Doors and Fanlights

This guide should be read in conjunction with Design & Conservation Guide No. 20: Door and Window Security; Guide No. 4: Sash Windows and Guide No. 5: Glass and Glazing may also be relevant.

Doors

Original doors are important to the character and appearance of historic buildings (Figure 1), but are frequently removed unnecessarily and replaced with new doors, which often have an adverse impact on the character and appearance of historic buildings. Repair of surviving original doors is almost always possible unless the decay or damage is unusually severe.

Listed Building Consent will always be required where removal or replacement of external doors or historic internal doors is contemplated. An application for Planning Permission may also be required where removal or replacement of external front doors is proposed (particularly in cases where a historic building is unlisted and located within a Conservation Area).

Most historic buildings in Islington have timber doors (Figure 2) made of fine quality pine or fir pieces called deal. These were invariably painted with lead-based paints. In particularly prestigious buildings, hardwoods such as oak or mahogany might be used either in solid form or applied to softwood as surface veneers. For a large number of domestic buildings in Islington the size and position of the door and windows were decided by interpretations of systems of proportion derived from buildings of classical antiquity. This means that alterations to doors and door openings as well as windows can have a very disruptive effect upon the building’s appearance and should be avoided.
There is usually uniformity of door design and sometimes colour within terraces or groups of buildings (Figure 3). Most external and internal doors in Islington houses are variants upon two, four or six panelled designs (Figure 4). Some internal or external basement doors may also be simple plank doors. The complexity of a door’s pattern will normally depend upon the status of the building or room for which it was intended. All original doors should be retained in their original positions as they indicate the status and hierarchy of the buildings or individual rooms.

Many buildings have front doors with glass fanlights over, or panelled doors with integrated decorative glass panels. Some modern front doors wrongly incorporate the fanlight into the doors themselves. This should always be avoided. The principal element of a panelled door are the stiles, muntin, rails and panels (see Figure 4). The stiles are joined by the horizontal rails. The muntin, which runs down the centre, is not normally a single piece of timber. Other than the top and bottom rails it is common for there to be a rail at the level of the handle called the lock rail and one between this and the top rail known as the frieze rail. The rails, stiles and muntins will vary in their sizes and proportions. Panels are slotted into grooves in the framing sections and are not normally nailed or glued in place. The joints are often wedged. The mouldings for
the panels are normally integral (Figure 5), but occasionally extra ‘planted’ mouldings were stuck on mainly interior doors, or patterns cut into the panel surfaces.

**Assessment of condition**

Doors, like windows, will suffer from decay if they are not properly maintained and are left exposed to water penetration or insect attack. External doors are most vulnerable to decay and/or damage from break-in, lock mechanisms etc. There are common patterns of decay which are often exaggerated (Figure 6). It is normally less expensive to repair a door than to replace it on a like-for-like basis.

A proper assessment of condition is the most important element in setting up a programme of repair. It should be possible to make an assessment without removing the door from site.
Door surrounds and porches are designed to throw water away from the front of a building. Failure of flashings will expose the tops of doors to decay but the most vulnerable section is the bottom of a door. Water will settle or splash back at the bottom and rot will normally set in via the joints. The rot will often only extend into the bottom rail, joints between the rails and stiles and lower sections of the stiles (Figure 6). Basic exploratory work with a pen-knife will help to establish the extent of the decay, testing for soft material.

Forced entry is most likely to affect the locking stile and the bottom rail and panels. It should be possible to replace these elements and upgrade the door at the same time. Occasionally gradual structural movement will have left the door out of line with its opening. There are a number of measures which can accommodate this. If the movement appears to be progressive you should seek immediate professional and Islington Council Building Control advice.

If there is glass in the door it also needs to be assessed. Old glass can be very vulnerable during repairs and may need expert repair. Glazing bars or lead cames (the lead bars which hold the glass) may be repaired, but if there has been severe damage or deterioration is particularly severe they should be replaced on a like-for-like basis. Careful use of a putty softener will ease the removal of glass without damage occurring to the glass or framing structure (note that this type of system is very rare in Islington).

