Neutral Citation Number: [2020] EWHC 36 (QB)

Case No: QA-2019-000107

IN THE HIGH COURT OF JUSTICE
QUEEN'S BENCH DIVISION
ON APPEAL FROM CENTRAL LONDON COUNTY COURT
HER HONOUR JUDGE BAUCHER

Royal Courts of Justice
Strand, London, WC2A 2LL

Date: 13/01/2020

Before :

MR JUSTICE MARTIN SPENCER

- -

Between :

Mr Wayne Bass	**Appellant/ Claimant**
- and –	
Ministry of Defence	**Respondent/ Defendant**

- -
- -

Mr Theo Huckle QC, Mr Paul Kilcoyne, Miss Turan Hursit and Mr Frederick Powell (instructed by **Hilary Meredith Solicitors**) for the **Appellant**
Mr Ben Collins QC and Mr Robert Dickason (instructed by **Government Legal Department**) for the **Respondent**

Hearing dates: 5 and 6 December 2019

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Approved Judgment

I direct that pursuant to CPR PD 39A para 6.1 no official shorthand note shall be taken of this Judgment and that copies of this version as handed down may be treated as authentic.

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MR JUSTICE MARTIN SPENCER

Mr Justice Martin Spencer:

Introduction

1. The Claimant seeks permission to appeal against the order and judgment of HHJ Baucher dated 29 March 2019 whereby she dismissed his claim for damages against the Defendant arising out of the contraction of Q fever in May 2012. In addition to hearing the application for permission to appeal, I also heard the substance of the appeal argued over 5/6 December 2019.

2. In this case, a significant number of abbreviations and acronyms have found their way into the documents. I therefore set out a table of some of these, and what they stand for:

CDSG	Communicable Diseases Steering Group
CQPG	Chloroquine and Proguanil
DIN	Defence Instruction & Notice
DNBI	Disease & Non-Battle Injury
FOB	Forward Operating Base
Medint	Medical Intelligence
MHSWR	Management of Health & Safety at Work Regulations 1999
MIA	Medical Intelligence Assessment
QF	Q-Fever
QFCFS	Q-Fever Chronic Fatigue Syndrome
The 2001 Order	The Health and Safety at Work etc Act 1974 (Application Outside Great Britain) Order 2001

Background facts

3. I am grateful to Judge Baucher for her exposition of the background facts which I have extensively drawn on. The Claimant was born on 27 July 1984 and is now aged 35. He

enlisted in the army on 1 November 2008 joining the 2nd Mercian Regiment as a Private. Between October 2011 and April 2012 he was deployed to Afghanistan as part of Operation Herrick 15, returning to the UK via Camp Bastion and Cyprus after his deployment finished on 30 April 2012.

4. On 19 May 2012 he began to suffer flu-like symptoms and he was admitted to the Queen Elizabeth Hospital, Birmingham. Q fever (see paragraph 6 below) was suspected and the Claimant was transferred to the Regional Infectious Diseases Unit where he was put on a two week course of Doxycycline, one of the tetracycline family of antibiotics, and he came under the care of Lt Col Mark Bailey, a consultant physician in Infectious Diseases and Tropical Medicine at Birmingham Heartlands Hospital who has a special interest in Q fever.

5. Unfortunately, despite appropriate treatment, the Claimant has gone on to develop Q fever chronic fatigue syndrome ("QFCFS") and he was discharged from the army on medical grounds on 1 August 2014.

6. Q fever is a bacterial infection caused by the organism Coxiella Burnetii. Exposure usually arises through contact with animals and the disease was first identified in the farming community in Australia. Coxiella Burnetii is both highly transmissible and resilient. A single organism is capable of causing Q fever. Clinical diagnosis is difficult as the symptoms are often non-specific and diagnosis requires expert serological testing. After exposure to the bacterium, symptoms usually arise within two to three weeks in those who become symptomatic (not all do) and it would appear that the Claimant's exposure must have been right at the very end of his deployment in Afghanistan. There was no issue at the trial that the infection was contracted whilst the Claimant was in Afghanistan.

Knowledge of Q fever

7. Epidemics of non-specific febrile illness were observed among German soldiers in southern Yugoslavia from March 1941 during the Second World War. 600 soldiers were affected and 41% of them developed pneumonia. Fever lasted between seven and eight days and was accompanied by malaise, headache, joint pains and cough which was occasionally productive of blood-stained sputum. There were further outbreaks of such fever throughout the war. Five of the outbreaks were investigated and produced serological evidence of Coxiella Burnetii infection. After the war, further outbreaks were observed: in the Spring of 1948 an epidemic of 66 cases of Q fever occurred in an army recruitment training camp in Switzerland and there was a further epidemic of 53 cases in an air force recruitment training camp in the Engadin valley in 1950. In 1955 there was an epidemic of Q fever in Algeria involving 175 soldiers in a French battalion. These outbreaks led Lt Col A J Spicer, in an article in the Journal of the Royal Society of Medicine published in October 1978, to state:

> "These reports undoubtedly show that Q fever is a disease of military significance for which preventative measures need to be taken. In epidemics where numbers were recorded, the loss of manpower ranged from 23% to 77% and the operational efficiency of some units must have been seriously impaired."

8. In 1956, Tigertt and Benenson reported on a study carried out on young adult male volunteers who were deliberately exposed in groups to Coxiella Burnetii in order to compare different treatment regimes. The incubation period depended upon the dose of infection, declining from 17 days to 11 days as the dose increased. Within 24 hours after the onset of persistent fever, Oxytetracycline therapy was initiated and symptoms ceased in 24 to 48 hours. In comparable groups of volunteers prophylactic administration of Oxytetracycline was initiated late in the incubation periods following the same regimen as used for therapy and clinical disease was prevented in all instances. However in a group of men placed on the same prophylaxis schedule within 24 hours after exposure to a small quantity of Coxiella Burnetii, four out of five developed disease after an incubation period eight to ten days longer than that of the control group. There was evidence on x-ray of pneumonia in one half of the cases. The authors summarised their findings as follows:

> "The disease in man responds promptly to early Oxytetracycline administration and has not been observed to relapse in the 29 clinical cases studied.
>
> Oxytetracycline, given prophylactically late in the incubation period, prevents clinical disease but similar amounts given soon after exposure do not prevent disease, merely delaying the time of onset.
>
> Pneumonia detectable only by x-ray studies was present in one half of the cases. Individuals who did not have pulmonary lesions at the time antibiotic therapy was begun did not develop such lesions subsequently."

9. Commenting on the Tigertt and Benenson study, Lt Col Spicer, in his article in October 1978, stated:

> "Tigertt and Benenson showed that tetracycline, in a dose of three grams daily for six days, taken late in the incubation period, prevented the appearance of symptoms in a group of volunteer soldiers experimentally infected with Coxiella Burnetii. There is only one account of chemoprophylaxis in a military epidemic and as the report is incomplete in several respects the outcome must be considered inconclusive. Chemoprophylaxis for individuals or groups at short-term risk of developing Q fever, particularly if they perform essential roles, may be of value. Long-term prophylaxis with the dosage of tetracycline used by Tigertt and Benenson cannot be recommended and no study appears to have been undertaken with tetracycline at lower dosage levels."

