

Farmer's daughter wins the Assay Office Prize



Brought up on a farm in the Cotswolds, Caroline Richardson was fascinated from an early age by organic forms, and this fascination

encouraged her to create strange shapes and sculptures from scrap metal lying around on the farm.

Following an introduction to precious metals during work experience at Hart Silversmiths in Chipping Campden, she went

on, via Warwickshire College, to study Jewellery and Silversmithing at the School of Jewellery in Birmingham. Here she gained a B.A. with first-class honours.

Her winning design.

Onopordum acanthium is a plant which formed the basis for six silver pod forms. The aim of the six pieces was to represent the life cycle of the plant, recording the shapes from its beginnings as a seed, through to maturity and finally decay and decomposition. "The six finished pieces have a silent beauty about them, which

perfectly replicates the nature of the subject matter "Says Caroline. " I have developed my pods into a collection of silver and 18 carat jewellery"

Caroline had exhibited her pods alongside the best of the U.K.s young fresh talent at the New Designers Show". Here she was 'spotted' by Francis Raeymackers of the prestigious Metal Gallery and through their " Graduate 2004 Exhibition saw her work displayed with that of the most talented new metalsmiths, jewellers and silversmiths

Each year Birmingham Assay Office sponsors a special Award in the BJA Annual Prize giving ceremony to students at the UCE School of Jewellery.

The Ceremony took place at the School on 10th November in the presence of the Deputy Lord Mayor of Birmingham, Councillor Peter Hollingworth and our prize was presented to Degree student Caroline Richardson for her silver Onopordum pods

alive today. A very promising start to her career. Caroline has established her own workshop at the guild in the Cotswolds which is open daily for visitors to see her ever-evolving collection in silver and gold. Caroline can be contacted via email - caz.richardson@btinternet.com or by telephone at 01386 841167.



Prestige Award for AnchorCert Diamond Grader

There were celebrations at the Birmingham Assay Office with the news that one of their Diamond Graders for SafeGuard Quality Assurance was to receive a prestigious award for her studies in Gemmology.

The presentation took place on Monday 1st November at Goldsmiths Hall in London, and Anu Manchanda - MSc FGA DGA was this year's recipient of the Christie's Prize for Gemmology. This is a Trade Prize which consists of instruments and books to the value of £500 and is awarded to the best candidate of the year who derives his or her main income from activities essentially connected with the jewellery trade.

Anu, a geology post graduate, joined the Birmingham Assay Office as an Administration Assistant in the Diamond department. Being at the heart of Diamond certification, she was inspired by the Office's investment in the latest technology, and recognising the career opportunities that came on offer, she decided to enrol for the DGA and FGA Diplomas.

Studying, working and looking after a

home and a family has been no easy task for Anu. She came to England from India with her husband Dippal Manchanda, who is the Chief Assayer at the Birmingham Assay Office, and their two children Parth -13, Raghav - 8,

Anu says "It has not been easy, but Dippal has encouraged me all the way, pushing me and telling me that I can do more. He has great faith in me. My family have been very supportive and have had to get used to me attending evening classes. It became part of our routine".

Anu doesn't get much spare time at the moment, but when she does she has her head buried in a good book. She says "I prefer to read books related to gemmology and I like browsing the internet for related subjects. I get great satisfaction if I can get results from what I am looking at, gemmology has become an addiction"! And what about the future? Anu wants to continue to study and hopes to expand her knowledge of gemmology.



Anu Manchanda Msc FGA DGA receives her prize from Ian Mercer BSc FGA Director of Education (The Gemmological Association of Great Britain)

Research + Investment = Our commitment to you



The Birmingham Assay Office is continually researching and investing in the most up to date technology in order to extend its range of capabilities to provide a vast range of high quality services. In a continuous effort to support the Precious Metal and Jewellery Industry, our capabilities now go far beyond our statutory hallmarking duties.

