

STATEMENT OF Robin John FALCONER - 4th July 1997

I am a Bachelor of Science, a Chartered Biologist and a Member of the Institute of Biology. I have been employed in the Forensic Science Service for over 24 years during which time I have dealt with many cases involving the evidence types described in this statement.

Further Statement

Further to my previous statements, most recently of 11th April 1997 (110497) and 18th April 1997 (180497), the following additional items were received from the Humberside Police at Driffield on the dates shown.

11th April 1997 (110497)

Items relating to Dyersburg Fabrics Inc , New York

- AB1 Fleece swatch 0197
- AB2 Fleece swatch 0113
- AB3 Fleece swatch 0119
- AB4 Fleece swatch sample card

Item relating to 'Choice Latch' , Oadby, Leics

- JMG1 Purple Acrylic Yarn

Item relating to Columbia Sportswear, Dinder, Somerset

- NS1 5 swatches of fleece

Items relating to S & B Phillips, 1 Duke Street, Manchester

- AJD1 Petrel Polyester fleece
- AJD2 Purple Polyester fleece

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Items relating to D Chadwick Ltd, Edward Street, Manchester

MH70 Bottle green polyester fleece

MH71 Forest green polyester fleece

MH72 Sample cards

Items relating to Courtaulds Jersey Leisurewear, Lurgan , Co Armagh

DD50 Courtaulds Fleece

DD51 Courtaulds Fleece

DD52 Courtaulds Fleece

Item relating to Hollas Garments, Altrincham, Cheshire

CRR1 Fleece swatches

Item relating to Judith DEANS

JED22 Regatta jacket

Item relating to Margaret HAWKINS

MH30 Regatta jacket

Item relating to Easy Garments , Edgware Road, London

AC1 Fleece swatch, moss

Item relating to Littlewoods Stores Ltd, Albert Dock, Liverpool

SW40 Sample of fleece

Item relating to A & S Clothing, Hockley, Birmingham

PRK1 4 fleece swatches

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Items relating to Edinburgh Woollen Mills, Langholm, Dumfriesshire

RIS1 Purple coloured fleece sample

RIS2 Green coloured fleece sample

Item relating to W L Gore Ltd, Livingston

KW1 Fleece sample (green)

Item relating to Goodman Clothing, Leeds

PAD1 Green polyester fleece jacket

30th May 1997 (300597)

Items relating to B Suthi, 82 Rolfe Street, Smethwick

BSS1 Fleece sample (green)

BSS2 Fleece sample (purple)

Item relating to Mackays, Caledonia Street, Paisley

DAF1 Green fleece jacket

Item relating to H/O Carlsberg Int, 50 Strandvejen, Hellerup, Denmark

AT1 Green coloured sweatshirt with Carlsberg Logo

Purpose of Examination

In examining these items I have again sought to determine whether or not any of them contain 'matching' constituent materials to the clothing of Derek CHRISTIAN - jacket, sweatshirt and jogging bottoms.

Examination and Results

My examination has been conducted with the assistance of scientific support staff. A full record of the work undertaken is contained within case notes made at the time of the examination and these are available for inspection, if necessary, at the laboratory.

Comparisons with the Jacket (KJB1)

Items (JED22) and (MH30) are both 'REGATTA' fleece jackets which are green and purple in colour with purple, knitted acrylic cuffs and waistband. While the green polyester and purple polyester constituent fibres of these two jackets are microscopically indistinguishable from the respective types in Derek CHRISTIAN's jacket (KJB1), the acrylic cuffs and waistband are readily distinguishable from their respective material in the jacket (KJB1) when examined microscopically.

As was previously noted therefore, it would appear that although the green polyester and purple polyester fibres in this style of 'REGATTA' jacket are subject to little, if any, variation at a microscopic level, there are differences in the acrylic component which makes up the cuffs and waistband.

None of the other materials or jackets comprising this current batch of submissions has been found to be indistinguishable from the constituent fibres of the jacket (KJB1).

Comparisons with the sweatshirt (JPK04)

Item (AT1) originates, I understand, from the Headquarters of the 'CARLSBERG' organisation and is one of a residue from the batch of which the sweatshirt (JPK04) was part. It (item AT1) is an unused item of clothing.

Although at a microscopic level the sweatshirt (JPK04) can be seen to be faded and well worn, these differences are less marked at an individual fibre level when examined microscopically. There is some degree of overlap between the constituent materials of the two sweatshirts although the extent of damage and fading to some of the fibres from (JPK04) are much more noticeable.

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I consider it perfectly reasonable to conclude that the sweatshirt (JPK04) from Derek CHRISTIAN originated from a manufacturing source of which the sweatshirt (AT1) is an unused item.

