

## Shootinglee, Glass Report Robin Murdoch

### Introduction

The assemblage of glass from Shootinglee consisted of 181 mainly wine bottle shards of the 18<sup>th</sup> century with a few dating to the late 17<sup>th</sup> or early 19<sup>th</sup> century. There are also apparently a small number of finds from the excavations which were unavailable for inspection for this report.

What was recovered is very typical of the glass turning up on Scottish sites of similar period. The main reasons behind this are that there was a very limited range of glass items available at the time and the fact that what was available was very expensive. While the term 'wine bottle' is used throughout this report for simplicity, it may be that some of the common green glass shards derive from beer or ale bottles. These were almost identical to wine bottles until the 19<sup>th</sup> century and it is virtually impossible to discriminate one from another (Turnbull 2017, 275).

Another notable feature is that the glass is mostly fire-bright, i.e. in excellent condition, an indication of a neutral or slightly acidic buried environment. Virtually all historic glass will corrode, especially in alkaline conditions (e.g. lime mortar) and this corrosion can vary from a slight dulling of the surface through to complete disintegration of the item.

### *Bottle Glass*

The lack of any corrosion can make dating of glass a bit more difficult since its presence can be a rough indication of age. The nature of corrosion products also varies with the composition of the glass. Common bottle glass in Scotland, particularly for containing wine, was made in a range of varying shades of green from the late 17<sup>th</sup> through to the early 19<sup>th</sup> century. Shards which have no distinctive characteristics are simply described in the catalogue as late 17<sup>th</sup> to early 19<sup>th</sup> century although, judging by colour, the majority will date to the 18<sup>th</sup> century. While pXRF analysis can be useful in dating or indicating likely origins of certain types of glass, this is not the case with common bottle glass. This is because common bottle glass typically contained a lot of cullet, broken glass that could have come from any source, leading to a very varied composition.

Fortunately wine bottle shape evolved quite radically from its introduction into England around 1630, probably from France or Belgium, until fully moulded versions appeared in the early 19<sup>th</sup> century (Dumbrell 1992, 29-39). Dumbrell's book is one of a number of publications which contain shape by date information on wine bottles. The earliest wine bottle shard excavated in Scotland so far, dates to about 1660.

The earliest wine bottles were very round bodied, with long necks and a very shallow kick (the push in of the base for stability (Dumbrell 1992, *ibid*). After the Restoration in the 1660s the necks gradually became much shorter, probably a sensible move after the return to more flamboyant clothing following the demise of the Cromwellian administration, but the kick remained quite shallow (SF204). The more or less rounded body continued morphing into the famous 'onion' shape (SF79 base 2) of the early 18th century with a much deeper kick. These bottles had very short, widely splayed necks. Round about 1740 a significant change occurred when the dip mould was introduced. This was where the lower part of the body was blown in a cylindrical mould, probably to try to standardise the capacity of the bottle compared to the entirely free blown item. Most of the bottles blown in dip moulds exhibit *belling*, a slight swelling of the bottle just above the base. This was created when the still soft bottle was removed from the mould and the base pushed in to form the kick. The result was a slight swelling of the lower part of the body since it was no longer restrained by the mould. *Belling* is only seen on wine bottles c1740-c1840 (SF79 base 1). Another

step change occurred around 1760 when there was a significant change to the lip form. As time progressed the cylindrical bottle gradually increased in height and reduced in diameter approaching the approximate dimensions of today, although squatter versions persisted but are not very common. Very few items, other than wine bottle shards, were recovered. Again this is not unusual for the period of occupation.

### *Window Glass*

With regards to window glass a chart of date range versus composition was generated by English Heritage based on analysis of known dated glazing events from the late 16<sup>th</sup> century onwards. (Dungworth 2011, 2)

In assessing the five samples of window glass which were kindly analysed by Helen Spencer (this report) the following conclusions regarding probable date of manufacture were reached, although allowances have been made for the limitations of the pXRF at the lower end of the atomic spectrum. Some of the readings deviated considerably from Dungworth's chart (ibid.) but enough information was there to reach the following conclusions:

SF12 Tr1: This could be a forest glass pre c1567 which would be very early for a Scottish secular site, although window glass of this composition was found at Fast Castle, Berwickshire, abandoned by c1600 (Mitchell et al 2001). However, the apparent composition of this shard is fairly similar to that of the later high lime low alkali glass, so it is difficult to be absolutely certain which category it falls into.