Metal Analysis

In addition to the traditional methods of cupellation and titration, Technical Services offers a comprehensive range of precious metal analysis. Our Laboratory is equipped with Atomic Absorption Spectrometry (AAS) which is routinely used to determine elements including platinum, palladium, nickel, copper and zinc. Also the Inductively Coupled Plasma Optical Emission Spectrometer (ICP-OES), a very versatile and flexible tool which is capable of analysing several elements simultaneously. In addition we can quickly complete full analysis of alloys, including major, minor and impurity elements. Powder samples can be analysed by scorification or smelting to determine their silver or gold content. Gravimetric analysis is also available for a variety of elements.



Nickel Testing



In the early 1990's there was growing concern from dermatologists about the increase in cases of nickel sensitisation which was believed to be linked to body piercing. As a result, a European Directive was introduced in 2000 which now restricts the use of nickel. This applies to earrings and body jewellery and all items which are intended to come into prolonged and direct contact with the skin and such products must comply with these regulations. Our Technical Services Department was closely involved with the development of these tests and we have considerable experience of Nickel testing, offering a UKAS accredited service to the jewellery and fashion industries.



Plating Thickness Determination

Today's decorative gold plating processes are applied to a very diverse range of consumer products and deposit thicknesses will vary with the specifications and application. Plating Thickness Determination enables wholesalers and retailers to have the plating checked for quality and durability. This process is completed by taking a cross section of an article, mounting it in resin then grinding and polishing it. The cross section is then examined using an optical microscope. The plating thickness is measured in micrometers using a video Calder on a monitor screen. It is also possible to take photographs of the plated layers. This is a lengthy process and a high level of operator skill and experience is required to correctly interpret the results. The microscope and photographic facility are also used to examine and record suspect counterfeit hallmarks.



White Gold Analysis

White Gold is available in 9ct, 14ct and 18ct and the alloy is usually bleached by the addition of silver, palladium or nickel, or a combination of all three. The results of these compositional differences are quite a significant variation in colour. It is accepted practice to plate white gold items with between 0.05 and 0.5 microns of Rhodium to produce a bright, white and uniformly finished article. While this makes the new item very attractive, it has inevitably led to problems as the Rhodium plating will eventually wear off, revealing a variety of disappointing colours underneath the plating.



In response to this, the Birmingham Assay Office has worked with a forum of UK retailers and manufacturers to establish standards and a recognised retail definition of White Gold. The standards established apply to the visual appearance of the metal rather than its content. After lengthy research to find a suitable grading system, the Yellowness Index ASTM D1925 which is widely used in the plastic and paint industry, proved to be most relevant. This index enabled the researchers to produce an acceptable "order of whiteness", permitting numerical grades to be identified for white gold alloys. The proposals presented by the researchers are now in the process of being adopted worldwide and we are able to classify alloys scientifically, by colour measurement.



Tarnishing and Product Performance Tests

Tarnishing has been a long standing problem for the jewellery industry. Whilst trying hard to offer the best possible product, many jewellers have been experiencing major difficulties with tarnishing. In response to these growing concerns, the Birmingham Assay Office has developed in-house methods based on appropriate International Standards to assess the susceptibility of a product to tarnishing both pre sale and during wear. The pre sale test exposes the item to the three most common accelerants of tarnishing which may be encountered during packing, transport, storage and in store display. These are sulphur, humidity and high temperature. The complete test is more comprehensive, also exposing the item to accelerants that may be encountered during wear such as fluctuations of temperature, higher humidity and sweat. The samples are photographed before and after each test. The degree of tarnishing is reported in four categories according to a visual assessment and a spectrophotometric measurement where possible. Packaging can also be tested to ensure that it is not introducing tarnishing accelerants. Tests to date have revealed that some glue, spray flock and sticky labels have caused hundreds of pieces of stock to deteriorate during transit and while on display. These new tests enable us to identify the sulphur releasing components.



SAFE GUARD Quality Assurance

SafeGuard Quality Assurance Limited, the leading Jewellery Valuation and Recovery service, is a subsidiary of the Birmingham Assay Office. It is a nationwide operation offering a high quality expert valuation service. A SafeGuard valuation includes a full description of the item valued, a digital image and a unique 'SafeMark' which is stamped onto the item to provide proof of ownership and traceability. SafeGuard offers benefits to independent and multiple jewellers and the final customer. It is a nationally recognised service undertaken by experienced and qualified experts, established jewellery identification and recovery system, and the only system with major insurance company endorsement and promotions.

