5 features overlain on 1908 Ordnance Survey map (reproduced by kind permission of the National Library of Scotland)

4.6 Phase 5: Infilling of area and construction of Edinburgh Ice and Cold Storage Company's unit

Map and documentary evidence indicate that there was a great deal of change in the late 19th century with the redevelopment of the area, the infilling of Lochrin Basin and the construction of the Edinburgh Ice and Cold Storage Company's unit (Illus 10). This change was evidenced archaeologically, with the presence of several dumped deposits, visible as tip lines, in the eastern area of the site. This suggests that the ground level was substantially raised, probably with rubble and material generated from the demolition of buildings in the area, prior to the construction of the cold storage unit. Several bottle fragments were present in the dumped material. These included 22 green bottle bases, five marked '6 to the gallon' and one marked 'J & C Cockburn, Edinburgh'. The bottles date between 1820 and the early 20th century (Franklin 2013).

Dumped clay and rubble material was also present, in the western portion of the site, overlying the corner of Building [101] and beneath the 'cobbled' surface (082). Finds recovered from the deposit included general domestic refuse dating from the late 18th to early 20th century, including bottle glass and part of a glass funnel or alembic used for distilling (Illus 11). If the latter, the part might represent the tube part of the cap which would fit over the cucurbit containing the heated liquid. Its purpose was to catch the heated vapours and allow them to cool and drip down the tube into a receiving container. While used for distillation of liquids, its small size means it is unlikely that it was part of the whisky distilling apparatus on site, which would have been on a much larger industrial scale. Nevertheless, it is possible that it, and indeed the bottle glass from the same deposit, had some function relating to the distillery.

A structure [011] first shown on the 1908 map overlay the dumped deposits. It was keyed into Culvert [135] and overlay the northern portion of Wall [126]. It consisted of a central room, measuring 2.60m long and 2.13m wide with three narrow cells on the northern, eastern and western sides, each measuring 0.80m wide. The northern, southern and western walls of the central cell were all whitewashed in the interior. The only surviving



Illus 11 Possible alembic stem © Headland Archaeology

floor surface was a compact clay surface (090) in the western chamber, truncated by a pipe cut on the northern side.

The building was backfilled with a deposit of compact greyish brown loamy material (012) containing several finds including various sherds of moulded bottle glass dating from the late 19th to early 20th century, a stoneware bottle rim and willow pattern plate sherd, iron nails, two leather straps, fragments of coke and slag, metal strips and bricks frogged 'Niddrie'.

No archaeological remains could definitively be associated with Lochrin Ice Pond. However, it is possible that a rough 'cobbled' surface (082), located in the western part of the site may relate to levelling prior to the construction of the ice rink.

4.7 Phase 6: Structures relating to the garage

The site was latterly occupied by a garage. It is likely that Structures [033] and [161], and Walls [018] and [052] relate to the garage. Although they were not depicted on the 1931, 1951 or 1974 Ordnance Survey maps (not illustrated), it is likely that Structures [161] and [033] were unmapped underground fuel storage tanks.

Structure [161] was located in the north-eastern corner of the site. It directly overlay Building [151] and comprised a red brick structure (Illus 7), with curved internal walls, probable housing to support a tank. It was filled with yellow building sand (160) soaked with petrochemicals.

Structure [152] directly abutted the northern boundary wall and overlay Structure [151]. It comprised a red-brick structure with two small rooms, evidenced by protruding wall stubs. The floor was constructed from a 0.12m-thick deposit of concrete.

Foundations of the garage building remained [018] and [052]. Walls [018] and [052] were truncated by Brick Structure [033], suggesting later modification to the garage building. The Structure [033] was constructed from bricks stamped 'Niddrie', therefore post-dating 1924,

and bonded with coarse grey cement and filled with sand (032) saturated with petrochemicals. It is likely that the structure was the remains of a fuel tank surround and that the sand fill was bedding for a fuel tank.

Various dumped deposits relating to the recent demolition and levelling of the site overlay the structures.

5. CONCLUSION

Excavation at 19 West Tollcross revealed multiple layers of archaeology relating to several hundred years of activity, from the 12th/13th to the 20th century. Although the remains were, in parts, fragmentary and difficult to interpret, when supplemented with documentary research they provided evidence of a dynamic, evolving landscape.