SF7 Tr1: High lime low alkali (extremely low manganese, a decolourant) c1600-c1700

SF10 Tr7: Potash/lead glass, possibly from a piece of furniture, late 17<sup>th</sup> - 18<sup>th</sup> century.

SF185 Tr3: High lime/low alkali (this time with moderate manganese) c1600-c1700, which could indicate a slightly earlier date than SF7.

SF212 TR4: Probable high soda modern glass post c1870 (contra Spenser, pXRF report)

Given the location of Shootinglee it is probable that glazing was not present until the 17<sup>th</sup> century given the hostile environment of the border area until after 1603. Window apertures would have been fitted with wooden shutters to permit closure. Although the few shards of window glass recovered from the excavations may suggest an earlier date it could easily be that it is re-used glass. There is an interesting parallel with Traquair House where the north wing (c1690) has window panes made up of overlapping pieces!

Six samples, over and above those analysed by Helen Spencer, were selected for pXRF analysis but this work was not carried due the temporary closure of the Heriot Watt laboratory. These are as follows: window glass shard SF26, medicine phial SF1.2, drinking vessels SF32.2 and SF69, black bead SF7.3 and lamp glass SF10.1

### *General comments about the glass in each trench*

Trench 1: Apart from window glass there was nothing else to provide more than a loose date. The wine bottle shards might indicate a second half 18<sup>th</sup> century date.

Trench 2: Again this did not yield any precisely definitive shards but what was there looked 2nd half 18<sup>th</sup> century. Two small shards of a possible drinking vessel were recovered.

Trench 3-4: Productive trench with 104 glass shards including wine bottles from 1st quarter 18<sup>th</sup> century and one, SF79, which may be late 17<sup>th</sup> century. There were three partly reconstructed bases from wine bottles of differing dates. Base 1 lacked any sidewall to be absolutely sure, but what was there appeared to be probably mid-18<sup>th</sup> century, possibly slightly earlier. Base 2 came from a classic 'onion shaped' bottle probably of the first decade of the 18<sup>th</sup> century. Further related shards indicated the usual widely splayed neck. Base 3, with the exception of a couple of shards from Tr8, was the only brown glass bottle recovered from the site. Its colour plus narrow diameter and slightly tapered shape indicate a probable 1st half 19<sup>th</sup> century date. Brown and black glass is rare on Scottish sites before c1800. This is related to the types of wine being consumed. Four shards of a possible medicine phial were also recovered. Only two shards were found in Trench 4, neither of which was definitive except to say probably 18<sup>th</sup> century in date, and none were recorded from Trench 5.

Trench 6: Only one shard, again probably 18<sup>th</sup> century.

Trench 7: Twenty-four shards mainly wine bottle ranging in date from probable late-17<sup>th</sup> to mid-18<sup>th</sup> century with the majority being early in that period. The junction of bowl and stem from a drinking glass was also recovered. A thin shard of possible lamp glass was also present.

Trench 8: This trench yielded a slightly enigmatic wine bottle part neck and lip. The string ring was 11mm below the lip which is usually an indicator of early second half 17<sup>th</sup> century which would be exciting since such examples are few in number. Other shards from this trench have a mid to late 18<sup>th</sup> century date, some possibly early 19<sup>th</sup> century.

