

15th March 2002



To all Councillors:

Dear Councillor,

There will be a meeting of the **Finance and Policy Committee** on **Tuesday 2nd April 2002** at **7.30 pm** at Thanet House, London Road, Stroud, to consider the following:

Yours sincerely,

A handwritten signature in black ink, appearing to read 'Susan Creswick', written in a cursive style.

Susan Creswick
Town Clerk

AGENDA

1. Apologies
2. Minutes of the meeting of 18th February 2002
3. Matters Arising
4. Stroud as a Fair Trade town
5. Grant application – Restoration of Blackboy School Clock
6. Museum – funding for trail pack
7. The Leazes Draft Management Agreement
8. SDC Golden Jubilee Grant
9. Budget Monitoring February 2002
10. Approval of payments for February 2002
11. Items for a future agenda
12. Confidential Business - Personnel Matters
13. Date of next meeting

*** Members of the public are welcome to attend ***

A J NICHOLLS MBHI
HOROLOGICAL ENGINEER
8, Williamson Road, St Andrews, Bristol BS7 9BH
Telephone: 0117 944 6276 - Fax: 0117 940 1313 - E-mail: Twrclocks@aol.com

BLACKBOYS, STROUD - EXTERIOR CLOCK

The 'Blackboys' clock is installed on the old Castle Street School building in Stroud, now residential flats. It takes its name from the wooden jack figure of a native African boy which stands in a niche above the clock dial. The jack has a club in his hand and strikes a bell with this to sound the hours. The jack also turns his head at the beginning and end of each striking sequence. There is a single exterior dial in an octagonal wooden frame.

The clock movement is a two train wrought iron posted frame miniature turret clock. This has a conventional going train to drive the outside dial. The striking train operates the arm of the jack to strike the bell. It has an additional mechanism for turning the head of the jack. The clock movement is located in the roof space behind the dial. It is enclosed in a wooden case. Access is via one of the flats, through a trap door into the roof space.

The clock movement bears the name & date Miles 1774 on a brass setting dial on the front of the movement. The setting dial has its own motionworks, so hours and minutes are displayed. Miles was a clockmaker in Kendrick Street Stroud. The clock was originally on his house. After Miles death, the clock was moved to the front of the Duke of York public house. The clock was bought by subscription in 1844 and set up on the present Castle Street School building.

The frame has one piece top and bottom ring plates separated by square section corner posts. These are secured with threaded fasteners. The wheels pivot in brass bushes set into vertical wrought iron train bars. These are secured to the main frame with taper pins.

The clock has brass wheels and iron leaved pinions throughout. It has four arbor trains, so was probably designed to be wound up once per week. The clock is driven by two weights which need to be manually wound. These would originally have descended into the room below. However, the weight shaft was sealed off when the building was converted into flats. This will reduce the running period between windings.

Timekeeping is controlled by a pendulum beating seconds. The clock has an anchor escapement with solid pallets. Beat adjustment is by bending the crutch. The going second wheel makes one revolution per hour and a coupling on this arbor and short leading off rod connect the clock to the dial motionworks. A centre hour wheel drives the setting dial on the clock movement and releases the striking train on the hour.

Striking control is conventional countwheel type. The striking lever and head turning lever are actuated by pins on the main wheel, one set of pins serving both levers. The speed of striking is controlled by a fly (or air brake) within the clock frame. There are two countwheels, coupled together and driven by a pinion of report on the mainwheel arbor. The second countwheel keeps the head of the jack in the turned position (looking at the bell) while striking and releases it to the normal position at the end of the striking sequence.

The clock was not going when inspected, as it had been removed from the building. The pendulum was missing. It was found to be in generally worn condition, with some badly worn parts in the striking train, namely the pinions and striking pins. The head turning mechanism was not working properly due to worn parts. The pinions in the going train were worn to a lesser extent and the action can be shifted to unworn parts of the pinions. The pallets were badly cut and need to be refaced. The extent of wear to the clock is probably due to the dilapidated condition of the jack and lack of

servicing. The jack may have needed excessive force to operate it. It is most important for the arm and head of the jack to work smoothly and be properly balanced.

The clock movement can be repaired and the worn parts remade. Extensive rebuilding is needed for the clock to work reliably. Some of the worn parts are lightly loaded and can continue to work in their existing condition. It is recommended that as much as possible of the historical mechanism be conserved. The minimum work recommended is replacement of the striking pins and reprofile lever tips, replacement of the strike second pinion, refacing the pallets, shift action of escape wheel pinion, rebush pallet front, going second rear and strike barrel rear bushes. Other general repairs will be needed and must be assessed when the clock is dismantled.