Excavation uncovered the only known archaeological evidence for medieval activity in the Fountainbridge area. Map and documentary evidence suggest that the area was open ground in the 12th century, on the fringes of medieval Edinburgh. It is likely that the area was used for orchards or gardens belonging to the Crown. During the 1500s, when the gardens fell into disrepair, the lands were possibly leased by private market gardeners. The area's rural nature continued until the 18th century, when the land was subdivided and held by the growing merchant classes who were leaving the Old Town, which was now overcrowded, in favour of country houses and the New Town (Easton 1988: 1). Several mansions of various sizes were built in the area during this time. By the mid-19th century many of the mansions had disappeared, eclipsed by new housing programmes (Easton 1988: 9) and the encroachment of industry on the land that was previously used for agriculture.

The area then developed from open fields into a hub of industry, with the construction and subsequent expansion of Lochrin Distillery and associated byres, used to pen animals in order to keep waste costs down in the distillery. The livestock were also a valuable by-product for sale. Despite undergoing several adaptations over the years, the distillery continued to operate on a much-reduced scale after most of the equipment was sold in 1849. Edinburgh Slaughter-House was constructed in 1850. The proximity of the slaughterhouse and technological advances spurred the construction of the Edinburgh Ice and Cold Storage Company's facility. Due to the relocation of the slaughterhouse, the Ice and Cold Storage Company was forced to diversify in order to keep trading, and therefore they created Lochrin Ice Rink. The ice rink suffered failing usage during the First World War and closed in 1915. After the war, the site became a garage to accommodate the increasing use of commercial and private motorised transport. The Lochrin area provides an example of the development of an area from rural agricultural land to a dynamic industrial development, driven by technological innovations and socio-economic change.

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- 1 Scotsman, 6 October 1838: 2. Sale notice: Caledonian Mercury, 13 October 1838: 1; Scotsman, 27 October 1838: 1.
- 2 Plan preparatory to sale: RHP1383. Attempted sale advertised: *Caledonian Mercury*, 13 October 1838: 1; *Scotsman* 27 October 1838: 1.
- 3 Slaughter-Houses Act 1850 detailed: Caledonian Mercury, 4 March 1850: 4; Standard, 16 July 1850: 4; Robertson et al 1929: 193; MacLachlan 2005: 65–7. Site requirements of new slaughterhouse discussed: Scotsman, 17 July 1850, 1; Caledonian Mercury, 18 July 1850: 1.
- 4 Glasgow Herald, 31 July 1860: 1; Elgin Courier,3 August 1860: 5; Scotsman, 7 August 1860:4.
- Post Office Directory 1866–7: 214; 1867–8: 285;
 Shale Museum 2018; Scotsman, 2 April 1875: 1;
 29 March 1876: 1.
- 6 *Post Office Directory* 1861–2: 136; 1862–3: 120; Haig 1865: 1321.
- 7 The extension was authorised by the Edinburgh Markets Act, 1874: *Scotsman*, 8 October 1874: 1; 12 October 1874: 4; 7 November 1876: 2.
- 8 'Extraordinary Accident at Edinburgh', *Aberdeen Evening Express*, 12 September 1892: 2; 'Cab Proprietor's Action for Damages', 30 May 1893: 3; 'Buchanan v Haig', *Glasgow Herald*, 31 May 1893: 9.
- 9 The dovecote, still described as such, was let at £4, consistent with nearby stable rents: *Val Roll* 1885a: 609; *Val Roll* 1895: 1640.
- 10 'Lochrin Buildings Syndicate' named in *The Gazette*, issue 11,782, 1 December 1905: 1252–3; individual land sales: RoS, SS 37866: 260, 263–4, 268–9.
- 11 Lochrin House, Episcopal Church Children's Home: *Post Office Directory* 1866–7: 175, 285; *Val Roll* 1885b, owners and occupiers listed as Lochrin House, Home for Orphans.
- 12 Cold store at Glasgow: *Scotsman*, 7 October 1896: 6; cold store at Leith: *Scotsman*, 5 August 1899: 6.