**Repair**

A schedule of repairs should be drawn up for every door in a building identifying which timbers can be repaired with splices (refer Figure 7) and which will need replacement. The framework of the door needs to be freed to allow access to individual sections. The stiles are the only structural elements which run the full length of the door and once the tenons have been released the rest of the framing structure can be dismantled. Tenons are usually secured by wedges and may be reinforced by the use of dowels, nails or screws.

Small areas of damage to timber may be consolidated with a flexible, waterproof filler or mastic. Flexibility is important as wood will continue to move according to temperature and humidity and a rigid filler will not move at the same rate. Sections of hard filler will usually develop cracks around their sides which allow continued water penetration and can accelerate decay. They should only be used where wood glue can provide a flexible bond between surfaces.
Timbers which are to have new sections spliced in should be cut back to sound wood and a splicing joint prepared. The quality of timber used is essential to the success of the splice and the wood used must be good quality pine or similar, ideally second hand. It is important to expose as little of the splicing joint as possible to water penetration and it is sensible to secure the joints between the sections with non-ferrous fixings, although regular painting should mean that rusting is not a problem.

**Paint and paint removal**

All sections of the door should be painted prior to re-assembly including those joints that will be hidden. Softwoods in historic buildings were almost invariably intended to be painted and stripping doors will leave them more open to decay as well as being at odds with their original appearance.

Some paint removal may be necessary when repairing a door but it is generally advisable not to strip right back to the wood. Most doors had an initial coat of lead-based paint which formed an excellent seasoning coat. Health and safety regulations mean that these lead paints are no longer available for general use in buildings and so it is all the more important that the base coats are retained where they survive.

It is not normally advisable to dip doors to remove paint. Mouldings, areas of filler and any wood glue used to secure the joints may be dissolved by the acid. It is frequently difficult to identify mouldings and filler before the dipping. Losses can be very difficult or expensive to replace. Dipping may also cause the timbers to shrink and leave joints open as a result. Listed Building Consent is required for even the temporary removal of doors and most doors should be cleaned in situ. There is a wide range of gels and poultices on the market which can be used. These should always be patch-tested before a whole door is cleaned.

**Door Furniture**

Door furniture – handles, letterboxes, knockers – can be of interest as can original locks or hinges. These should always be retained and should be re-used where possible. L-shaped or H-shaped hinges from the eighteenth or earlier nineteenth centuries sometimes survive and should be re-fixed after repairs.

Figure 8 Historic door with fanlight over circa 1830s
Replacement Doors

Where unsuitable new doors have been introduced in the past their replacement is encouraged, but note that consent may be required. In terraces there will usually be a surviving original example which can form the pattern for a replacement door. Close attention to detail is always important in reproduction doors and it is particularly important to follow the correct door thickness and moulding profiles and to use a good quality timber which will not distort once in place.

Fanlights

A fanlight is a semi-circular or rectangular window (refer to Figures 8, 9 and 10), above and enclosed within the same void as a door, in which several panes of glass, fixed into glazing bars with putty, are arranged for decorative effect.

This definition makes a distinction between proper and the decorative iron grilles and leaded lights seen elsewhere. It is also noted that the putty is on the inside so that the decorative effect of the glazing bar mouldings is seen from the outside.

The two purposes of fanlights are to provide light to the hallways of eighteenth, nineteenth and twentieth century town houses, and to give some decoration to the exterior of these otherwise rather plain houses.

Glazing bars were required because glass was only manufactured in small panes and was very expensive. It is possible that the semi-circular shape of the fanlight derived from the round headed sash window.

Evolution

The earliest fanlights were formed from the fretted openings in a solid board in the 1720s. Examples can be seen in Britton Street and Charterhouse Square (Figure 10). Other fanlights were simply based on the upper parts of arched sashes utilising simple radiating glazing bars.
More elaborate and decorative fanlights came with the use of pattern books which suggested various designs based on classical and gothic motifs. The designs, however, were as much based on the materials used for their manufacture.