10. Spicer was of the view that Q fever is a disease of military significance and stated in his summary:

> "On the available evidence, Q fever is simply and largely preventable as a significant military disease by implementation of the following measures:

i) Education on the source and methods of infection.

ii) Banning the use of hay and straw for bedding, and the clearing and burning of hay and straw from farm buildings prior to occupation.

iii) The exclusion of sheep and goats from military areas.

iv) Regular serological surveillance of flocks adjoining military areas for evidence of heavy infection by Coxiella Burnetii.

v) Vigilance for an unusually high incidence of abortion in flocks adjoining military areas which should initiate an immediate serological survey to determine the possibility of gross environmental contamination by the Q fever organism.

vi) The possible use of short-term prophylaxis with tetracycline for limited exposures to Q fever."

Q Fever and the British army in Afghanistan

11. In December 2005, the Ministry of Defence completed a medical intelligence assessment for Afghanistan. This resulted in a highly sophisticated and detailed document divided into seven sections:

    i) Topography and climate;

    ii) Demographics, population displacement and NGO status;

    iii) Economy and public health infrastructure;

    iv) High risk infectious diseases;

    v) Environmental and industrial hazards;

    vi) Hazardous plants and animals;

    vii) Civilian and military medical capability overview.

    Among the high-risk infectious diseases identified in section iv) were food and waterborne diseases (bacterial diarrhoea, hepatitis A and E, protozoal diarrhoea and typhoid), vector-borne diseases (malaria, cutaneous leishmaniasis), animal contact diseases (rabies) and contact diseases (hepatitis B). Among the animals identified were various species of viper. At Appendix D, intermediate risk diseases were identified: foodborne and waterborne diseases (diarrhoea-cholera, hepatitis E), vector-borne diseases (Crimean-Congo haemorrhagic fever, leishmaniasis-visceral, sandfly fever, mite-borne typhus, West Nile fever), animal-borne diseases (anthrax, Q fever, brucellosis), sexually transmitted infections (HIV/AIDS), water-contact diseases (leptospirosis) and respiratory (tuberculosis).

12. In March 2007 the Defendant issued a Defence Instruction and Notice ("DIN") outlining UK medical intelligence policy for safeguarding force protection when on

deployment. The DIN identified five threats for the purposes of medical intelligence ("medint", i.e. intelligence derived from medical, bioscientific, environmental and other information related to human or animal health) including infectious and parasitic disease. The medint process included an "intelligence cycle" comprising direction (determination of intelligence requirements, planning the collection effort, the issuing of orders and requests to collection agencies), collection (exploitation of sources by collection agencies and the delivery of information obtained to the appropriate processing unit), processing (production of intelligence through collation, evaluation, analysis, integration and interpretation of information) and finally dissemination (timely conveyance of intelligence). Key to this process were "Requests for Information" (RFIs). Following this DIN, on 24 April 2007 the Defendant produced a document of operationally significant diseases for Afghanistan which graded the risk for each of the diseases referred to in paragraph 11 above. The document distinguished between high risk, intermediate risk, low risk and white (non-existent risks). It stated:

> "High: the main force health protection emphasis should be on these diseases which are the most likely to degrade operations by affecting a large percentage of personnel or by causing severe illness in a smaller percentage.
>
> Intermediate: these diseases also warrant force protection emphasis. They are less likely to degrade operations because they generally affect smaller numbers of personnel or cause mild symptoms. Other intermediate risk diseases are those assessed to be present at unknown levels that, under conditions favourable for transmission, could degrade operations.
>
> Low: other militarily significant diseases that are likely to have a minimal impact on operational readiness."

It is to be noted that the grading of these risks was by reference to their possible impact on operational capability rather than by reference to the risk to any particular individual, although Mr Collins QC, for the Defendant, argued that the two are inextricably linked: see paragraph 51 below. Hepatitis A, Hepatitis B, typhoid, malaria, leishmaniasis and rabies were graded as high risk, but Q fever was designated as an intermediate risk along with, for example, anthrax, HIV and gonorrhoea and chlamydia.

13. In 2007 and 2008, the first examples of "Helmand fever", a generic term for unspecific feverish illnesses suffered by troops stationed in Afghanistan, began to appear among British troops and they became the focus of particular study by Lt Col Bailey. On 27 May 2008 Gp Capt. Green gave approval to Lt Col (then Major) Bailey to carry out an enhanced surveillance study into Helmand fever which he concluded in October 2008. 23 diagnoses were made which included six patients (26%) with Q fever specifically. On 4 September 2008 Lt Col Bailey presented his findings to the Uniformed Services Section of the Royal Society of Medicine, although his paper was not actually published until 2012 in the Journal of the Royal Army Medical Corps.

14. On 6 March 2009, Col Ross issued a Medical Force Protection Audit. Q fever was not identified as a significant health threat and therefore did not feature in the audit. This audit stated:

> "As expected, numerous observations were made on health protection, and considerable detailed input was obtained. In particular, reviews of current threat assessments for malaria and hepatitis B are recommended. Detailed guidance and further work on the management of diarrhoea and vomiting and outbreak control are required. Improved information should also inform the level of risk associated with current practices for managing relief in place."

The audit contained a number of recommendations including the following:

> "82. Health protection risk assessment – malaria and hepatitis B. Evidence suggests that the current assessment may not be correct for these two diseases and an urgent review of both should take place to ensure that personnel are optimally protected from these important diseases."

In his witness statement, Col Ross explained:

> "Q Fever did not feature in this audit as it was not identified as a significant health threat to deployed forces due to it being rare. There were many other more serious health threats and risks to the health of those in theatre, including, but not limited to, the diseases I have set out above"
>
> [this being a reference to malaria, hepatitis B, rabies and Leishmaniasis].

15. So far as Q fever is concerned, on 29 March 2010 Lt Col Bailey sent an email to Gp Capt. Green, giving him an update from Afghanistan where he was himself deployed. In that he stated:

> "Overall I've had 86 medical inpatients over the three weeks I've been here and most are from the Bastion area which I suspect is the tip of the iceberg compared to what is going on in the FOBs [Forward Operating Bases]! I think I've been a bit busier than my predecessor (Andy Johnston) but then I did volunteer to come at this time because I knew it coincided with a roulement and the seasonal increase in Helmand fever cases."

Having then reported on various types of illness including gastroenteritis and scarlet fever, he said at paragraph 7:

> "That's about it really – except to say I remain convinced there is no malaria in Helmand and that if we're going to take prophylaxis then it should be Doxycycline … but I know we've discussed this before."

16. In the summer of 2010, the senior medical officer at the primary healthcare group in Camp Bastion, Afghanistan, was Lt Col Delal and on 4 August 2010, he produced a

clinical information bulletin on Helmand fever including Q fever. This related mainly to treatment of suspected cases and serological testing, as opposed to prevention.

17. On 10 September 2010, Col Ross issued a further Medical Force Protection Audit. At page 27 this contained recommendations in relation to health protection against infectious diseases and stated:

> "6.6 The malaria policy for Op. Herrick should be reviewed including assessment of risk for personnel based in different locations, and choice of chemoprophylaxis. This should be undertaken at the end of the current season."

This led to Permanent Joint Headquarters being requested by Medical Command to consider a switch to Doxycycline chemoprophylaxis for malaria in view of the presentations with Helmand fever, and the Communicable Disease Steering Group ("CDSG") was requested to advise.

18. On 26 January 2011 the CDSG met to consider the issue and the minutes record that:

> "It was felt that the present regimen should continue unchanged for the present, since there was no evidence that it was failing to protect against malaria. This decision will be reviewed in light of the HPA's final report and PH's finished paper."