- 13 Edinburgh Evening News, 28 October 1898: 2; Glasgow Herald, 29 October 1898.
- 14 Scotsman, 30 October 1900: 7; 15 January 1903: 9; Edinburgh Evening News, 17 March 1902: 2; 17 October 1902: 3; 22 October 1902: 4; 8 November 1902: 2.
- 15 Edinburgh Corporation (Markets, Slaughterhouses, etc) Order Confirmation Act, 1903: recorded in *The Gazette*, issue 11,463, 21 November 1902: 1218–19, 1222; issue 11,528, 3 July 1903: 4179; *Scotsman*, 16 March 1903: 10; 17 March 1903: 4; 3 April 1903: 4; 27 June 1903: 8; *Journal Commons*, 1903: 208, 222, 269, 275; Robertson et al 1929: 194–5
- Director Mr Brydon Hogg objects: Scotsman, 15
 January 1903: 9. 118 butchers object: Scotsman
 17 January 1903: 10. Director Mr Brechin objects: Scotsman, 14 March 1903: 10. Director Mr Brechin's and other general objections: Scotsman, 17 March 1903: 4.
- 17 Scotsman, 26 March 1903: 4; 3 April 1903: 4; 10 April 1903: 4.
- 18 *Scotsman*, 24 September 1909: 8 (progress report); 3 June 1910: 10; 24 June 1910: 10; 2 September 1910: 8; 8 September 1910: 4.
- 19 Roller-skating rink: *Scotsman*, 25 November 1909: 1; 27 November 1909: 11; 2 December 1909: 1; Trowell and Aspinall 2012.
- 20 Lochrin opened 2 February 1912, see *Scotsman*, 3 February 1912: 13; *Glasgow Herald*, 3 February 1912: 12; Haymarket opened 3 February 1912, see *Scotsman*, 17 January 1912: 1; 24 January 1912: 8; 5 February 1912: 9. Lochrin was the earlier rink to be opened despite claims that Haymarket was first, eg O'Brien 2010: 168.
- 21 Last ice-rink advertisement, which therefore suggests probable date of closure: *Scotsman*, 14 April 1915: 6.
- 22 Building warrant granted by Dean of Guild Court for various building works: *Scotsman*, 28 January 1928: 13; 23 March 1935: 12; 16 May 1936: 13; roads and access, ownership, 1940–60: RoS, SS 18707a: 342–4; roads, recombining diverse titles into one unit again, 1976–82, RoS, SS 18707b: 155–6.

- Bailey, L 2013 'Land adjacent to Lochrin Basin, 19 West Tollcross, Edinburgh. Archaeological Excavation', unpublished report for Headland Archaeology Ltd.
- Baird, G 1963 Edinburgh Theatres, Cinemas and Circuses: 1820–1963 (revised by G F Baird 2000), [PDF doc] Scottish Cinemas and Theatres Project [Online Archive]. http://www.scottishcinemas.org.uk/etcc/. Accessed 21 Dec 2018.
- Barber, J, Thompson, L & Rankin, D 2002 '10– 12 West Tollcross', unpublished desk-based assessment, AOC Archaeology Group.
- Bradley-Lovekin, T 2011 'Lochrin Place, Edinburgh Archaeological Desk-based Assessment', unpublished report, AOC Archaeology Group.
- Brown, G 1988 'The Working Population', in Easton, D (ed.) By the Three Great Roads: A History of Tollcross, Fountainbridge and the West Port, Tollcross Local History Project, 41–59. Aberdeen: Aberdeen University Press.
- Creighton, S 2012a 'Edwardian Rollerskating', Audio Podcast, 3 July 2012, National Archives, Kew. http://media.nationalarchives.gov.uk/ index.php/edwardian-rollerskating/. Accessed 8 August 2018.
- Creighton, S 2012b 'The Edwardian Roller Skating Boom 1908–1912', *History & Social Action* (Personal Blog of Sean Creighton), 11 June 2012. http://historyandsocialaction.blogspot. co.uk. Accessed 8 August 2018.
- Cross, M 2008 'Kirkliston Distillery Ownership History since 1792', unpublished document, AOC Archaeology Group.
- Curr, J 1988 'The Meadows and Links', in Easton, D (ed) 1988 By The Three Great Roads: A History of Tollcross, Fountainbridge and the West Port, Tollcross Local History Project, 139–52. Aberdeen: Aberdeen University Press.
- Easton, D 1988 'The origins of Tollcross', in Easton, D (ed.) By the Three Great Roads: A History of Tollcross, Fountainbridge and the West Port, Tollcross Local History Project, 1–19. Aberdeen: Aberdeen University Press.
- Franklin, J 2013 'Finds Assessment for Lochrin Basin', unpublished report for Headland Archaeology Ltd.

