SPECIAL IMMIGRATION APPEAL COMMISSION

Field House,
Breams Buildings
London

BEFORE:

THE HONOURABLE MR JUSTICE IRWIN

BETWEEN:

Z

Appellant

and

THE SECRETARY OF STATE FOR THE HOME DEPARTMENT

Respondents

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MR HENRY BLAXLAND QC and MR RICHARD THOMAS (instructed by Birnberg Peirce and Partners) appeared on behalf of the Appellant.

MS SARAH HANNAFORD QC and MR ANDREW DEAKIN (instructed by the Treasury Solicitor) appeared on behalf of the Secretary of State.

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Transcribed by Harry Counsell
Tel: 020 7269 0370

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RULING ON
DAMAGE TO Z'S TAG

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MR JUSTICE IRWIN:

Background

1. The general background to this particular appellant's case is well known and does not need repetition.

2. On 22 April 2008, pending his appeal to the Court of Appeal, Z was tagged and released on bail. There followed a tag "tamper alert" on 2 June 2011. Z's bail was revoked. On 28 July 2011, following a full hearing, including expert evidence, Mitting J found that Z had deliberately damaged his tag, concluding that the evidence was only

> "explicable on the basis that considerable force was deliberately applied on more than one occasion to this device by the appellant ... He deliberately breached a significant condition of his bail."

3. Z was detained until released on bail by Mitting J on 12 November 2012. He was again provided with a tag and it was a condition of bail that he should not damage or tamper with the tag.

4. On 23 December 2013, following advice from his solicitor, Z contacted the monitoring company at around 3 o'clock in the morning, informing them that the tag had "cracked" and that he was concerned. He was visited later that day and the tag was removed for examination. The tag was then examined by a scientist instructed by the Secretary of

State, James Campbell. Mr Campbell had been one of the experts involved in the previous episode concerning the damage to the appellant's tag. In a report on 26 December, Mr Campbell concluded “with a high degree of confidence” that Z had deliberately tampered with his tag.

5. The Secretary of State, as a consequence, applied to revoke Z's bail. Following a hearing before Upper Tribunal Judge Latter, his bail was revoked. On 2 July 2013 a further application for bail was made on behalf of Z on the basis that (1) his psychological health had deteriorated and (2) that it was wrong to infer a risk of absconding even if the damage to the tag was deliberate. In ruling on that date, I accepted the first submission, that there was a deterioration in his mental health, but rejected the second for reasons then given. I remarked upon the regrettable delay in gathering expert evidence on the issue as to whether the damage was deliberate and directed that the matter should be addressed as rapidly as possible, even outside of normal term. By that route the matter came before me on Monday, 4 August 2014. At the conclusion of the hearing, directions were given for some further information and submissions to come to the Commission. I now address the matter on Wednesday, 13 August.

The standard of proof

6. The Secretary of State accepts that she bears the burden of proving that Z damaged his tag. However, in closing submissions dated 6 August, Ms Hannaford QC submitted that the proper standard of proof in such a case is to the civil standard. She relies upon the authority of the Upper Tribunal in the Immigration and Asylum Chamber in *Mohammed*

Rahim Bah -v- Secretary of State for the Home Department [2012] UKUT 00196 IAT. The Tribunal in that case were concerned with the evaluation of circumstances giving rise to a decision to deport and concluded that:

> "... any specific acts that have already occurred in the past must be proven by the Secretary of State, and proven to the civil standard of a balance of probabilities."

7. Subsequently, addressing the point in further written submissions, Mr Blaxland QC for Z submits that there is no binding authority on the approach, that the case of *Bah* can be distinguished since it arises in a different context, both factual and legal, and, although relating "in a broad sense" to the liberty of the subject, there is not such a direct relationship as in this case. Mr Blaxland goes on to consider the parallel in criminal bail proceedings governed by the Bail Act 1976, as examined by the Divisional Court in *R -v- Havering MC; R (McKeown) -v- Wirral MC* [2001] 1WLR 805, to the effect that there is no authority that the court is obliged to apply the criminal standard of proof, because of the delicate exercise in which the court is involved, balancing fairness to the defendant but securing the objectives of justice and the protection of the public. As Mr Blaxland reminds me, Latham LJ in paragraph 39 of that judgment stated:

> "It seems to me that the justice is simultaneously required by the statute to come to an honest and rational opinion on the material put before him. In doing so, he must bear in mind the consequences to the defendant, namely

the fact that he is at risk of losing his liberty in the context of the presumption of innocence."