Diamond Laser Marking

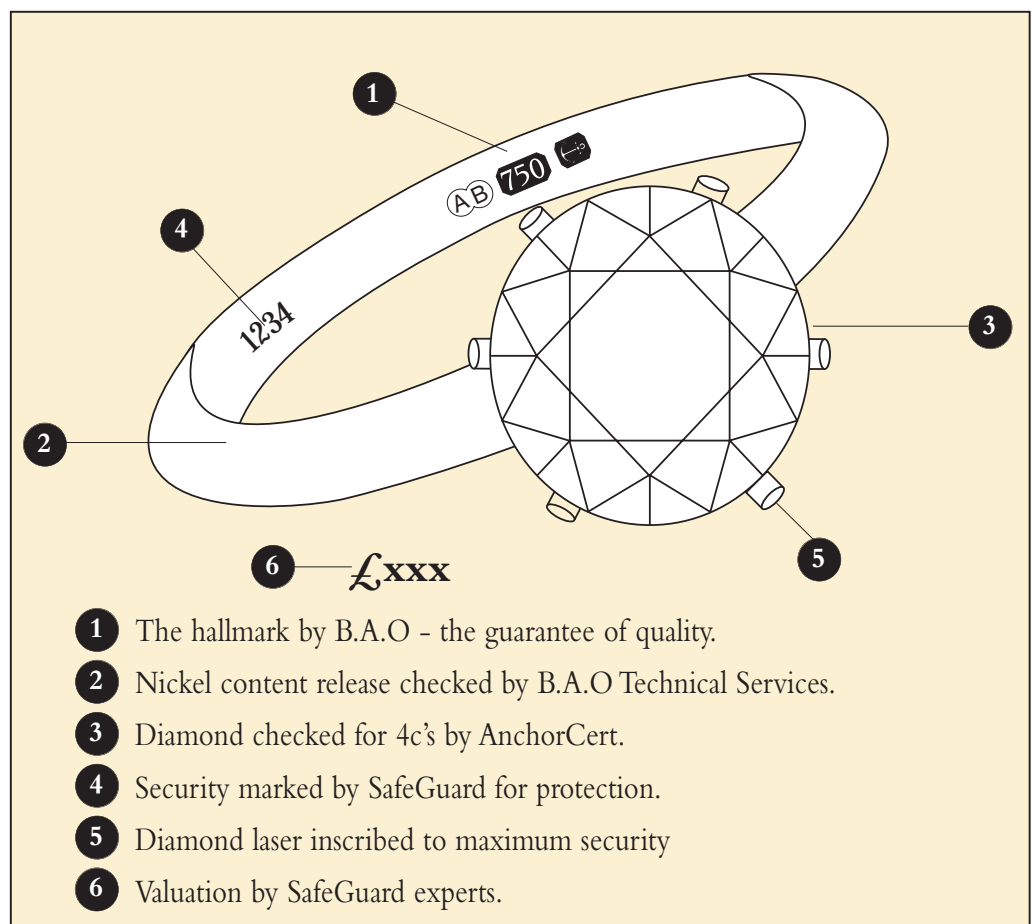
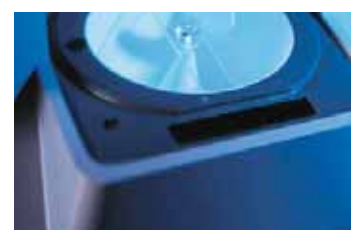
Laser Inscription of Diamonds can be used in a variety of ways. The equipment has been specifically developed for the laser marking of diamonds and can inscribe very accurate and delicate marks without any damage to the stone. As well as AnchorCert certificate numbers, ensuring that the certificate and the stone belong together, a name or a romantic message can also be inscribed onto a diamond to give it a personal identification. The inscription will be invisible to the naked eye but readily legible under x10 magnification. Diamond laser marking is an ideal way of providing proof of ownership and traceability for a diamond.