This decision was reflected in a notice sent by Lt Col Hennessey on 10 February 2011 which stated, among other things, as follows:

> "4. Each nation follows national guidelines and national licensing laws. The UK advice concerning seasonal risk and chemoprophylaxis is provided by Advisory Committee on Malaria Prophylaxis and their current advice is to use Chloroquine and Proguanil with no alternative regime recommended. There remains no problem with Chloroquine resistance in P.Vivax in Afghanistan. The season is somewhat arbitrarily determined based on incidence of reported malaria cases and has previously been set as 1 March – 1 November. …
>
> 5. Little is known about the epidemiology of Rickettsial[1] disease in Afghanistan, and there is ongoing work to try and determine if significant numbers of UK service personnel are being exposed. The seroprevalence study which is a collaborative project between MOD and HPA has only reported interim findings which are not sufficiently robust yet to make definitive decisions. This project will be monitored closely and results reviewed in time to inform the next malaria season.
>
> 6. The Med FP Audit demonstrated that compliance with chemoprophylaxis is poor due to a combination of factors including individuals not believing the threat and mistrusting the

[1] Rickettsial disease appears to be used as a generic term to cover all the Helmand fevers, including Q Fever.

> advice due to differences in policies between deployed nations. This review, however, did not find compelling evidence to go against UK national guidelines just to align with another nation. There is a clear need to make yet more effort to reinforce the need for anti-malarials and the emphasis on bite avoidance measures which is being actioned as part of in-theatre health protection and through the CoC.
>
> Summary
>
> 7. A review of malaria and malaria chemoprophylaxis was conducted following recommendations in the 2010 Medical Force Protection Audit. The results of the review were presented to the CDSG who has found no justification to change the current chemoprophylaxis regime at this time."

Clearly, this notice from Lt Col Hennessey and the decision taken not to substitute Doxycycline chemoprophylaxis for Chloroquine and Proguanil is at the heart of this case as a change in 2011 would have potentially benefitted the Claimant who was deployed to Afghanistan in October 2011.

19. In the meantime, Lt Col Bailey continued to present his findings arising out of his Helmand fever study. On 15 March 2011 he presented a paper to the Disease and Non-Battle Injury ("DNBI") Working Group meeting, reflected in an email from Air Cdre Clare Walton on 16 March 2011. The Working Group felt that Lt Col Bailey's findings, although based on small numbers, were significant and had possible policy implications. She stated:

> "The HPA/MOD study results … suggest up to 20% of deployed personnel studied … had seroconverted for Q fever by the end of their deployment. Clearly not all of these had been ill. Mark Bailey's research and analysis suggest that of those seroconverted 50% would be symptomatic (to a greater or lesser extent) of which 25% could develop Q fatigue and 1-5% could go on to have chronic Q [fatigue]. If the HPA results are accurate (and Andy Green is yet to have a close look at them) this could represent a significant number of cases that arguably we should be following up. There is very little data or research that tells us what the long-term health implications of asymptomatic seroconversion are."

This email, sent to Air Cdre Wilcock, among others, was met with the following response on 1 April 2011 from Air Cdre Wilcock:

> "This needs some discussion. It is not clear whether the science behind the concerns is yet robust enough to generate policy, or whether in fact we need a broader research project or some sort of cohort follow-up. Recognising the timescales for continuing involvement in Herrick, this may be difficult to achieve. I haven't read the full report, but no doubt the clinical experts will give a view in due course. Whilst I hesitate to say it, it would be

> useful to know what the US experience has been, given their greater numbers and longer length of deployment."

20. In the meantime, there was a post-operational report by Lt Col Ayers in relation to the October 2010 – April 2011 deployment which questioned the current anti-malarial medication and suggested Doxycycline prophylaxis. Lt Col Ayers' post-operational report included the following:

> "I question whether the current recommendation of Chloroquine and Proguanil could be re-evaluated and Doxycycline considered. This would have the following advantages:
>
> (a) Prevent daily drugs being taken weekly and vice-versa. There is a significant risk of toxicity if this occurs;
>
> (b) Treatment of Q fever and rickettsial typhus;
>
> (c) Treatment of acne and folliculitis;
>
> (d) Treatment of chlamydia;
>
> (e) Better tolerance."

In the course of summer 2011, there appears to have been a continuing groundswell of support for Doxycycline as chemoprophylaxis for malaria. On 5 June 2011, Lt Col Bailey published his Helmand fever paper and recommended that Doxycycline chemoprophylaxis be considered. On the same day, he referred, in an email which was widely distributed, to having diagnosed four new cases of Q fever in British troops over the previous few weeks and seeing about one case a week when he was deployed in Helmand and suggesting that Q fever remained a 'significant problem' in Helmand. This resonated with Gp Capt. Steven Kilbey who, on 9 June 2011, referred to comments he had made in 2010 on whether malaria prophylaxis should be in line with the US, "as we would cover more diseases and potentially improve compliance". On 10 June 2011, Col Martin Nadin wrote that he strongly supported Gp Capt. Kilbey's comment and that:

> "We should consider switching to Doxycycline as our primary anti-malaria in South Afghanistan given its wider prophylactic properties".

This was responded to in an email (the author of which is not apparent) as follows:

> "This matter is indeed due to be reviewed at the next meeting of the CDSG. Like you I think Mark's points move us towards a Doxy [Doxycycline] default but I would be very interested in Andy Green's take on this."

On 2 July 2011, Col Ross wrote:

> "I think you all know my view because I made it clear in the last Med FP report that there would be significant benefits in

> changing to Doxycycline, which Mark has reiterated in his comments."

21. On 23 August 2011, the Infectious Disease Working Group, chaired by Surg Cdr Gardner, a consultant physician, met and it was decided that Surg Cdr Gardner would approach DCA CDC with a view to anti-malarial prophylaxis being changed to Doxycycline on the basis that:

> "There has only been one reported case of Helmand fever in the US Forces – this patient had not been taking his anti-malarial prophylaxis (Doxycycline)."

22. It is in the above context that it was the Claimant's case that the Defendant should have carried out an appropriate risk assessment for the risk of contraction of Q fever by troops deployed in Afghanistan and that, had such a risk assessment been carried out, a decision would or should have been made to switch to Doxycycline prophylaxis for malaria which would also have protected the Claimant against Q fever in time for his deployment to Afghanistan from October 2011.

The trial before, and judgment of, HHJ Baucher

23. At the trial in January 2019, Judge Baucher heard from many of the personnel to whom reference has been made including Lt Col Bailey, Gp Capt. Green, Air Cdre Walton and Col Ross. She also heard from experts on each side, Dr Brendan Healy, a consultant in microbiology and infectious diseases for the Claimant and Professor Ron Behrens, a consultant in tropical diseases, for the Defendant.

24. The principal case for the Claimant in relation to breach of duty was whether the Defendant carried out any, or any adequate, risk assessment, for the contraction of Q fever. One of the issues in this regard was whether this case is caught by the Management of Health and Safety at Work Regulations 1999 ("MHSWR") but, in any event, the duty to carry out a proper risk assessment was agreed to arise under the duty at common law. After a detailed and careful consideration of the evidence, Judge Baucher concluded that, far from failing to assess the risk, the Defendant continually assessed the risk (paragraph 133). In so concluding, she relied on, among other things, the audit by Lt Col Ayers in March 2011, the exchange of emails culminating in Col Ross' email of 2 July 2011 and the meeting of the Infectious Disease Working Group on 23 August 2011. She found at paragraph 148 that the Defendant considered the risk of Q fever and that it appropriately assessed the level of the risk and its consequences. The question was whether the Defendant's response to that risk was reasonable. The conclusion to this, after a further careful consideration of the literature and expert evidence is to be found at paragraph 181 as follows:

> "In the light of this material, the Defendant had to give careful consideration to any change of policy. Given those factors and the complete lack of evidence that Doxycycline worked as a prophylaxis for Q fever, coupled with the attendant problems of tolerability of the drug I find that the Defendant was entitled to keep to its existing regime. It was not required to change its chemoprophylaxis and did not fail in its duty of care to the Claimant."