None of the other materials examined in this current group of submissions contains materials matching that of the sweatshirt (JPK04). Most of the other to (sic) materials were however primarily submitted in relation to 'fleece' materials of the type comprising the jacket (KJB1).

Comparisons with Jogging Bottoms (JPK05)

None of the samples of material examined in this group of submissions contained any blue polyester fibres which matched the blue polyester fibres which partly constituted the jogging bottoms (JPK05). Again though it should be noted that this group of submissions was primarily submitted in relation to 'fleece' materials (potentially matching the jacket KJB1) rather than the jogging bottoms.

Summary/Conclusion in relation to this batch of submissions

From the examinations conducted on the present group of submissions:-

- (i) Two 'REGATTA' jackets have been examined which have green polyester and purple polyester components which match the jacket (KJB1) taken from Derek CHRISTIAN. However the acrylic component of these two jackets differs from the jacket (KJB1).
- (ii) An original 'Carlsberg' sweatshirt (AT1) has been found to contain matching fibres to those of the sweatshirt (JPK04) although the unworn sweatshirt is not faded and has not been subjected to the same degree of fibre damage.

These findings do not in any way alter my opinion that the combination of fibres recovered from the clothing of Margaret WILSON is highly unlikely to have resulted from random or co-incidental matches of fibre.

Additional Background and Comment

I have been asked to provide some additional interpretation of the fibre findings in the context of studies that have been conducted and published on 'target' fibres and 'persistence of fibres'.

Target Fibres

The methodology employed in this type of study is to select a particular 'target' fibre type and examine items of clothing selected at random for evidence that fibres of the same particular target type are present as 'foreign' fibres on the clothing. The same range of tests will be applied to both the target fibre and any fibres initially selected as potentially matching fibres from the randomly selected items of clothing.

Such studies are highly resource intensive to the extent that they would be impractical to carry out within the circumstances of a particular case. Generally they are conducted as collaborative studies between laboratories, for instance a recently published study took place across 30 laboratories in 19 countries.

In a study carried out with 335 items of clothing four popular pullovers were used as target items. No more than two apparently co-incidental matches were found on any one garment that was searched for these types of fibre.

In the more recent study across 19 countries 435 garments in total were searched for target fibres that originated from a particular red scarf. These were on sale in at least 11 countries. Overall production figures of the scarf were however relatively small as compared with the earlier 'pullover' study. On two items of clothing one target fibres (sic) was found in each instance.

It is suggested from these studies, although somewhat limited in their range and diversity, that to find any more than a small number of positive fibres by pure coincidence on an item of clothing is very unlikely.

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Other target fibre work that has been carried out has involved the presence of 'target' fibres on car seats. This study involved 108 vehicles. These studies on vehicle seats tend to reinforce the results of clothing studies. It is interesting to note that in the two instances where significant numbers of coincidental matching fibres were found in vehicles (20 and 7 respectively), a probable source for the fibres were identified amongst the family of the owners.

Persistence of Fibres

Fibres transferred to a recipient garment will gradually be lost over a period of time, the rate of that loss is of interest and a number of studies have been conducted that deal with just this issue. In almost all instances the experiments rely on monitoring fibres loss in a time period (24 hours or less) after the initial contact has taken place.

In broad terms the experimentation has shown that the greatest loss of transferred fibres from the recipient garment takes places within the first few hours. As a very general guide approximately 80 per cent of the fibres are lost within 2 hours of 'normal' wear. Naturally there are many variables in these studies, i.e. the type of fibre transferred, the texture of the recipient material (smooth or rough), the definition of 'normal wear', but they do establish the principle that the majority of transferred fibres are lost relatively quickly after initial contact.

In the circumstances in which Margaret WILSON was found the number of fibres recovered that are apparently significant suggest that contact with the parent items has been relatively recent, i.e. within a period of a few hours at most prior to packaging of the items rather than a 24 hour period. I understand that the movements of Margaret WILSON prior to her death have been researched and possible contact with materials that could be a source of fibres matching the jacket (KJB1), sweatshirt (JPK04) and tracksuit bottoms (JPK05) of Derek CHRISTIAN, have been investigated.

If the fibres recovered from Margaret WILSON's clothing do relate to her assailant, then as there would have been minimal movement of her clothing after death, there would have been less opportunity for the loss of any fibres transferred to it. Hence it would have been reasonable to expect significant numbers of fibres to be retained on the clothing always assuming that her attacker wore clothing that shed fibres reasonably easily.

Overall conclusion

Against the background of the 'target' fibre studies, the 'fibre persistence' studies and the examinations conducted in respect of elimination samples, I believe they all serve to reinforce the opinion that there is very strong scientific support, by means of fibres, to link three items belonging to Derek CHRISTIAN (namely the jacket, sweatshirt and jogging bottoms) with the clothing, particularly outer clothing, of Margaret WILSON.