

May 2022

Keith Borer CONSULTANTS



THIS ISSUE

Firearms Expertise

Meet the
Handwriting Team

Neutral Findings in
Sexual Assaults

Disclosure & Cell
Site Analysis

Team News

TEAM NEWS

We recently expanded our Mobile Phone department. Louie Holbrook specialises in extracting and presenting communications data from mobile phones – if this could assist your case, please get in touch for an estimate.

Experienced forensic biologist Kerri Allen joined KBC in March this year. She brings considerable expertise in sexual offences cases involving DNA, body fluids and textile fibre transfer. She works from the Huntingdon office and is happy to accept instructions in London, the south east and further afield, as required.

Ian Warrick joins the Imagery Analysis team after a long career in military, police and humanitarian roles around the world. More about him in the next newsletter, to be published in September!

Firearms Expertise

Over recent years there has been an increase in forensic firearms work being carried out by the police using in-house force armourers instead of being submitted to ISO17025 accredited Forensic Service Providers, as stipulated by the Forensic Science Regulator.

In the Forensic Science Regulator Newsletter No 34, April 2020, the Regulator stated that: "There are rare circumstances where it is not possible to secure a classification statement from an accredited supplier, prior to initial court or remand proceedings being instigated. In such circumstances, it is acceptable for an expert from a non-accredited organisation to provide an initial statement for the court. Under these circumstances a further examination must be conducted by an expert from a forensic unit that is accredited to ISO 17025, and that second statement served on the defence".

Quite frequently, however, we are seeing reports submitted to the defence by force armourers or other police staff who are apparently not accredited to ISO17025.

The firearms team at Keith Borer Consultants includes David Platt and Alan Henderson. They can advise on what testing has been done, whether the test equipment was appropriate and calibrated, and whether or not the classification of firearms or ammunition is correct.



[Click HERE to read David Platt's article on the importance of independently testing Air Weapons and Firearms](#)

[Click HERE to read David Platt's article on current issues with Ammunition in firearms cases](#)



DISCLOSURE AND CELL SITE ANALYSIS

Many of you will have experienced cases involving cell site analysis, which involves analysing call data records (CDRs) to assess cell coverage in order to deduce where (or where not) a mobile device may have been operating at a particular time. Such analysis is often crucial to an investigation and has been known to make or break a case.

The key data required to undertake such analysis is within the CDRs and, to undertake the required analysis, we need those CDRs in the original format in which they were provided by the Mobile Network Operator to the police. The format tends to be in a comma separated value file (.csv) which can be read in Excel.

What we often get are the following:

- PDF copy versions of call data which can't be analysed; they need to be in Excel or .csv format. In general, any PDF files cannot be used even if they contain a copy of the original network data.
- Excel files with data that has been saved improperly causing any long numbers to be changed into a string of zeros or exponential values.
- Excel files with 'redacted' call data records with phone numbers and possible other columns redacted so that it's no longer possible to see which numbers contacted each other.
- Excel files containing data that was outputted from a software program used by the Police. Common programs used are CSAS, Chorus and ADM. We are unable to verify if the outputs accurately reflect the original data that the police were privy to in their analysis.

With Excel files, depending on the corruption, software used or redaction, it is possible some analysis can be used depending on the case, but in all examples, the data has been changed from its original and it is prudent and best practice, to get a true copy of the original data. The exception is ADM data which cannot be relied upon in any circumstance.

If you are experiencing any difficulties with either the CPS or police providing a copy of the original (unredacted) CDRs please advise them that we are happy to sign a Memorandum of Understanding as to how we will use, control, and subsequently display such records in any reports we prepare. Usually, the police analyst will know exactly what the data it is that we are asking for, but this can be lost in translation amongst other parties. With permission, all of the KBC cell site team are happy to speak directly with either the CPS, OIC or police analysts to resolve issues regarding sharing the original CDRs with us.



NEUTRAL FINDINGS IN SEXUAL ASSAULTS

It is often said that the absence of evidence does not equate to evidence of absence, and whilst this might be true in many situations, there will be occasion where more thought is warranted before jumping to a neutral conclusion.

Absence of DNA profiling evidence

With DNA being the 'gold' standard in biological evidence, failure to obtain a DNA profile often leads to the conclusion that there is no scientific evidence to support either the prosecution or defence case. However, when body fluids have been detected, the presence of these alone can have evidential value.