25. In relation to causation, the learned judge also found in favour of the Defendant. She was not satisfied that, had the Claimant been prescribed Doxycycline instead of Chloroquine and Proguanil, he would have taken it any more frequently than he took the existing regime which, on her findings, he had only taken 50% of the time. Furthermore, she found that, even had the Claimant taken Doxycycline, it would not have been effective to avoid his contraction of Q fever or Q fever chronic fatigue syndrome.

The arguments on this appeal

26. On behalf of the Claimant, Mr Huckle QC has challenged each of the judge's findings in the court below on the basis either that they were wrong in law or that they were not supported by the evidence, whether because, as he submits, the evidence was misunderstood or misinterpreted, or alternatively the learned judge failed to take into account evidence that she should have done. In relation to breach of duty, he submits that there was a failure by the judge properly to apply the prevailing regulatory law and in any event, a failure to apply the legal requirements of modern health and safety law, in particular as to the importance of risk assessment in the law of employers' liability. She instead permitted and endorsed an "informal" approach to risk assessment thereby affording the Defendant inappropriate flexibility and leeway whereby the Defendant was allowed to give primacy to the need to meet combat risks at the expense of the relevant risk of contracting Q fever: he submits that an appropriate assessment and balancing exercise should have been undertaken, but was not. He submits that the learned judge should have found that the Defendant failed to take all reasonable steps to guard the Claimant against the contraction of Q fever and the consequential chronic fatigue syndrome.

27. So far as causation is concerned, Mr Huckle submits that, as part of its appropriate risk assessment, the Defendant would or should have emphasised to its personnel the importance of complying with the prophylaxis and the risk of failing to do so, including the risk of contracting Helmand fever (including Q fever). Such training and instruction would have led the Claimant to be compliant with the taking of chemoprophylaxis and the judge should have so found. He further submits that, in view of the Defendant's failings, the evidential burden was on the Defendant to show that Doxycycline would not have been effective to protect the Claimant from contracting Q fever and Q fever chronic fatigue syndrome and the learned judge wrongly failed to find that the Defendant had failed to meet this evidential burden. It is further submitted that the learned judge should have found in favour of the Claimant on the basis of material contribution. These submissions will all be considered in more detail in the context of consideration of each of the issues which arise on this appeal.

28. The issues on this appeal are accordingly as follows:

    i) The territorial application of the MHSWR;

    ii) The learned judge's approach to risk assessment and whether she should have found breach of duty;

    iii) The approach of the judge to tolerability;

iv) Whether the Claimant would have been compliant with a regimen of Doxycycline chemoprophylaxis;

v) Whether Doxycycline would have been effective to prevent contraction of Q fever;

vi) Whether Doxycycline would have been effective to prevent chronic fatigue syndrome.

Permission to Appeal

29. From the above recitation of the background facts and the issues, it is apparent that this appeal raises important issues concerning the extent of the duty of employers generally, and the MOD in particular, when deploying soldiers overseas, to carry out risk assessments, including the nature of such risk assessments and the appropriate response to them where risks have been identified. In the circumstances, it is appropriate, in my judgment, to grant permission to appeal.

Issue 1: The territorial application of the MHSWR

30. In a sense, resolution of the question whether the MHSWR apply to decisions taken by the MOD in the UK concerning activities to be carried out by employees abroad is of no consequence where it is agreed, as here, that the duty arising under the Regulations adds nothing to the duty owed by the Defendant at common law. Nevertheless resolution of this issue might have wider implications for the Defendant and I am therefore asked to resolve it.

31. The Claimant's pleaded case is that the Defendant's failings amounted to breaches of Regulations 3, 4 and 8 MHSWR 1999. In response, the Defendant relies upon section 84 of the Health and Safety at Work Act 1974 and the Health and Safety at Work etc Act 1974 (Application Outside Great Britain) Order 2001 ("the 2001 Order"). Article 3 of the 2001 Order provides:

> (1) The prescribed provisions of the 1974 Act shall, to the extent specified in the following articles of this Order, apply to and in relation to the premises and activities outside Great Britain which are so specified as those provisions apply within Great Britain.
>
> (2) The reference in paragraph 1 of this article to premises and activities includes a reference to any person, article or substance on those premises or engaged in, or, as the case may be, used or for use in connection with any such activity, but does not include a reference to an aircraft which is airborne."

None of the articles then referred to could be treated as extending the application of the Regulations to the Claimant's work in Afghanistan. Regulation 23 of the MHSWR provides that the MHSWR:

> "shall, subject to Regulation 2, apply to and in relation to the premises and activities outside Great Britain to which sections 1 – 59 and 80 – 82 of the Health and Safety at Work Act 1974 apply by virtue of the [2001] Order."

32. The effect of these Regulations is, in my judgment, that, unless specifically included by article 3 of the 2001 Order, the provisions of the MHSWR 1999 do not apply to premises and activities outside Great Britain.

33. For the Claimant, Mr Huckle QC submits that a distinction is to be drawn between the activities themselves carried out extra-territorially and the *decisions* made in the UK relating to those activities. He contends that decisions relating to appropriate chemoprophylaxis against diseases to be encountered by troops abroad are decisions taken by an employer in the UK affecting the health and safety of its employees and, as such, are subject to the regulations.

34. On behalf of the Defendant, Mr Collins QC points out that the Claimant's submission is unsupported by authority and is, he submits, inconsistent with a dictum of Lord Carnwath at paragraph 157 of the judgment of the Supreme Court in *Smith v MOD* [2014] AC 52. *Smith's* case involved claimants who were members of the families of three British soldiers who, while serving in Iraq, had been killed when improvised explosive devices were detonated beside the Snatch Land Rovers in which they had been travelling. It was claimed that the soldiers' deaths had resulted from the Defendant's failure to provide suitably protective equipment for soldiers on active service in Iraq in breach of its obligation to safeguard the soldiers' right to life guaranteed by Article 2 ECHR and in negligence for failing to provide suitable equipment. Mr Collins submitted that had it been considered that duties were owed under the Regulations such a claim surely would have been brought. Furthermore he relies on the judgment of Lord Carnwath where he says (at paragraph 157):

> "It is important to recognise that we are being asked to authorise an extension of the law of negligence (as indeed of Article 2) into a new field. We have not been referred to any authority in the higher courts in this country or any comparable jurisdiction, in which the State has been held liable for any injuries sustained by its own soldiers in the course of active hostilities. Further we are concerned only with duties at common law rather than under statute. As the Court of Appeal recognised, para. 38, statutory regulations governing the responsibilities of the Ministry as employers do not apply outside the United Kingdom."