8. Mr Blaxland also relies upon the fact that Mitting J adopted the criminal standard when addressing this issue in the past with this appellant.

9. In my view, the Commission is not obliged to adopt the criminal standard of proof. However, the thrust of the remarks of the Divisional Court in the *Havering Justices* case suggests that the Commission should look for a clear degree of confidence in findings which will have a considerable and direct effect on the liberty of the appellant. It is appropriate to bear fully in mind the importance of the factual issue in hand, and the potential length of time over which findings of fact may lead to the withholding of bail or the imposition of strict conditions of bail.

The experts

10. Mr Campbell, who is a forensic science specialist instructed by the Home Office, obtained an Honour's Degree in metallurgy and materials in 1974 and subsequently became a materials scientist in industry. Since 1991 he has been an independent consultant concentrating mainly on material failures. Mr Campbell wrote the original specification for the relevant tags and the relevant test programme. The tag or, to give its proper title "Personal Identification Device", was designed to be robust but had to have a designed load at which it would break, so as to avoid accidents. The designed load for an adult tag is between 25 and 40kg. Mr Campbell also explained that the surface texture on the casing

and the strap of the tag was designed so as to leave telltale marks of impact or interference, particularly contact with hard objects.

11. In addition to the evidence of Mr Campbell, the Secretary of State relied on written material reporting on a number of tags in different cases from a second scientist working for Mr Campbell's consultancy, Troy Whyte. Mr Whyte's material was available but he was not called as a witness.

12. The appellant initially instructed Professor Ross Anderson from the University of Cambridge Computer Laboratory. Professor Anderson produced a report which has been before the Commission dated 25 July. However, he early made clear that:

> "As fatigue fractures are merely within my general engineering knowledge rather than part of my specialist expertise, I advised you to engage Dr Dean as well."

13. I have read Professor Anderson's report with care. He raises the possibility that the damage to the tag in question was a fatigue fracture. Both Dr Dean and Professor Anderson wore tags which Professor Anderson suggests both failed. He in his report considered that the failure of a "lug arch" might be part of the cause of some of the failures. In the event, this theory was abandoned. Professor Anderson was not called and Mr Blaxland, in effect, relied on the evidence of Dr Dean rather than that of Professor Anderson.

14. One part of Professor Anderson's report must be addressed. In paragraph 16 he stated that:

> "It must be noted that we were required by the court to work under severe time pressure."

This remark could easily be misleading. In the July hearing, the Commission was very concerned that so little progress had been made in preparing the scientific evidence on this issue, the appellant having been in detention by then for approaching six months. It was entirely appropriate at that stage to ensure that the matter was addressed quickly. In the event, I do not consider anything of any significance turns on this.

15. The appellant's principal expert is Dr James Dean, a senior research scientist in the Department of Materials Science at Cambridge University. Dr Dean is a materials scientist but has a very specific specialism in "finite elements".

The expert debate

16. The tag in question consists of a circular case with two arms locating a robust strap. The strap clip which locates into the serial number "arm" has fractured. The primary findings of Mr Campbell are not in issue. He gives the following description:

> "The left side of the clip is fractured on the outer most facing portion and also on the left innermost portion closest to the leg. The right side of the clip is still intact but has bent to form a hinged point. As a result, the strap

> now exits the case at an angle. Pulling lightly on the strap shows it to be still quite firmly attached and I cannot say whether with a broken clip it is now possible to remove the strap and replace it without causing further damage to the clip. However, the presence of a fragment of the fractured plastic attached to the broken clips suggests to me that it is more likely than not that the strap has not been pulled out."

17. That is consistent with the evidence of the Field Monitoring Officer who took the tag from the appellant. The tag had been in position for five months and had been subject to monthly checks, but it was in good order.

18. Mr Campbell's key findings were that the fractured surfaces on the clip have "river markings that fan out from the origin showing the direction of the fracture." There were also a few "conchoidal marks that radiate out from the origin of the fracture." Conchoidal marks are described by Mr Campbell as being seen in strong materials when they are overloaded, radiating out like ripples in the direction in which the fracture grows. Mr Campbell concluded that:

> "In combination ... these marks indicate an overload applied to the strap or case substantially in the direction of the normal access of the strap. The presence of these marks also shows that there were no defects in the plastic that could have weakened the clips. Had any moulding defects been present the material would not be sound and could not have generated these surface features."