Considering body fluid findings and alternative scenarios

Sexual offence cases are often complex, but differences in the detail of each party's account of events can provide avenues that scientific investigations can exploit. Take, for example, a recent case where sexual intercourse was agreed by both parties but there was dispute over whether or not oral intercourse had taken place – the defendant said it had but the complainant disputed this. Examination of mouth swabs taken shortly after events revealed trace amounts of semen, but DNA profiling failed to reveal the source of this. The prosecution's expert concluded that the scientific findings did not assist in addressing which version of events was true, but we reached a different conclusion.

The Devil's in the detail

The presence of semen on mouth swabs suggested relatively recent introduction of semen into the complainant's oral cavity, something that could be explained through the oral intercourse the defendant claimed. Within the framework of the allegations made by the complainant, there would be effectively no opportunity for semen to have been deposited into her mouth, but additional information provided included mention of possible oral intercourse with a boyfriend 3 days prior to the alleged incident. Whilst published data is limited, studies show that, in most cases, semen is lost from the mouth in less than 24 hours; the maximum recorded is 49 hours. Notwithstanding this, the prosecution's scientist concluded that the findings would be equally likely if oral intercourse had been 3 days or a matter of hours before the mouth swabs were taken. Our assessment, based on the scientific research, was that persistence of semen in the mouth 3 days after oral intercourse would be extremely unlikely, and therefore that the findings provide support, albeit limited, for the defendant's version of events.

Thinking beyond neutral conclusions

Beware of neutral conclusions, particularly when DNA profiling has failed but body fluids have been detected. Next time you read 'in my opinion the findings do not assist' be sure to get this checked.

An opportunity to meet one of our teams...

HANDWRITING AND DOCUMENTS

Dorothy Allan | Louise Floate | Karen Caramiello

- Dorothy, Louise and Karen all worked at the Forensic Science Service (FSS) for many years and received comprehensive training in this specialist field before joining Keith Borer Consultants.
- They are amongst the most experienced handwriting and document examiners in the UK and enjoy a varied caseload covering criminal, civil, private and family law matters in the UK, Ireland and further afield.

Accreditation news from the team:

- We are a UKAS accredited testing laboratory and are one of the few companies accredited to the international standard, ISO17025, for handwriting and signature comparisons, and have recently added the analysis of indented impressions of handwriting (ESDA) to our scope.

Our Specialisms:

- Handwriting Comparisons – we can compare a piece of questioned writing with the specimen writing from an individual, using scientific principles, and give an opinion on whether or not this individual wrote the writing in question. Similarly, we can compare two pieces of writing with each other to determine if they were authored by the same person. Sometimes even very small amounts of writing can be compared, and an opinion given.
- Signature Comparisons – we can compare a signature on a document to a set of specimen signatures to determine if it is genuine or a forgery.
- Indented Impressions – we can examine documents for indented impressions and use the ESDA to develop an image of them. The images can be used for intelligence, handwriting comparisons or to see if entries have been written in chronological order.
- Other types of Document Examination – including whether documents produced by office machinery are genuine or a forgery; whether a particular machine was used in their production; reconstruction of shredded documents.

SERVICES

Alcohol
Anthropology
Arson
Ballistics
Blood patterns
Body fluids
CCTV
Cell site analysis
Chemicals
Computer examination
Crime scene assessment
DNA profiling
Damaged clothing
Drugs
Ecology
Electronic tagging
Explosions
Fibres
Fingerprints
Firearms
Firearms residues
Fires
Footwear marks
Forensic overview
Glass fragments
Hairs
Handwriting
Health & safety
Industrial accidents
Mobile phones
Paint
Personal injury
Physical fits
Road traffic accidents
Tachograph analysis
Toolmarks
Toxicology
Video imaging

CONTACT US

Email: kbc@keithborer.co.uk
Tel: 0191 332 4999

DURHAM OFFICE:
Locard House
Belmont Business Park
Durham DH1 1TW

HUNTINGDON OFFICE:
Tel: 01480 432 794

...and in Scotland:
Tel: 01835 822 511

@KBCforensics

You can follow Keith Borer Consultants on Twitter for up to date details of CPD training seminars for solicitors and barristers, links to news articles and case excerpts that may be useful to your case.



CrimeLine CPD Podcasts

If you are a CrimeLine subscriber, you can catch up with the experts at KBC in a series of forensic podcasts. Topics include CBD oil, IP addresses & cloud storage, fingerprints, indecent imagery, DNA, fire investigation and handwriting analysis. Look out for new podcasts being added to the series. You'll find them under CPD.



Please note that we will no longer be members of DX from 1st July 2022