The reference by Lord Carnwath to paragraph 38 is to the judgment of Moses LJ in the court below where he had said:

> "38. It is beyond dispute, and the MOD did not purport to dispute, that it owed a duty of care at common law to members of the armed forces as their employer. Nor was it disputed that health and safety provisions contained in sections 2–4 and 6–7 of the Health and Safety Act at Work 1974 and in regulations made under section 15 imposed statutory duties on the MOD. For example, it is required to secure suitable personal protective clothing and adequate information, instruction and training about

> such equipment under the Personal Protective Equipment at Work Regulations 1992 (SI 1992/2966) to construct or adapt work equipment so that it is fit for purpose under the Provision and Use of Work Equipment Regulations 1998 (SI 1998/2306), to make a suitable and sufficient assessment of risks to health and safety, and to secure adequate health and safety training on recruitment, or when exposed to new or increased risks, under the Management of Health and Safety at Work Regulations 1999 (SI 1999/3242). The territorial scope of those regulations is limited to Great Britain: section 84(1), extended to Northern Ireland by Order in Council under section 84(3) of the 1974 Act."

Mr Collins submits that the force of the dictum by Lord Carnwath is not detracted from by the fact that, in relation to the duty under common law, his was a dissenting judgment. Clearly, it is only obiter dictum though: it was no necessary part of the decision of the Supreme Court to determine whether the Regulations did or did not apply.

35. In her judgment in the court below, HHJ Baucher rejected the Claimant's submission stating:

> "24. … The effect of Regulation 23 and the 2001 Order is to exclude work activities outside the UK. I do not consider that the Regulations have any application to this case. I'm satisfied the duty I have to consider is the common law duty of care."

I agree with the learned judge. In my judgment were it otherwise the courts would be faced with the impossible task of distinguishing between decisions concerning the activities of soldiers serving abroad which, although equally affecting their health and safety, might be made in this country or in the theatre of deployment. It seems to me that, as submitted by Mr Collins QC, the clue lies in the word "activities". Where soldiers are deployed abroad, those activities are extra-territorial and this provides an umbrella of protection from the applicability of the Regulations relating to those activities and to decisions taken by the employer in relation to those activities, wherever those decisions are made. In the circumstances I agree with Judge Baucher that we are concerned only with the Defendant's duty at common law and I am comforted by the thought that this appears to be consistent with the view of Lord Carnwath.

Issue 2: The learned judge's approach to risk assessment and whether she should have found breach of duty

36. It was agreed from the outset of the trial below that the risk of infection with Q fever in Southern Afghanistan was foreseeable. This is hardly surprising given the history and background facts to which I have referred and it was the subject matter of agreement between the experts in their joint meeting on 3 September 2018:

> "Both experts agreed it was foreseeable and RHB [Professor Behrens] pointed out that the Medical Intelligence Assessment

> for Afghanistan carried out in 2005 described the risk of infection with Q fever."

This was also a concession made by the Defendant at paragraph 10 of the opening skeleton argument for the trial below.

37. Given the foreseeability of the contraction of Q fever, the duty on the Defendant was as definitively stated by Swanwick J in *Stokes v Guest Keen and Nettleford (Bolts and Nuts) Ltd* [1968] 1 WLR 1776, cited with approval by the Supreme Court in *Baker v Quantum Clothing Group Ltd* [2011] 1 WLR 1003:

> "From these authorities I deduce the principles, that the overall test is still the conduct of the reasonable and prudent employer, taking positive thought for the safety of his workers in the light of what he knows or ought to know; where there is a recognised and general practice which has been followed for a substantial period in similar circumstances without mishap, he is entitled to follow it, unless in the light of common sense or newer knowledge it is clearly bad; but, where there is developing knowledge, he must keep reasonably abreast of it and not be too slow to apply it; and where he has in fact greater than average knowledge of the risks, he may thereby obliged to take more than the average or standard precautions. He must weigh up the risk in terms of the likelihood of injury occurring and the potential consequences if it does; he must balance against this the probable effectiveness of the precautions that can be taken to meet it and the expense and inconvenience they involve. If he is found to have fallen below the standard to be properly expected of a reasonable and prudent employer in these respects, he is negligent."

The Claimant's arguments in the court below

38. In the court below, it was submitted on behalf of the Claimant that the Defendant had taken no step to assess the risk of Q fever and taken no step to guard against it. Relying upon the groundswell of opinion to which I have referred (see paragraph 20 above), it was submitted that a suitable and sufficient risk assessment in accordance with the modern duty of the reasonable and prudent employer as expressed for example by the Supreme Court in *Kennedy v Cordia* [2016] 1 WLR 597 (see paragraph 56 below) would have led the Defendant to "scope" the realistic risks and consider their relative importance. It was submitted that, in accordance with Swanwick J's reference to keeping abreast with developing knowledge and not being too slow to apply it, the information emerging from Lt Col Bailey and others throughout 2010 and 2011 should have led to a re-assessment of the risks and an appropriate response specifically in relation to Q fever. It was submitted that the Defendant had asked itself the wrong question when the CDSG was asked in early 2011 to consider the *anti-malaria* regime alone. It was submitted that the CDSG in February 2011 wrongly followed the advice of Gp Capt. Green in preference to the different guidance available from other bodies which centred on malaria prevention without reference to the risk of Q fever. It was submitted that it was clearly and wrongly Gp Capt. Green's position that the MOD should follow the general advice in relation to malaria prevention which was not

tailored to the particular risks in, and demands of, the Helmand deployment, that position being that unless there is compelling evidence to suggest that the risks to the group deployed to Helmand were significantly different no change from national best practice would be warranted. It was submitted that the focus of the MOD was in relation to the risk of the various diseases for the Defendant's operational capacity rather than the risk to the health and safety of the individual servicemen and this meant that Gp Capt. Green was adopting a flawed approach to risk assessment. Reliance was placed upon Gp Capt. Green's evidence at the trial that the consideration by the CDSG in January/February 2011 did not constitute a risk assessment in relation to the Helmand fevers in general and Q fever in particular so that there was no review of the evidence-base for the efficacy of Doxycycline in the prevention of Helmand fevers and Q fever. It was submitted that had a proper risk assessment viz a viz the health and safety of the servicemen been carried out, it would have been:

> "an obvious and reasonable step for the Defendant to prescribe Doxycycline prophylactically upon deployment and warn/advise/instruct the Claimant and colleagues to adhere to the prescription in precisely the way done to combat the risk of malaria infection, but in fact with far better prospect of general compliance."

39. In relation to the assessment of the risk, it was submitted in the court below that risk is the product of two factors: the likelihood of injury (incidence) and the severity of the possible injury (gravity). It was submitted that the risk of Q fever (and, with it, Q fever chronic fatigue syndrome) was a serious risk taking into account the known incidence of the Helmand group of fevers as analysed in Lt Col Bailey's Helmand paper and as exemplified by what happened to the Claimant himself. Thus, with a relatively high likelihood of injury and a relatively severe possible outcome, the risk would or should have been assessed as a high risk (as opposed to the intermediate risk assessed for the purposes of impact upon operational capability) and this would have led to action being taken accordingly.

The Defendant's arguments in the court below

40. For the Defendant, it was submitted that the size of the risk remained unclear in 2011 and it was not possible to reach any sort of conclusion as to how commonly British troops were exposed to Q fever, how commonly they were developing an acute disease or how commonly they were developing serious or long-term symptoms. Reliance was placed on the evidence of Lt Col Summers who had stated:

> "It was a challenging job. There was a significant amount of uncertainty as to some of the hazards that were being assessed. There wasn't a lot of information … it was a new deployment. This was a difficult process. We used baseline assessments from previous countries. Intelligence and information, medical information from either a war-torn country or a developing country is very hard to get hold of, particularly around disease."