Birmingham Assay office, through its wealth of knowledge and expertise, is now able to offer all the information you require for a diamond ring.

ANCHORCERT® Diamond Certification

The growing consumer trend for better service and quality has significantly increased the demand for Certified Diamonds in recent years. Advances in technology have made it possible to create a substitute for real diamonds or to enhance natural stones and the Assay Office is aware of this growing trend in synthetic diamonds and High Pressure High Temperature Treatment (HPHT). In response to this the AnchorCert Diamond Certification Service was established and is now the largest in the UK, with offices in London and New York. AnchorCert is well equipped with sophisticated instruments such as the DiamondSure II, DiamondView and a Raman Spectrophotometer to screen for these new treatments. AnchorCert Diamond Certification is offered by a team of highly qualified Gemmologists and Diamond Graders. The latest addition to our AnchorCert team is the resources of the Precious Stone Laboratory London, now known as the AnchorCert Gemmological Office and headed by Director Eric Emms. Our London office in Hatton Garden provides the full portfolio of AnchorCert certificates available in Birmingham and New York, with the benefits of a wealth of experience and expertise in the identification of diamonds, coloured gemstones and pearls.



Two New Guardians

The Annual General Meeting of the Guardian's saw the retirement of two Guardians and the appointment of two new ones.

The new Guardians are Kate Hartigan and John Grey.

Those retiring, having reached the compulsory retirement age of 70, are Bernard Ward, the former Assay Master, and Ross Bellamy. Both of these were originally appointed Guardians in 1985.



Bernard Ward



Ross Bellamy



Kate Hartigan

Kate Hartigan

Kate is currently Managing Director of INA Bearing Company Ltd., a subsidiary of the German INA Schaeffler Group. In her profession of

Accountant she has 25 years of experience in multi-national companies and her areas of expertise include strategic planning, world class



John H. Gray

manufacturing and project management.

John H. Gray

Born in Solihull, John graduated from the University of Warwick with an honours degree in Management

Sciences. He became practically and technically qualified while working with BSA and Lucas and by running two businesses within the Conentic Group plc.

He has international business knowledge whilst working in the USA, France, Germany and Australia.

He is presently Managing Director of AB Electronics Ltd, part of TT Electronics plc.

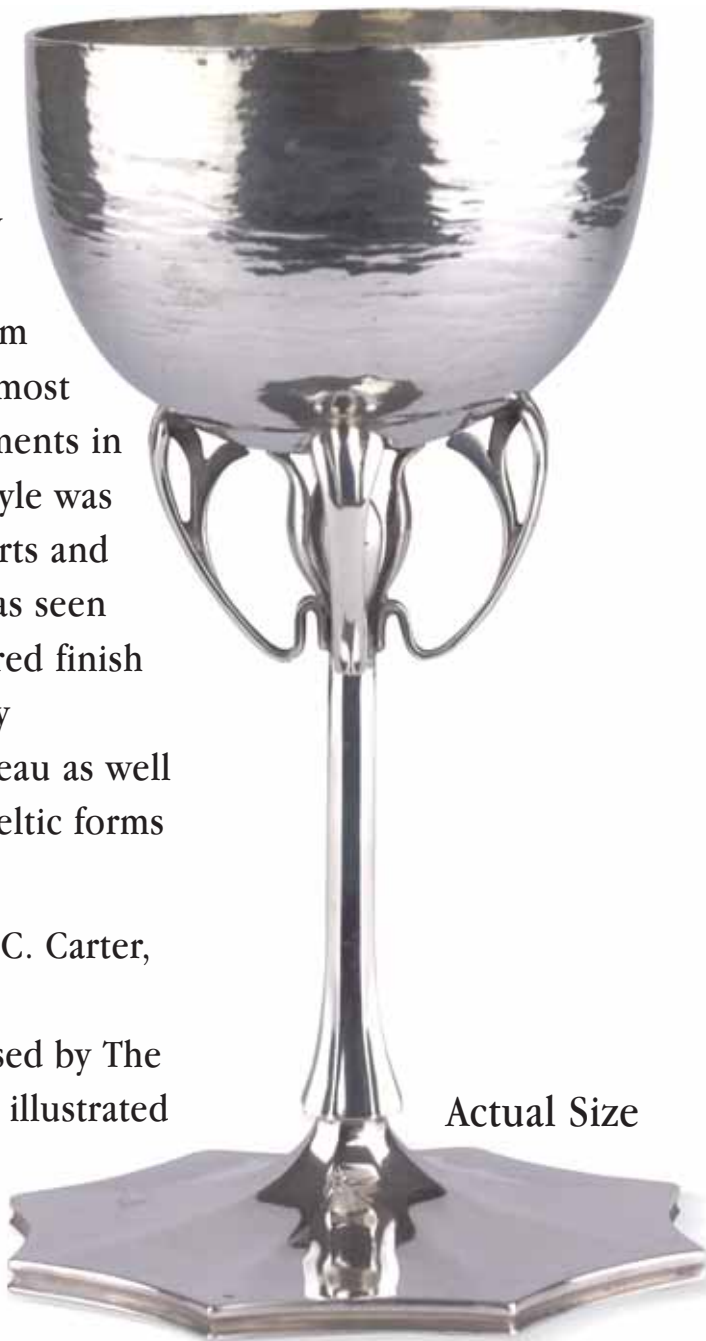
He lives near Stratford-upon-Avon, is married with 2 teenage children.