## References:

- Dumbrell R 1992: Understanding Antique Wine Bottles: Antiques Collectors Club, Suffolk
- Dungworth D 2011 Walmer Castle, Deal, Kent, Analysis of window glass: English Heritage research report 2-2011, Portsmouth.
- Mitchell K, Murdoch R: Fast Castle, Excavations 1971-86, Edinburgh Archaeological Field & Ward J 2001 Society, Edinburgh
- Turnbull J 2017 From Goblets to Gaslights, The History of the Scottish Glass Industry 1750-2006, Society of Antiquaries of Scotland, Edinburgh

## Catalogue

In the catalogue, where shards are either too small or indiscriminate in shape, the expression 'late 17<sup>th</sup> to early 19<sup>th</sup> century' is used. However, occurrence of wine bottles from the late 17<sup>th</sup> century is rare compared to those from the 18<sup>th</sup> and later, perhaps less than 10%. Early 19<sup>th</sup> century bottles are frequently darker green through to black and brown. The expression 'orange peel' is used in some places to describe the look of the surface of a shard. This effect was the result of the metal mould being at too low a temperature during the moulding process, this led to differential cooling and the surface of the shard resembling that of orange peel. Unless otherwise stated all finds may be presumed to be fire bright. Where any corrosion is evident it is noted, e.g. slightly dulled.

The window shards already analysed by Helen Spencer are identified by an asterisk. The layout of the catalogue mirrors finds list order Trench by Trench.

### Trench 1

#### 7.4 All Context1:

Shard window glass, pale dull green, 1.7mm. \*

Two shards probably wine bottle, pale dull green, late-17<sup>th</sup> to early-19<sup>th</sup> century.

#### 12.3 Shard window glass, mid dull green, 1.7mm. Context2. \*

#### 16 Small shard probably wine bottle, light dull green, late-17<sup>th</sup> to early 19<sup>th</sup> century. Context 1

### Trench 2

22 Neck and part shoulder wine bottle, mid dull green, late-17<sup>th</sup> to early-19<sup>th</sup> century. Context 1.

23 Very small probably wine bottle shard. Context 1.

25 Shard possible window glass, mid aqua, thickened edge, 3.3mm. Context 1.

27 Shoulder/neck shard wine bottle, pale dull green, late-17<sup>th</sup> to early-19<sup>th</sup> century. Context 1.

30 Three small shards wine bottle, pale dull green, late-17<sup>th</sup> to early-19<sup>th</sup> century. Context 1.

31 Small shard wine bottle, straight sided, pale dull green, 2nd half 18<sup>th</sup> century. Context 1.

36 Small shard wine bottle, pale dull green, late-17<sup>th</sup> to early-19<sup>th</sup> century. Context 1.

44 Two shards wine bottle, pale dull green, late-17<sup>th</sup> to early-19<sup>th</sup> century. Context 1.

66 Shard shoulder/neck wine bottle, pale dull green, late-17<sup>th</sup> to early-19<sup>th</sup> century. Context 1.

67 Very small shard wine bottle, pale dull green, late-17<sup>th</sup> to early-19<sup>th</sup> century. Context 1.

69 Two small shards, clear, possible drinking vessel. Context 1.

72 Neck shard wine bottle, pale dull green, late-17<sup>th</sup> to early-19<sup>th</sup> century. Context 1.

- 77 Small shard wine bottle, pale dull green, late-17<sup>th</sup> to early-19<sup>th</sup> century. Context 1.
- 90 Shard wine bottle, possibly straight sided, pale dull green, 2nd half 18<sup>th</sup> century. Context 1.

### Trench 3

- 1.2 Three shards, pale greenish aqua, possible medicine phial late-18<sup>th</sup>-early-19<sup>th</sup> century. Context 2.
- 7 Shard pale greenish aqua, possible medicine phial (same as 1.2?). Context 2.
- 11.3 Two small shards wine bottle, pale dull green, late-17<sup>th</sup> to early-19<sup>th</sup> century. Context 2.
- 20 wine bottle neck, mid slightly olive green, slightly dulled, neatly finished, 1st half 18<sup>th</sup> century. Context 2.
- 48 Six shards bottle, mid brown, 19<sup>th</sup> century. Spoil heap.
- 57 Shard neck and lip wine bottle, pale dull slightly olive green, neat string ring, slightly lopsided lip, c1700-50. Context 1.
- 74 Part neck and lip wine bottle, mid dull slightly olive green, neat finish of string ring and lip. Neck has curving splay, aperture 18mm, c1700-25, possibly late 17<sup>th</sup> century. Context 2.
- 79 A total of 87 shards from at least three wine bottles in generally dull mid green. All Context 2:

Base 2 is a large reconstructed base from an 'onion' shaped bottle 1<sup>st</sup> quarter 18<sup>th</sup> century. Original diameter c150mm+, kick 34mm, moderate to gentle base ring curve. Moderate base ring wear. From the same bottle are three lower neck and shoulder shards (also reconstructed), which are splayed. Also a small section of lip quite neatly made.