It was submitted that other diseases were rightly categorised as presenting a higher level of risk, and in particular malaria. The Helmand fever study had not estimated the prevalence of the disease stating only that "a sero-epidemiological study is required to

estimate the true burden of the diseases": the study had identified only six cases of Q fever over a six-month period. It was submitted that: "It was wholly impossible for the Defendants to do more, when assessing the risk of Q fever, than recognise that troops were at risk but that the risk of infection was relatively low, and the risk that any such infection would lead to serious consequences was itself relatively low."

41. The Defendant further submitted that the suggestion on behalf of the Claimant that there had been no risk assessment was unfounded and wrong, and in fact considerable thought had gone into the question of the correct prophylactic regime. It was submitted that the case for the Claimant that the "only reasonable conclusion open to the Defendant was a change of malaria chemoprophylaxis" was neither the view of Gp Capt. Green nor of Lt Col Bailey, both of whom agreed that there was insufficient data available to make a recommendation for a change of malaria prophylaxis to Doxycycline. The only evidence that the decision should have been taken to switch to Doxycycline came from the Claimant's expert Dr Healy, who was described by Mr Collins on behalf of the Defendant as having "no expertise in malaria and has no experience in advising on or participating in decisions as to malaria prophylaxis policies."

It was submitted that the emphasis by Gp Capt. Green on malaria prophylaxis was wholly appropriate: this disease being a significant threat, there having been over 600 cases of malaria in NATO forces by 2011. Gp Capt. Green said in evidence:

> "The primary role or the reason for giving malaria prophylaxis is to prevent malaria as a disease, and I think, as this attached paper from Lt Col Hennessey also describes, it was clearly a policy which was working because there had been zero cases in British troops the year before, in contrast to, as we've already said, a large number of other NATO forces who had significant numbers of malaria cases."

Gp Capt. Green also noted that malaria was more common in US troops who were taking Doxycycline prophylaxis.

The Judgment of HHJ Baucher

42. In her judgment, Judge Baucher correctly and appropriately stated that the incidence of risk is closely intertwined with breach of duty and thus she considered the risk in the context of her consideration of breach of duty. Having set out in detail the arguments for each party and having made some preliminary observations on the expert evidence, the learned judge then reviewed the chronology. She considered that the MIA of December 2005 was an appropriate starting point for the Defendant to consider the risk of Q fever. She stated (at paragraph 98):

> "I consider that when the MIA is considered in the context of other diseases that the risk was indeed 'low' and Professor Behrens' identification of it as such was therefore a fair assessment. Indeed it is reflected by the evidence."

43. In her judgment, the learned judge placed particular reliance upon the evidence which she had heard from Lt Col Bailey. In that evidence, Lt Col Bailey had conceded that

the Helmand study was not "scientifically impressive" and was not the sort of evidence upon which major decisions should be made. Although, as shown in the various emails and documents emanating from him, he had been freely expressing his opinion to his military superiors, he said that all he was doing was suggesting that Doxycycline chemoprophylaxis should be considered and had he thought that the Helmand study warranted a wholesale change of policy by the Defendant, he would have said so. All that the study had been intended to show was that there was a possibility of Q fever being prevented if Doxycycline prophylaxis was given to the troops at risk; he had deliberately not elevated his view from "could" to "would". As the learned judge found (paragraph 108):

> "He was certainly not suggesting, as Dr Healy asserted, that it was his opinion that a change should be made."

44. The learned judge also referred to the evidence of Gp Capt. Green who had said that the Helmand study was not a formal risk assessment but rather a scientific investigation, which she considered to be a fair reflective statement. He said that the Helmand study was undertaken because the Defendant was unable to identify what was causing a number of infectious disease cases, a particular concern being whether there was Crimean-Congo haemorrhagic fever in Afghanistan. The learned judge found that whilst the Helmand study was not a formal risk assessment as such, the research underlying it was clearly aimed at assessing the risk faced by those on military deployment. She stated:

> "111. If the Defendant had been ignoring risks or not giving proper credence to such then I consider it could have ignored the Helmand study. However, I find rather than simply doing nothing, as Mr Huckle contends, the Defendant gave due consideration to the paper and reflected upon the risk. In my view that reflection was shown in the Medical Force Protection Audits of 2009 and 2010."

45. The learned judge also considered and placed reliance upon the evidence she heard from Air Cdre Walton who was responsible for health protection and policy and had a key strategic advice role at the time. The judge was impressed by her evidence. She said that she had taken Lt Col Bailey's work very seriously (as emerges from the various email exchanges), carefully considered the 2010 audit and as a result instructed Lt Col Hennessey to review whether the regime for chemoprophylaxis should be changed. This was again relied upon by the learned judge as showing that the Defendant was not ignoring the risk or failing to assess it in the light of the updated information, but was taking positive steps to assess the risk. The learned judge referred to the advice note produced by Lt Col Hennessey: see paragraph 18 above. She accepted that it is clear that the Defendant's focus was on its chemoprophylaxis policy for malaria and that the aim of Lt Col Hennessey's paper was to inform the CDSG of malaria risk in Afghanistan but she said,

> "There can be no doubt that the CDSG did so in the knowledge that the alternative regime may provide some protection against Rickettsial disease."

She rejected the suggestion that the CDSG had considered matters in a vacuum on the basis that it knew the ambit of the research and the discussion which had preceded the referral to it. The conclusion of the CDSG had been that the present regimen should continue unchanged for the present, "Since there was no evidence that it was failing to protect against malaria". Gp Capt. Green had said that the Defendant was following national policy in relation to malaria prophylaxis and took the view that, "to change away from national policy would require compelling evidence".

46. The learned judge went on to consider the position after the report from the CDSG, through the spring and summer of 2011. She referred to Col Ross' email of 2 July 2011 which appeared to recommend unequivocally a change of regime to Doxycycline. She said:

> "However Col Ross was at pains to point out he specifically referred to the Kenya study because albeit that was looking at another chemoprophylaxis regime for malaria the question of side effects was a significant matter. His evidence confirmed that the Defendant was weighing up and considering the risks."

The learned judge referred to the meeting of the Infectious Disease Working Group in August 2011 and the decision that the consultant physician would approach Gp Capt. Green with reference to anti-malaria prophylaxis being changed to Doxycycline. She referred to Gp Capt. Green's evidence that all the personnel who were part of the working group were deployed in Afghanistan and based at Camp Bastion. Whilst the implication might well have been that Doxycycline was working in the US forces, he said they only had a small perspective based on their observations at the camp and had little understanding of the wider picture and whilst there was a reference to no reported cases in US troops he did not know if the US was even examining for Q fever at the time. This was evidence which the learned judge accepted and she considered that the Defendant was entitled to consider such in the context of the wider picture which included the further sub issues of size, nature of the risk, effectiveness and tolerability.