Prize cup for Office collection

This cup, hallmarked in Birmingham in 1901, was recently bought at Sotherby's by the Assay Office.

It was part of the celebrated 'Cymric' range of silver launched by Liberty & Co in 1899, and described by the firm as 'one among the most important developments in Applied Art'. The style was influenced by the Arts and Crafts movement - as seen here in the hammered finish of the bowl - and by European Art Nouveau as well as by fashionable Celtic forms and ornament.

The design, by C.C. Carter, won first prize in a competition organised by The studio, 1897. It was illustrated in Liberty's Cymric catalogue, about 1900, described as 'Silver Cup for Presentation', and costing 9 guineas. The cup is 16.6cm high and weighs 240g.



Actual Size



ABCTV's "20/20" Uses American Assay to check "karatage"

A December 17 segment of "20/20", the primetime ABC television news programme, featured tips consumers should follow for ensuring that the gold jewellery they buy really contains the "karatage" as sold by the jeweller.

Producers from "20/20", took newly purchased gold to the American Assay & Gemological Office in New York City where it was tested using both fire assay and X-ray methods. Good Housekeeping magazine oversaw the tests and reviewed the results for good measure.

Our team are seen demonstrating the X-ray test for the 20/20 show producers and editors from good Housekeeping magazine.

We hope to give you a summary of ABCTV's findings in the next issue of 'The Anchor'



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Hallmarking Still Buoyant

Gold down 2.2 percent - but silver steady

With the record-breaking total of 35,244,597 in 2003 to beat it was not expected that the number of articles marked in 2004 at the 4 Assay Offices of Great Britain would exceed that number.

We were 491,552 short of setting a new record - the total of 34,753,045 being 1.39 percent lower than that of the previous year.

Gold articles marked were down 2.2 percent at 23,625,575

Silver was fairly static - a reduction of a mere 0.1 percent saw the total fall to 10,755,113

Platinum continued to be successful - showing a 15.6 percent rise to 362,988 articles

In the retail sector

Although retailers reported that sales over the Christmas period were tardy, the jewellery and watch retailer Goldsmiths said that New Year sales

were starting to be strong. The Group reported that after a poor November, sales picked up in the last week before the holiday. Sales in the four weeks to New Year's Eve were up 3 percent in total, though only 0.4 percent on a like-for-like basis.