19. Mr Campbell, having tested this design of tag, has determined that a strap will break at the clip, the weakest point, at between 60 and 90kg. His tests have demonstrated that cracking of the clip occurs when it is loaded to around 30kg. In his view, there are no scuffmarks, scratches, bruises or other marks consistent with a significant accidental snagging event. In Mr Campbell's view, this combination of findings means that there is no other realistic situation in which the strap could be overloaded except by deliberate loading of the strap by the soft tissue of the fingers. It is significant that the pressure or load has to be applied from the inside outwards. Experimentally, Mr Campbell has found that it is possible to break the clips with the fingers but it requires "considerable effort and determination to do so."

20. Mr Campbell fitted a dummy tag to a turned length of pinewood simulating the size of an ankle.

> "Using all the force I could muster with my fingers, I was able to deform one clip in particular, until after several applications of that force there was a significant distortion of the weakest part of the clips."

On examination, after 20 or so exertions, Mr Campbell found similar types of damage with conchoidal and river markings as in the clip from the appellant's tag.

21. In cross-examination it was put to Mr Campbell that he was not independent on this issue since he had contributed to the specification of the clips and the relevant testing

programme approved by the Home Office. He was regularly instructed in a number of such cases, always acting for the Home Office. It was suggested that he had confused some of the relevant terms, for example, using the term “conchoidal” when it would have been clearer to describe the marks as “concentric striations”. It was suggested that he should have been using the term “Wallner lines”. In response to that suggestion, Mr Campbell said that he found the term “Wallner lines” could be confusing in a court hearing. He maintained the position that his description of the marks in the plastic were scientifically appropriate, and that he was correct in the conclusions that he drew overall from the marks observable in the plastic and, of course, from the broader experimental evidence which he advanced.

22. Mr Campbell was referred to pictures taken by Mr Whyte dated 16 April 2014 and entitled “Investigation of Forces Required and Characteristics of Fracture”. Mr Whyte's experiment involved setting up an automated test rig to apply a consistent repetitive load to the relevant strap loop. The load was shared equally between both of the clips in a manner consistent with someone repeatedly pulling on the strap. Mr Whyte had used a calibrated spring balance to measure the force which could be applied by a number of scientific colleagues to such loops. Most could achieve a maximum pull of 22kg, which was thought to be an “extremely hard pull of the strap, requiring much effort.” That value was chosen for the test. After approximately 1,500 cycles a very faint mark could be seen in the corner of one of the clips in the experiment. This mark became progressively more pronounced until at 3,000 cycles two small lines on the clip could be seen. At 4,755 pulls of 22kg a corner of the plastic clip scratched. On the 4,760th pull, the whole clip fractured and the rig was stopped. On inspection of the fractures, Mr Whyte found:

> "That the fractured clip's surface has very distinct radiating striations from the start of the fracture; these are characteristic of fatigue."

23. In further experimentation, Mr Whyte measured the breaking force necessary as the angle from the strap accesses increases from zero to 50 degrees. Given that such a change of angle loads the breaking force more on to one clip, even at 50 degrees from the strap's axis loading of between 20kg and 24kg would be necessary to cause the fracture at one end, but the clip would still not fracture fully.

24. Mr Campbell relied on the illustrations of concentric striations indicative of "fatigue and river markings indicative of a brittle fracture". On page 22 of Mr Whyte's report, Mr Campbell distinguished between the "concentric striations" in the bottom of the image, which Mr Whyte described as "typical of a high load, low-cycle fatigue mechanism", and the river marks radiating from the origin of the crack when the clip finally failed. Mr Campbell's evidence was that the marks on the clip in this case corresponded to the river marks and indicated a brittle fracture.

25. Mr Dean began his evidence by criticising the use of language by Mr Campbell. Mr Campbell had described the relevant clip as both "tough" and "brittle". Mr Dean suggested that a material could not be both tough and brittle, since to a materials scientist, "tough" means that a material was "ductile" and capable of some permanent shape change whilst remaining unbroken, whereas "brittle" means that a material is not capable of

permanent shape change or plasticity. If a material was truly brittle, there could be no material ahead of a crack tip.

26. Mr Dean's explanation of the damage to the relevant clip was that there was a partial fracture with concentric marks. The load would not necessarily be very high. The load for the initial damage to the clip would be consistent with a snagging event. Early in his evidence he showed a video of himself pulling a tag off his own leg. He gave confident evidence that he had used about 15kg of force. When asked how he reached that conclusion, he said that he was familiar with forces and materials, that "I have a good feeling" that the force was about 15kg and that he "estimated the force was about 15kg." He then said that the load for a partial fracture of the clip would be "a lot less." His explanation of this event was that there could well be a small crack initiation in Z's tag, with progressive cracks ending with the failure of the clip which had been found.