47. The learned judge then went on to consider the evidence as to the size and nature of the risk. On the evidence, she found that in 2011 it was simply, "not apparent to the Defendant that the figures from the Helmand fever study would correlate with those who were ultimately clinically assessed. On the evidence available and throughout Mr Bass' deployment the Defendant identified the risk but it considered it to be low as is evidenced from the MIA (when considered in context) and subsequent audits." She rejected a relative risk calculation put forward by Mr Huckle QC as having any application to such an analysis. She concluded:

> "147. I am satisfied the Defendant was required to identify the potential risk of Q fever. A review of the entirety of the documents and the evidence shows it did so albeit that the focus was principally on malaria. The risk of Q fever was low. I refute the contention there was sufficient data upon which the Defendant could have taken an alternative view. There was no evidence that suggests the risk changed by the time of the Claimant's deployment. I accept there will always be a time when more data could assist but even in 2014 when the Newman

> study was published there was a recommendation for the need for further research."

She concluded that she was satisfied that the Defendant considered the risk of Q fever, that it appropriately assessed the level of the risk and its consequences. On that basis she identified the crucial issue as being whether the Defendant's response to that risk was reasonable.

48. In the context of whether the Defendant's response was reasonable, the learned judge went on to consider two matters: whether Doxycycline chemoprophylaxis would have been effective (by reference to the expert evidence) and whether it would have been tolerated by the troops. However, I found this portion of the judgment to be confusing in the absence of evidence that these were matters specifically taken into account by the Defendant in making a decision not to change the prophylactic regimen to Doxycycline. These matters are, of course, relevant and pertinent to questions of causation had such a decision been taken, but I cannot understand how the expert evidence of Dr Healy and Professor Behrens as to the effectiveness of Doxycycline as a prophylactic regime could inform a decision whether the response of the Defendant to its consideration of the risk of Q fever was reasonable when the Defendant did not have that evidence available to it. The <u>assumption</u> in all the documents which I have described in paragraph 20 above as the groundswell of opinion through 2010 into 2011 was that Doxycycline was effective and this was the information upon which the Defendant would be basing its decision. Nevertheless the conclusion of the learned judge was clear at paragraph 181 of her judgment:

> "Given the reference to the prevalence of malaria in Afghanistan in the Wallis and Hennessey papers and its incidence in other forces I consider the Defendant was right to have regard to the risk. Professor Bailey considered that the risk was overstated in the Helmand Province, but he did not advocate a change of chemoprophylaxis policy but just that change be considered. The Defendant was aware that when the US was in Iraq, they had seen cases of malaria when using Doxycycline. Gp Capt. Green referred in his evidence to 50 reported cases of malaria in 2010 amongst NATO personnel in Afghanistan most of whom were Americans taking Doxycycline prophylaxis. Professor Bailey said that he thought the US had seen few, if any, cases in Afghanistan but that they still have a significant rate of seroconversion suggesting exposure or infection that did not present as symptoms or did not present for treatment. In the light of this material the Defendant had to give careful consideration to any change of policy. Given those factors and the complete lack of evidence that Doxycycline worked as a prophylaxis for Q fever, coupled with the attendant problems of tolerability of the drug I find that the Defendant was entitled to keep to its existing regime. It was not required to change its chemoprophylaxis and did not fail in its duty of care to the Claimant."

The Claimant's arguments on this appeal

49. On this appeal, Mr Huckle QC has largely reiterated the arguments adduced before the court below. He submitted that there was sufficient knowledge of either a problem or a potential problem with Helmand fever by early 2011 for it to be a breach of duty for the Defendant not to have carried out a risk assessment which addressed the relevant risks and the necessary steps to be taken to avert or minimise that risk. He referred to Lt Col Bailey's email of 5 June 2011 as being the best evidence of the information available. He submitted that the lack of detailed information was simply a reflection of the lack of proper assessment by the Defendant at the time and that such an assessment was an essential step towards deciding on the appropriate chemoprophylaxis regime. He submitted that no assessment had been carried out by the Defendant which would have allowed them to take a correct or appropriate view. He submitted that there had been a failure by the judge to consider properly the role of a proper risk assessment in modern employment law and its role as a "blueprint for action". This was a reference to the judgment of Smith LJ in *Allison v London Underground* [2008] ICR 719, endorsed by the Supreme Court in *Kennedy v Cordia* [2016] 1 WLR 597 (see paragraph 56 below). He submitted that a correct and appropriate analysis of the documentation emanating from various quarters in 2010 and 2011 formed more than a sufficient basis for the Defendant to have carried out an appropriate risk assessment followed by a blueprint for action which, he submitted, the Defendant had signally failed to do and the learned judge should have so found.

The Defendant's arguments on this appeal

50. For the Defendant, Mr Collins submitted that the risk assessment to be undertaken by the Defendant for its soldiers serving in Afghanistan was very different, and much more complex, than for example a routine risk assessment by a manager in relation to the risk of a fall or of personal injury from manual handling. Thus, as the MIA of 2005 showed, there were multiple risks from various diseases, some of which were perceived to be more serious than others, and rightly so. Thus, to change the prophylaxis regime to take account of the risk of one particular disease, Q fever, would potentially have a knock-on effect on prophylaxis for other diseases, and in particular malaria with the risks arising from that disease. Thus, he submitted that a different kind of risk assessment was required in the present case, one which was an ongoing process undertaken through study, committees and correspondence. He submitted that, put into its proper context, the judge was justified in finding that there was a proper risk assessment in the circumstances of this case and her findings of fact were properly underpinned by the evidence.

51. Mr Collins referred to the MIA of 2005 and the risk assessments in relation to the various diseases considered in that document. Q fever was assessed to be an intermediate risk because it was one of the diseases less likely to degrade operations because they generally affect smaller numbers of personnel or cause mild symptoms. He refuted Mr Huckle's submission that this was, in some way, a flawed assessment because it concentrated on the degrading of operations rather than upon the effect on the soldiers. He said that the degrading of operations is itself defined by reference to the effect on soldiers. Thus the disease is less likely to degrade operations because it affects smaller numbers of personnel and it follows that it is looking at how many people are likely to become ill and how serious their symptoms would be. In the context

of disease, this is, he submitted, precisely the sort of risk assessment that the authorities say needs to be carried out. It encompasses the two central questions: what is the level of risk to the individual (incidence) and how serious are the consequences if that risk materialises (severity). He illustrated this by reference to the soldier who contracts Q fever and with it chronic fatigue syndrome. Such a soldier can no longer serve and what is a very severe consequence for him is equally a severe consequence for the employer because the army can no longer use his services for its operations. He submitted that whether one looks at it from the perspective of the needs of the employer or the welfare of the individual, their interests are identical and the same approach is taken to the process of risk assessment. He further pointed out that, as the evidence showed, the people taking these decisions were doctors and, on the evidence, there is no doubt that these personnel, whether Lt Col Bailey, Col Ross or Gp Capt. Green, were people whose key interest was the welfare of their troops. In contrast to the assessment of risk for Q fever, the assessment of risk for malaria was high and this was by reference to the same factors: incidence and severity. He submitted that, in so far as the Defendant, carrying out its risk assessment, prioritised malaria over Q fever, it was wholly justified to do so.

52. Mr Collins further made reference to the Helmand fever study and the way that the learned judge dealt with this at paragraph 104 of the judgment. This was, in the end, a very small study by a junior doctor, that doctor, Lt Col Bailey, only put the efficacy of a change in prophylactic regime as a possibility. Thus, in the course of cross-examination, Lt Col Bailey said:

> "But I do not say 'would', and I remember writing this sentence and pondering on that word and I did not [write] 'would', and I wanted to create the impression that it could work, that it might be a possibility, but I knew the evidence for it was limited and I did not want to overstate what I was saying so I put 'could'. This was then reviewed by senior authors and this is what we submitted."