Jurek Piasecki, who has run Goldsmiths for 22 years, said: "I've only ever known one Christmas worse than this and that was in the depths of recession in 1990"

Signet, the U.K's largest jewellers, held a different angle on sales. "Diamonds were the catalyst for sales this year" said Terry Burman Chief executive." Same - store sales in the UK, where Signet owns the Ernest Jones and H. Samuel chains, increased by 1.5 percent in the nine weeks to 1st January. He went on, "We have gained market share and managed to increase the proportion of diamonds that we sold from 26.5 per cent of UK sales a year ago to 28 per cent."

Breakdown of articles marked at the four U.K. Assay Offices during 2004

Number of articles

GOLD							SILVER					PLATINUM				
375 9 carat	585 14 carat	750 18 carat	916 22 carat	990	999	TOTAL	800	925 Sterling	958 Britannia	999	TOTAL	850	900	950	999	TOTAL
19,981,850	376,976	2,446,144	819,550	54	1,001	23,625,575	4,471	10,735,601	8,434	6,607	10,755,113	16	1,294	370,866	181	372,357
-4.5%	62.0%	13.9%	-5.0%	-92.2%	-49.2	-2.2%	-32.1%	-0.1%	-15.2%	-15.3%	-0.1%	-72.4%	-3.9%	18.6%	98.9%	18.6%

Weight of articles

GOLD (Grams)							SILVER (Kilograms)					PLATINUM (Grams)				
375 9 carat	585 14 carat	750 18 carat	916 22 carat	990	999	TOTAL	800	925 Sterling	958 Britannia	999	TOTAL	850	900	950	999	TOTAL
85,623,152	1,436,882	12,415,337	7,377,999	410	16,534	106,870,314	92	189,789	765	341	190,988	246	6,805	2,886,062	2,262	2,895,375
-7.4%	15.7%	14.2%	-5.1%	-94.50%	-34.53%	-4.9%	-32.6%	-1.4%	-4.0%	-9.8%	-1.5%	-87.6%	-23.2%	12.8%	81.8%	12.6%

Percentage figures show an increase or decrease (-) compared to the corresponding period of the previous year.

How the final quarter of 2004 shaped up!

Number of articles

GOLD							SILVER					PLATINUM				
375 9 carat	585 14 carat	750 18 carat	916 22 carat	990	999	TOTAL	800	925 Sterling	958 Britannia	999	TOTAL	850	900	950	999	TOTAL
7,095,042	188,868	790,921	173,282	35	589	8,248,737	737	3,244,251	2,735	549	3,248,272	5	560	94,068	38	94,671
-3.8%	224.2%	11.0%	-8.4	600.0%	59.2%	-1.1%	-48.1%	-2.1%	-3.3%	-88.3%	-2.2%	-73.7%	32.1%	11.2%	72.7%	11.3%



See you at the Spring Fair 2005

AnchorCert & SafeGuard

We will once again be promoting our AnchorCert Diamond Certification Service & SafeGuard Valuations at the Spring Fair. Come and see us on Stand H34 in Hall 17 to catch up on the latest developments and give us your feedback on our service.

On the Gemmological side, the big news is the move of Eric Emms and the Precious Stone Laboratory, now re-established as the AnchorCert Gemmological Office, from their existing premises in Hatton Garden to larger and meet increased demand across the road at 88-90 Hatton Garden. Suite 26 is

currently being transformed into a well equipped gem testing facility and by mid February Eric and his team will be offering their existing raft of services, plus AnchorCert Mini Reports, from the new address. AnchorCert will then be available from Birmingham, London and New York.

Spring Fair also sees the launch of the new look for the Assay Office's other Jewellery service, SafeGuard Valuations, or at least, a mini makeover. SafeGuard's marketing materials and Point of Sale material are very much part of the product and we have refreshed them in line with our objectives to continually

improve our service, both to retailers and the final consumer. Our leaflets and documents will have a more upmarket, quality feel which we believe will be appropriate to our retailers.

We look forward to a positive response from our customers at the Show.

Assay Offices of Great Britain

The Assay Offices of Great Britain will also have their usual joint stand offering information and advice about Hallmarking. Representatives from Birmingham will be there every day so please come and see us with your queries, comments and any



feedback about our service. Marie Brennan, Alan Morris and the rest of our team look forward to welcoming you to Stand H39 in Hall 17.