27. Dr Dean agreed that he had never been involved in a forensic scientific investigation before this case. He agreed that Mr Campbell had the correct qualifications for this investigation "on paper". He agreed that Mr Campbell had significantly more experience than he did of this equipment.

28. Dr Dean's evidence was that there could be Wallner lines or fatigue striations where the damage derived from fatigue rather than a single event. In relation to the tag which he pulled off his own leg, he had taken no images of the marks which had resulted. He concluded that they were "not necessary". He was, therefore, unable to say what would be observed by way of marks on that clip.

29. Dr Dean was then cross-examined in relation to section 4 of his report, setting out the results of his own cyclic loading tests. It is not necessary for me to reproduce or, indeed, summarise all of this testing. It is sufficient to say that the results of Dr Dean's own experimentation was that even many thousands of repeated loads up to 37.5kg did not produce the damage observed in this clip. None of the experimentation produced any fatigue failure in any clip.

30. This set of findings is consistent with those presented by Mr Whyte.

31. I found no basis for concluding that Mr Campbell's evidence was altered or in any way distorted by the history of his engagement with the specification or testing programme for these tags, or by his consistent pattern of appearance on behalf of the Secretary of State. Mr Campbell undoubtedly has a lower level of theoretical scientific achievement than Dr Dean, but I found him straightforward and direct in his evidence and he is clearly more familiar than anyone else with this equipment. I did not conclude that he had any essential confusion in his thinking or in his use of language. Nor was I persuaded that his analysis of the appearance of crack or fracture lines was in error, although I did not in the end find this a decisive factor in reaching my conclusions. It appears to me this is an area of considerable specialist debate, and I was not in a position to be confident of the specific application to this case.

32. I have real concern as to the evidence of Dr Dean. His manner was combative and he gave an impression of over confidence. His assertion that he was able to give “scientific”

evidence as to the load he himself exerted on the tag he broke from his own ankle because “he was familiar with forces and materials” and had “a good feeling” that the force was about 15kg and that he “estimated” the force was about 15kg left me with little confidence in his approach. He appeared to me to pay no regard to the overwhelming picture coming from both sides' experimentation. In order to cause any significant damage to any of these clips in the course of experimentation, an enormous number of repetitions of the application of force has proved necessary.

33. There is no evidence from the appellant of even a single episode of significant snagging or catching which could produce a load on the clip in question from the inside. The possibility that such an episode might have arisen in the course of playing with children, engaging in a children's tug of war or cycling, without the appellant being aware of it, seems fanciful. It was Dr Dean's evidence that a single episode of this kind, where a pull of 20 kilos or more was exerted, would, undoubtedly, be noticed by the wearer of the tag. This appears to me to accord with common sense, and it was unchallenged by the Secretary of State. Z's evidence confirms that he has noticed no such episode: that is to say not even a single episode, never mind hundreds or thousands of such episodes. Z also confirms that his habit was to wear a sock over the top of the anklet. Whilst the sock might protect the tag from external impact and diminish or abolish marks on the tag or the exterior of the strap from such impacts, it would also make it more unlikely that an object would go inside the strap and more unlikely that it would do so unnoticed.

34. I also bear in mind that if there were to have been an unexpected application of force from inside the strap pulling out, causing this fracture accidentally without Z being aware of it -

in short if Z's account were correct – it would mean that in his case lightning would have struck twice.

Conclusions

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35. For all the above reasons, I regard it as overwhelmingly unlikely that this damage to the tag arose by accident. It seems to me vanishingly unlikely that sufficient force pulling the tag away from the leg could have been applied a sufficient number of times to cause this damage, without Z being aware of it. I have considered Mr Blaxland's argument that there is little or no logic in his client deliberately causing such damage in the middle of the night and then reporting it to the authorities. I accept the argument thus far: there is little logic to it. However, Z has a history of mental health problems and of impulsive behaviour. It seems to me that those arguments pale into insignificance besides the stark facts I have indicated above.

36. I therefore conclude that the damage to this tag was caused deliberately by Z. If it were necessary to achieve the criminal standard of proof for this conclusion, I would have not the slightest difficulty in doing so. I also conclude that it is likely that Z panicked, seeing that he had caused some damage, and, realising that it would be observed on the next inspection, reported it himself following advice from his solicitor.

37. It now remains for those who represent Z to consider the consequences of this finding. They will no doubt advise Z as to whether he should apply once more for bail in the light of this finding and, if he does, on what conditions.