Several shards from a second wine bottle of similar colour, but much smaller diameter, c90-100mm, bellling. Post c1740 and possibly 2<sup>nd</sup> half 18<sup>th</sup> century.

Small bag, 4 shards wine bottle, mid dull green, one with rounded profile, 1<sup>st</sup> half 18<sup>th</sup> century and pre c1740 in date.

Second small bag (annotated 27-6-15), containing 22 small shards wine bottle similar colour to above. One is curved but may have slightly flattened profile suggesting late 1st quarter 18<sup>th</sup> century.

Partly reconstructed wine bottle base (Base 1), mid dull green, diameter c130mm, appears to have moderate to tight base ring curve, fairly shallow kick, probably mid-18<sup>th</sup> century.

Partially reconstructed bottle (Base 3), probably wine, in dark dull brown, diameter 87mm, deep 35mm pointed kick, slight orange peel outer, no bellling, slight body taper, probably blown in a three piece mould. Light to moderate base ring wear, 1st half 19<sup>th</sup> century.

- 82 Shard wine bottle base, mid slightly olive green, large diameter, moderate base ring curve, moderate base ring wear, 1st half 18<sup>th</sup> century, possibly late 1st quarter. Context 2.

- 138.2** Two shards wine bottle, mid dull green, late-17<sup>th</sup> to early-19<sup>th</sup> century. Context 3.
- 162** Shard wine bottle, pale dull green, late-17<sup>th</sup> to early-19<sup>th</sup> century. Context 3.
- 181** Shard wine bottle, mid slightly olive dull green, late-17<sup>th</sup> to early-19<sup>th</sup> century. Context 3.
- 182** Shard wine bottle, mid slightly olive dull green, late-17<sup>th</sup> to early-19<sup>th</sup> century. Context 3.
- 185** Shard window glass, pale dull green, 1.1mm thick. Context 3. \*
- 203** Shard wine bottle, mid slightly olive dull green, late 17<sup>th</sup>- 19<sup>th</sup> century. Context 3.
- 204** Base shard wine bottle, mid dull green, moderate base ring curve, heavy base ring wear, shallow kick, late-17<sup>th</sup> century. Context 3.
- 225** Shard wine bottle, mid slightly olive dull green, late-17<sup>th</sup> to early-19<sup>th</sup> century. Shard wine bottle, ditto. Context 44.
- 251** Shard wine bottle, pale slightly olive dull green, late-17<sup>th</sup> to early-19<sup>th</sup> century. Spoil heap.

#### **Trench 4**

- 212.2** Two shards window glass, pale dull green, 1.9 and 2mm. Context 32. \*
- 268.2** Small shard neck wine bottle (?), pale rich green, late-17<sup>th</sup> to early-19<sup>th</sup> century. Context 58.

#### **Trench 6**

- 1** Shard wine bottle, pale dull green, late-17<sup>th</sup> to early-19<sup>th</sup> century. Context 1.