- Haynes, N 2014 *Scotland's Sporting Buildings*. Edinburgh: Historic Scotland.
- Heawood, R 2009 'Excavations at Lochrin Distillery, Edinburgh', *Industrial Archaeology Review* XXXI (1): 34–53. https://doi.org/10.1179/174581909X424763.
- House, J 1959 Lochrin's Hundred Years: The Story of William Bain & Company Ltd of Coatbridge. Edinburgh: McFarlane & Erskine.
- Hunter-Blair, A 2009 'Lochrin Basin Edinburgh Excavation: Data Structure Report', unpublished report, AOC Archaeology Group.
- Laxton, P & Rodger, R 2013 Insanitary City: Henry Littlejohn and the Condition of Edinburgh. Lancaster: Carnegie Publishing Ltd.
- MacLachlan, I 2005 "The greatest and most offensive nuisance that ever disgraced the capital of a kingdom": The slaughterhouses and shambles of modern Edinburgh', *Review of Scottish Culture* 17: 57–71.
- Maxwell, W (ed.) 1909 First Fifty Years of St. Cuthbert's Co-operative Association Limited 1859–1909. Edinburgh: The Association.
- Moss, M & Hume, J R 2000 The making of Scotch Whisky: A History of the Scotch Whisky Distilling Industry. Edinburgh: Canongate Books Ltd.
- O'Brien, G 2010 *Played in Glasgow: Charting the Heritage of a City at Play.* Edinburgh: Historic Scotland.
- Otto, S A 1994 Gooderham and Worts Heritage Plan, Report No. 4. Inventory of Archival Sources. http://www.distilleryheritage.com/report_4. html. Accessed August 2014.
- Paterson, L 2006 From Sea to Sea: A History of the Scottish Lowland and Highland Canals. Glasgow: Neil Wilson Publishing.
- Post Office Directory 1860 *Post Office Edinburgh and Leith Directory* 1859–60 Edinburgh https://digital.nls.uk/83524931. Accessed February 2019.
- Post Office Directory 1861 Post Office Edinburgh and Leith Directory 1860–1 Edinburgh https://digital.nls.uk/84934543. Accessed February 2019.
- Post Office Directory 1862 Post Office Edinburgh and Leith Directory 1861–2 Edinburgh https://digital.nls.uk/83536135. Accessed February 2019.
- Post Office Directory 1863 Post Office Edinburgh and Leith Directory 1862–3 Edinburgh https://

- digital.nls.uk/83066461. Accessed February 2019.
- Post Office Directory 1867 Post Office Edinburgh and Leith Directory 1866–7 Edinburgh https://digital.nls.uk/83411869. Accessed February 2019.
- Post Office Directory 1868 Post Office Edinburgh and Leith Directory 1867–8 Edinburgh https://digital.nls.uk/83589971. Accessed February 2019.
- Robertson, D, Wood, M & Mears, F C 1929 Edinburgh 1329–1929. Edinburgh: Oliver and Boyd.
- Roy, M 2014 'Lochrin Place, Edinburgh, Archaeological Desk-based Assessment', unpublished document, AOC Archaeology Group.
- Shale Museum 2018 'A Brief History of James "Paraffin" Young', *Museum of the Scottish Shale Oil Industry*. https://www.scottishshale.co.uk/KnowledgePages/Histories/JamesYoung.html. Accessed 21 December 2018.
- Smith, C J 2000 *Historic South Edinburgh* (new edition). Edinburgh: John Donald Publishers Ltd.
- Townsend, B 2004 Scotch Missed: Scotland's Lost Distilleries (originally published 2000). Glasgow: The Angels' Share.
- Trowell, I & Aspinall, T 2012 'The Sheffield Jungle Project', *National Fairground Archive*. https://www.sheffield.ac.uk/nfca/projects/sheffieldjungle. Accessed 21 December 2018.
- Wilson, D 2005 'Lochrin Basin Evaluation, Tollcross, Edinburgh', unpublished report, AOC Archaeology Group.