**Materials**

Until the mid-eighteenth century, wooden fanlights had three types of construction:

- Wooden glazing bars with the mouldings on the exterior;
- members made from laminated timber strips glued together; and
- hand moulded and carved glazing bars done as individual creations.

A further type was one which utilised *compo*, a patent composition consisting mainly of whiting and glue, which was overlaid on the wood to provide further decorative elements.

With the London Building Act of 1774, the change to metal was encouraged, which was not only less combustible but could utilise thinner and more graceful designs, which at the same time allowed more light into the hallway. The earlier type S used brass or wrought iron made by a hot rolling process. Others used T-sectioned bars, to which cast brass ornaments might be soldered.

As iron casting improved so that thin enough sections could be produced for glazing bars, this superseded wrought iron; but the most important change came with the invention of the compound glazing bar in the late eighteenth century. Here, the external ribs of the glazing bars were cast in an alloy of tin and lead and soldered to thin glazing webs of brass, copper or tinned iron. Once glazed, this provided a rigid frame. This was patented by Francis Underwood in 1774, and his firm – Underwood, Bottomley and Hamble – continued to produce fanlights of this type into the 1830s.

Another type of metal window was known as the *Eldorado* (after the golden colour of the metal). The glazing bars were made in two parts, the webs fitting into grooves in the back of the ribs and then crimped together between rollers. The components were then soldered together and fixed to the outer timber sash by screws or sharp points.

With the invention of sheet glass in the 1830s, the structural requirements for glazing bars declined and the fanlight became a plain sheet of glass. There have been periods where the designs have been revived, particularly after the First World War. There were more often grilles set up in front of sheet glass, such as may be seen on banks or post offices; or else they followed the more traditional method of wooden glazing bars. Another method was to use leaded lights to imitate the earlier metal types.

**Designs**

Fanlights are either semi-circular (figures 8, 9 and 10) or rectangular. The earlier types were a simple fan like shape or else resembled the spokes of a wheel. This developed into more elaborate designs incorporating sub-divisions, geometric patterns, swags, star shapes, ovals and circles. Two particularly common designs in Islington are the *batswing* and *teardrop* variety. The batswing consists of a central circle with ribs either side, radiating down to look like the ribs of a bat’s wing. The teardrop is similar but the divisions finish in semi-circles, looking like drops of tears each side of the central circle (Figures 8 and 9). The rectangular fanlight tends to be...
simpler. Sometimes this combines with a semi-circle with some decoration in the
spandrel, but other designs show rows of circles or inter-locking shapes (Figure 1). A
walk down almost any street in central or southern Islington reveals a remarkable
array of different designs.

Methods of Repair

It must be stressed that any repairs must be made using matching materials. The aim
should be to retain as much of the original fabric as possible. Before a repair can be
made, a careful analysis of the material and method of construction must be made.
This will possibly involve the careful chipping away of a small area of paint work or
alternatively looking at any other on site evidence. A review of any fanlights on
nearby properties can provide additional clues. Obviously, fanlight types vary from
house to house and street to street – that is part of their delight, but careful
observation should be made as the nearby houses tend to have been constructed at
the same time. Bear in mind, however, that all houses have been altered and that the
existing may not be the original. A fanlight should never be replaced with a copy.

There may be a case for reinstating a missing fanlight. The above methods of
investigation apply. Listed Building Consent will also be required. It may also be
worth investigating early photographs of the area and any other documentary
evidence. The Islington Local Studies Library is an excellent resource for these
purposes.

Any repairs to a fanlight must be carried out by a competent crafts person.
Useful contacts

Islington Council - Planning & Development Management Service
Website: www.islington.gov.uk/services/planning
Email: planning@islington.gov.uk

Islington Council - Building Control
Website: www.islington.gov.uk/services/planning/building-control
Email: building.control@islington.gov.uk

Historic England
http://www.historicengland.org.uk

The Society for the Protection of Ancient Buildings
www.spab.org.uk

Building Conservation Directory
www.buildingconservation.com

The Georgian Group
Website: www.georgiангroup.org.uk

The Victorian Society
Website: www.victoriansociety.org.uk