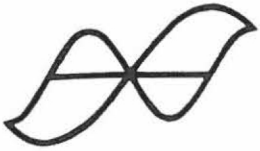
The clock will need to be wound up every day due to the reduced weight fall available. This is unlikely to be convenient for Landlord or Tenant and is likely to lead to abandonment of the clock. The best way of conserving the historic mechanism is to install automatic winding. This will keep the clock running. However, it will be necessary to make regular adjustments to the timekeeping and provision must be allowed for this. Access to the pendulum for regulation is via an inspection hatch below the ceiling of the flat. It is recommended that the clock be adjusted to run slightly fast. It can then be easily set to time by stopping the pendulum as required.

The jack figure is currently being restored, and the mechanism was inspected. A rod passes through the figure to operate the arm and club which strikes the bell. The buffer spring, was missing, presumably corroded away. This is important to prevent the striking club from resting on the bell and spoiling the tone. The missing spring had also caused severe wear in the operating rod bush, making the arm very loose at the shoulder. Repair and a new buffer spring are recommended.

In the roof space is a rod inside a tube which operates the turning head of the jack. The lever linkage which moves this rod in and out is missing and a new one will need to be made. The other levers were found to be serviceable.

To conclude, this is an interesting and historic clock. It is probably the only jack clock in Gloucestershire. Certainly the only one with its original movement. Some extensive repairs to the clock movement and jack are needed to make the clock work reliably. However, it is recommended that as much as possible of the original workings be conserved. It is strongly advised that automatic winding be installed to ensure the continued working of this clock. It can then be expected to once more become a popular feature and give useful service to the local community.

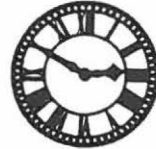
A J Nicholls MBHI
October 2001



A J NICHOLLS MBHI HOROLOGICAL ENGINEER

8 WILLIAMSON ROAD ST ANDREWS BRISTOL BS7 9BH
TELEPHONE 0117 944 6276 FAX 0117 940 1313

TOWER CLOCK



SPECIALIST

Our Ref: P1786
05/12/01

Dear Mr Mellish,

Re: Blackboys Clock

I now have pleasure in sending our estimate for restriction of your clock. the delay. Please note that the jack figure will need a buffer spring on its arm to allow the bell to sound properly. The shape and position of this can only be determined with the jack in situ, since the relative positions of the jack and bell are needed.

We understand that you also require a price for a new clock system to drive the existing dial and jack. This will need to be specially made due to the unusual functions required. We recommend a quartz master clock to control the dial and jack. A price for this will follow in due course.

ESTIMATE

Estimate A - Clock Restoration

To attend site and collect clock movement, take necessary measurements in roof space, overhaul and clean, repair loose barrel arbor, secure going mainwheel, rebush worn holes as necessary, shift wheel action to unworn part of escape wheel pinion, reface pallets, reverse strike mainwheel to present unworn tooth profile and make new striking pins, shift wheel actions in striking train as necessary, make new fly ratchet, secure pinion of report, secure strike front bush in frame, straighten strike lever, and reprofile lever tip, rebush head shake lever and make new bearing pad, repair broken lead-off coupling, make new jack arm bush, make new cranks for head shake linkage to replace missing items, assemble oil and test, fix on site and adjust, connect to autowind and serviceable dial and jack, set clock going to correct time.

£1601.75 + VAT

MECHANICAL AND ELECTRICAL REPAIRS
AND OVERHAULS
TURRET CLOCKS
AUTOWINDERS
NIGHT SILENCING



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NEW INSTALLATIONS COMMISSIONED
MASTER CLOCK SYSTEMS
SURVEYS AND
MAINTENANCE AGREEMENTS
VAT NO 520 1780 83

Estimate B - Automatic winding

Design and manufacture two epicyclic geared automatic winding units for Blackboys clock, with totally enclosed motors, safety overrun cut-outs and thermal circuit breakers; supply industrial quality chain and sprockets; make special collets to mount drive sprockets on clock arbors; re-use parts of existing clock weights for autowinder; design and manufacture steelwork support structure to mount automatic winding units adjacent to clock; install all equipment on site and connect to customer's prepared live electricity supply in clock room; test and commission system; set clock going to correct time.

£2000.00 + VAT

Estimate C - Night Silencing

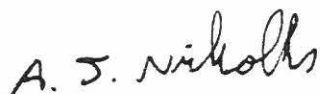
Supply & fit automatic night silencing for strike, controlled by quartz time switch with 100 hours battery reserve, connect to customers prepared live electricity supply in clock room, test & commission system. Silencing times may be set as required.

£350.00 + VAT

Estimate is valid for three calendar months from the above date. Our standard terms and conditions would apply and we draw your attention to the enclosed copy. Customer to provide access scaffold to exterior dial & jack, all to be erected in accordance with Health & Safety Executive guidelines.

We are dedicated to the conservation of historical clocks and would value the opportunity to restore your clock. Our many satisfied customers include respected names such as The National Trust and Duchy of Cornwall. All our work is carried out to the high professional standards required of the British Horological Institute. We enclose a portfolio of our work for your reference. Please call if you need any more information. We look forward to being of service to you.

Yours sincerely,



A J Nicholls