8.1 Documentary sources

- DSA, Cooper & Taylor Practice = 'Cooper & Taylor, Architectural Practice 1896/7–1906 (Architect Biography Report)', *Dictionary of Scottish Architects*. http://www.scottisharchitects.org. uk/architect_full.php?id=200318. Accessed 21 December 2018.
- Fell 1865 = Fell, Janet Callender, alias Haig, 24 Gilmore Place, Edinburgh, Inventory, Registered 16 August 1865, Edinburgh Sheriff Court Inventories, SC70/1/126: 868–87, National Records of Scotland. www.scotlandspeople.gov. uk. Accessed 22 September 2014.

- Fell 1866 = Fell, William Edwin Cotton, Lochrin House, Edinburgh, Inventory, Registered 18 May 1866, Edinburgh Sheriff Court Inventories, SC70/1/130: 43–86, National Records of Scotland. www.scotlandspeople.gov.uk. Accessed 26 September 2014.
- Haig 1865 = Haig, Alexander, of Blairhill, Perthshire, Trust Disposition and Inventory, Registered 3 June 1865, Perth Sheriff Court, SC49/31/79: 1250–339 (Inventory: 1293–339), National Records of Scotland. www.scotlandspeople.gov. uk. Accessed 17 September 2014.
- Journal Commons 1903 = Journals of the House of Commons 158 (Feb-Aug 1903), 3 Edward VII. www.publications.parliament.uk/pa/cm/ cmjournal.htm. Accessed 21 December 2018.
- RoS, SS 17506 = Registers of Scotland (Glasgow Office) Search Sheet 17506, Second Series, Sasine Register, County of Edinburgh, Vol 86: 96–101. Subjects of Search, I) Portion of Lochrin 1132 sq yds with buildings of the Ice and Cold Manufactory thereon; II) At Fountainbridge, 0.451 acre of ground; III) At Fountainbridge, 457 sq yds; IV) Ground extending 131 ft 8 ins along Lochrin Lane; V) Northern extension of Lochrin Lane; 15 May 1909–3 May 1976.
- RoS, SS 18707a = Registers of Scotland (Glasgow Office) Search Sheet 18707, Second Series, Sasine Register, County of Edinburgh, Vol 93: 340–5. Subjects of Search, Portion of Lochrin bounded on west by Lower Gilmore Place, on north by canal loading bank, etc: 340–5, 12 November 1909–30 November 1926.
- RoS, SS 18707b = Registers of Scotland (Glasgow Office) Search Sheet 18707, Second Series, Sasine Register, County of Midlothian, Vol 794: 154–6. Subjects of Search, Nos VI–X, Various garages etc, and No. XI, 1132 sq yds on North Side of Lochrin Lane, disponed to Edinburgh Ice and Cold Storage Co., 1898, etc; 1928–82.
- RoS, SS 37866 = Registers of Scotland (Glasgow Office) Search Sheet 37866, First Series, Sasine Register, County of Edinburgh: 259–80. Subjects of Search, I) Part of North East Park, Wrightshouses, 8 acres on North side of burn, etc; II) House, garden etc on 2 acres, 2 roods, 26 falls bounded on east by [Home St]; III) Square of houses and garden at Lochrin with distillery. 16 May 1896–30 November 1900.

- Val Roll 1885a = Edinburgh Valuation Roll 1885–6, Parish of St Cuthbert, Lochrin, VR100/132/29: 608–9. www.scotlandspeople.gov.uk. Accessed 16 October 2014.
- Val Roll 1885b = Edinburgh Valuation Roll 1885– 6, Parish of St Cuthbert, Lochrin House, Home for Orphans, J R Haig, per John Stein, Lochrin, VR100/133/168: 1318, No. 24. www. scotlandspeople.gov.uk. Accessed 17 September 2014.
- Val Roll 1895 = Edinburgh Valuation Roll 1895–6, City of Edinburgh Parish, Lochrin, VR100/173/136: 1640, No. 2 (Dovecote). www.scotlandspeople.gov.uk. Accessed 16 October 2014.
- Val Roll 1905 = Edinburgh Valuation Roll 1905–6, City of Edinburgh Parish, Lochrin, VR100/237/139: 2560, Nos 17 (Ice and Cold Storage Co.) and 20 (Dovecote). www. scotlandspeople.gov.uk. Accessed 16 October 2014.