#### **Trench 7**

- 2.7** Six shards wine bottle, pale dull green, including lip fragment neatly made and with string ring 6mm below lip, probably late 17<sup>th</sup> century. Context 1.
- 7.3** Dark brown (black) bead, sub-circular, diameter 10.5mm, aperture 3.5mm. At one end there is what appears to be a short cylindrical extension centred on the aperture, possibly a leftover sprue from the moulding. Context 1.
- 8.2** All Context 1:
  - Body shard wine bottle, pale brownish green, straight sided, c80mm diameter mould contact, last quarter 18<sup>th</sup> - 1st quarter 19<sup>th</sup> century.
  - Base ring shard wine bottle mid dull green, moderate base ring curve, 1st half 18<sup>th</sup> century, possibly late 1st quarter.
  - Neck shard wine bottle, mid-dull green, late-17<sup>th</sup> to early-19<sup>th</sup> century.
- 10.1** Shard window glass, clear, 3mm. Small thin shard, pale green, lamp glass or possibly medicine phial. Context 1. \*

- 10.2 Part neck and lip wine bottle, mid dull slightly olive green, slight splay, late 1st half 18<sup>th</sup> century. Context 1.
- 14.4 Thick probably neck shard wine bottle, mid dull green, late-17<sup>th</sup> to early-19<sup>th</sup> century. Context 1.
- 16.2 Small neck/shoulder shard wine bottle, pale dull slightly olive green, late-17<sup>th</sup> to early-19<sup>th</sup> century. Context 1.
- 18.4 Shard wine bottle, pale dull green, late-17<sup>th</sup> to early-19<sup>th</sup> century. Context 1.
- 19.2 Base shard wine bottle, mid slightly olive dull green, moderate base ring curve, heavy base ring wear, 1st half 18<sup>th</sup> century. Context 1.
- 24.3 Two shards wine bottle, mid slightly olive dull green, late-17<sup>th</sup> to early-19<sup>th</sup> century. Context 1.
- 27.2 Shard wine bottle, pale slightly olive dull green, late-17<sup>th</sup> to early-19<sup>th</sup> century. Context 2.
- 32.2 Small shard clear, junction of bowl and stem from drinking vessel. Context 11.
- 33.1 Thin shard wine bottle, pale dull slightly olive green, late-17<sup>th</sup> to early-19<sup>th</sup> century. Context 2.
- 36.1 Shard wine bottle, mid green, late-17<sup>th</sup> to early-19<sup>th</sup> century. Context 10.
- 45 Body shard wine bottle, mid slightly olive dull green, curved, slightly flattened, probably mallet shape, late 1st quarter to early 2nd quarter 18<sup>th</sup> century. Context 2.
- 50.3 Small neck shard wine bottle, pale dull slightly olive green, late-17<sup>th</sup> to early-19<sup>th</sup> century. Context 2.
- 62.3 Small shard wine bottle, pale dull slightly olive green, late 17<sup>th</sup> to early 19<sup>th</sup> century. Context 8.
- 78.2 Shard wine bottle, pale dull slightly olive green, late-17<sup>th</sup> to early-19<sup>th</sup> century. Spoil heap.
- 80.2 Body shard wine bottle, mid dull slightly olive green, curved, 1st quarter 18<sup>th</sup> century. Spoil heap.

## **Trench 8**

- 1.1 Base shard wine bottle, mid dull slightly olive green, belling, orange peel, diameter c110mm, mid-18<sup>th</sup> century. Context 1.

- 2.1 All Context 1:

Part neck and lip wine bottle, pale to mid dull green, neat string ring 8.5mm below plain unfinished lip, possibly 3rd quarter 17<sup>th</sup> century. Small shard probably from same bottle.

One further wine bottle body shard, pale dull green, late-17<sup>th</sup> to early-19<sup>th</sup> century.

**3.1** All Context 1:

Two shards bottle, pale brown, straight sided, mould marked surface, probably early 19th century.

Shard wine bottle ? shard, mid green, orange peel, late 18<sup>th</sup> - early 19<sup>th</sup> century.

Small shard bottle, pale dull green.

**4.2** Shard wine bottle base, mid to dark dull green, belling, original diameter c110mm, mid-18<sup>th</sup> century. Context 2

**5.1** Base shard wine bottle, mid dull, slightly olive green, belling, original diameter 110mm, mid-18<sup>th</sup> century. Context 2.

**6.2** Body shard wine bottle, dark brownish green, straight sided bottle, slight belling, slight orange peel, late 18<sup>th</sup> - early 19<sup>th</sup> century. Context 1.