8.2 Newspaper citations

Where newspaper sources are cited, shortened forms have been used. Full titles may be found below. Newspaper archives may be consulted online and details of relevant databases are below.

The below may be accessed online via the *British Newspaper Archive (Online Database)*, www. britishnewspaperarchive.co.uk. Accessed 21 December 2018.

Aberdeen Evening Express = Aberdeen Evening Express (1881–94)

Caledonian Mercury = Caledonian Mercury (Edinburgh 1720–1867)

Edinburgh Evening News = Edinburgh Evening News (1873–1906)

Elgin Courier = Elgin Courier (1845–67)

Paisley Herald = Paisley Herald and Renfrewshire Advertiser (1853–77)

The below may be accessed online via *British Library* 19th-Century Newspapers (Detroit, MI: Gale-Cengage) at subscribing institutions.

Glasgow Herald = Glasgow Herald (1820–1900) Preston Chronicle = Preston Chronicle (1831–94) Standard = The Standard (1827–1900) The below may be accessed online via *Google Newspapers*, http://news.google.com/newspapers. Accessed 7 January 2018.

Glasgow Herald = Glasgow Herald (1901–90)

The below may be accessed online via *The Gazette official public record* (Online Database), https://www.thegazette.co.uk. Accessed 21 December 2018. *The Gazette = The Edinburgh Gazette* (1699–present)

The following may be accessed online via *The Scotsman Digital Archive* (Online Archive), http://archive.scotsman.com/. Accessed 20 October 2014. *Scotsman = The Scotsman* (Edinburgh 1817–1950)

8.3 Cartographic sources

- Ainslie, J 1804 Old and New Town of Edinburgh and Leith with the proposed docks. Edinburgh: Ainslie. National Library of Scotland, Maps Collection, Shelfmark: Newman 1028. http://maps.nls.uk/. Accessed 12 September 2014.
- Kincaid, A 1784 A plan of the city and suburbs of Edinburgh. Edinburgh: Kincaid. National Library of Scotland, Maps Collection, Shelfmark: EMS.s.632. https://maps.nls.uk. Accessed 12 September 2014.
- Kirkwood, R 1817 *Plan of the City of Edinburgh and its environs*. Edinburgh: Kirkwood & Son. National Library of Scotland, Maps Collection, Shelfmark: Newman 598. http://maps.nls.uk/. Accessed 12 September 2014.
- Wood, J 1823 Plan of the city of Edinburgh. Edinburgh: Wood, J & Brown, T. National Library of Scotland, Maps Collection, Shelfmark: EU.31.W. http://maps.nls.uk/. Accessed 12 September 2014.
- Ordnance Survey 1853 *Edinburgh and its Environs*. Sheet 38, 1:1056.
- Ordnance Survey 1877 *Edinburgh and its Environs*. Sheet 38, 1:1056.
- Ordnance Survey 1894 *Edinburgh and its Environs* [New Series]. Sheet III.II.3, 1:500.
- Ordnance Survey 1908 *Edinburghshire*. Sheet III. II, 1:2500.
- Ordnance Survey 1931 *Midlothian*. Sheet III.II, 1:2500.
- Ordnance Survey 1951 Plan NT2472NE, 1:1250. Ordnance Survey 1974 Plan NT2452NE, 1:250.

- RHP1382 = 'Plan of James Haig, Esqr's property of Lochrin and Gilmour Place', RHP1382, Surveyor: Joseph Burke, 29 Jan 1822, National Records of Scotland, Edinburgh.
- RHP1383 = 'Plan of Lochrin Distillery, the property of James Haig and Son, Esqrs', RHP1383, Surveyor: Anonymous, Surveyed 1838,
- National Records of Scotland, Edinburgh.
 Sulman, J 1868 'Panoramic View of Edinburgh from the North (Engraved Illustration)', Supplement to the 'Illustrated London News', 18 July, 1868, Shelfmark: EMS.s.495, Maps Collection, National Library of Scotland, at http://maps.nls.uk/. Accessed 12 September 2014.