Mr Collins referred to the evidence of Gp Capt. Green where he gave similar evidence in re-examination:

> "There was no conclusion as to its efficacy at all. The 'could' implies a suggestion of a possibility, rather than a recommended course of action."

Referred to the conclusions of the study he said that what was being stated was that prophylaxis with Doxycycline and possibly Q fever vaccine should be considered, no more than that. Mr Collins also referred to the evidence of Lt Col Bailey where he referred to the small quantity of data relied on. Asked by Mr Collins whether it is an unusual situation for clinicians and advisors to be working on small amounts of data he said:

> "Your Honour, I think that's correct for when you're making decisions that affect one or two patients, and certainly I think the small amount of data I generated was enough to change our clinical policy for the number of patients coming through. But then to take those findings and apply them to 10,000 troops

> deploying twice a year to Afghanistan is an extrapolation that experts in public health need to look at … my perspective is of seeing the patients and of being aware of some quite severe cases and more frequent cases. So obviously I'm particularly interested in trying to prevent these cases but I have different perspective, a restricted view of the overall situation."

Thus, Mr Collins submitted that the evidence of Lt Col Bailey and in particular what he was saying in the various documents and emails in 2010 and 2011 needs to be looked at in that context: the decision of risk assessment and prophylaxis for 20,000 troops a year was more of a wider public health decision, whilst taking into account Lt Col Bailey's more limited perspective from treating those patients who contracted the disease.

53. In the above context Mr Collins submitted that the learned judge was almost bound to accept the Defendant's submissions in respect of this because there was no challenge to Lt Col Bailey about it. This was to be contrasted with the approach of Dr Healy who persisted in his contention that the effect of Lt Col Bailey's evidence was that, "he thought there was enough evidence to warrant the change". Dr Healy said:

> "Yes, he was certainly suggesting that it was his opinion that the change should be made, but also eager to point out that it wasn't his ultimate decision. That's how I read the evidence."

Mr Collins submitted that it was simply impossible to understand how Dr Healy could have continued to insist on this view of Lt Col Bailey's position when Lt Col Bailey had made it crystal clear, time and again, that this was not in fact his position. He submitted, as he submitted to the court below, that this was an example of Dr Healy being unable to acknowledge that his approach had been shown to be wrong, compromising his position as an independent witness.

54. Mr Collins proceeded to analyse the judgment of HHJ Baucher by reference to the documentation she was considering and the evidence she had heard. He submitted that each of the conclusions reached by the judge was justified on the evidence. He referred in particular to the decision of the CDSG in January 2011 which considered the content of the Helmand study (to which they had access, although the study itself had not yet been published). He referred to the judge's findings and submitted that she reached the right conclusion, namely that what the steering group had done was look at a possible control measure for the risk of Q fever, amongst other things, with a panel with very considerable experience and expertise, with a lot of information from Messrs Bailey, Newman, Green and Ross, with the audits and other documents and had concluded that to change the prophylaxis regime for malaria was not an appropriate way to go about addressing the risk of Q fever and he submitted that the judge was entitled to find that this was an appropriate process of risk assessment.

55. Mr Collins submitted that the learned judge was wholly justified in accepting what he submitted was the significant evidence of Air Cdre Clare Walton who was taking a view as a public health physician. She explained that position in the course of cross-examination by Mr Huckle QC. Mr Huckle put to her the email of 2 July 2011 where she had expressed a view that there would be significant benefits to changing to Doxycycline. She agreed she had said that but she had then qualified it. She said:

> "So in public health, clearly when you introduce an intervention, you have to weigh up whether it is going to cause more harm than good and the benefit of that intervention, and in some of the discussions, whilst I've been an advocate, shall we say, for thinking of using Doxycycline as the alternative to Chloroquine and Proguanil, I then considered the significant side effects may be more significant with Doxycycline, which we heard about from Lt Col Bailey in terms of the different Doxycycline preparations which were available, and the one we had available in the UK to us was the one that was more likely to cause gastro or intestinal side effects and other side effects."

She said that this was referred to by her when she referred to the malaria study in Kenya which was addressing the issue of side effects. Mr Huckle put to her that it was always a trade-off in considering the prescription of any drug whether its prophylactic benefits outweighed the potential side effects and non-tolerance with which she agreed. He put that her expression of view in the email of 2 July 2011 was pretty clear to which she responded:

> "… as a public health physician, I have to then go and look for the evidence, and I may try to advocate, whether it be for the clinician or the patient, to see whether we ought to introduce a new, different intervention. At the time I was taken, following my first audit and discussion whilst I was in theatre, that there might be benefits from using Doxycycline to perhaps prevent other Rickettsial type illnesses and sandfly fever. What I didn't have at that time which is why I asked for a review certainly in the second audit, was the evidence to support my own personal opinion as opposed to the scientific evidence which was in the community."

Relying on this and the other evidence, Mr Collins submitted that what this revealed was in fact a good process of risk assessment whereby concerns were listened to, were considered and eventually were rejected for good reasons.

Discussion

56. In my judgment, the submissions of Mr Collins QC are to be preferred to those of Mr Huckle QC. The starting point is, of course, as Mr Huckle rightly submitted, the duty on an employer in relation to the carrying out of appropriate risk assessments. As he submitted, risk assessment is the key tool for an employer in assessing and meeting risk of injury and is fundamental to a proper approach to the safeguarding against risk. This was stated clearly by the Supreme Court in *Kennedy v Cordia* [2016] 1 WLR 597 as follows:

> "89. The importance of a suitable and sufficient risk assessment was explained by the Court of Appeal in *Allison v London Underground Ltd* [2008] ICR 719. Smith LJ observed at para. 58 that insufficient judicial attention has been given to risk assessments in the years since the duty to conduct them was first introduced. She suggested that was because judges recognised

> that a failure to carry out a sufficient and suitable risk assessment was never the direct cause of an injury: the inadequacy of a risk assessment could only ever be an indirect cause. Judicial decisions had tended to focus on the breach of duty which led directly to the injury. But to focus on the adequacy of the precautions actually taken without first considering the adequacy of the risk assessment was, she suggested, putting the cart before the horse. Risk assessments were meant to be an exercise by which the employer examined and evaluated all the risks entailed in his operations and took steps to remove or minimise those risks. They should, she said, be a blueprint for action. She added at para. 59, cited by the Lord Ordinary in the present case, that the most logical way to approach a question as to the adequacy of the precautions taken by the employer was through a consideration of the suitability and sufficiency of the risk assessment. We respectfully agree."

Thus far, the parties and the judge below were in full agreement, as am I.

57. However, risk assessment in relation to prophylaxis against disease for an employer deploying 20,000 troops a year to a foreign country is, as Mr Collins submitted, very different to a risk assessment carried out by for example a manager in relation to such matters as the risk of a fall or the sustaining of a back injury caused by manual handling. The MIA of 2005, a substantial document extending to some 50 pages or so, is a detailed and comprehensive assessment of the medical intelligence for Afghanistan which takes a global view of the risk to personnel from disease and other hazards encountered in Afghanistan. It shows that the Defendant was taking its responsibilities as employer very seriously and, as Mr Collins submitted, the welfare of the troops and the welfare of the operational capacity went hand in hand. I reject Mr Huckle's submission that the Defendant asked itself the wrong question or in some way sacrificed the welfare of the troops to the efficacy of the operations carried in Afghanistan. Again as Mr Collins submitted, the senior officers considering the matter were all physicians and the welfare of the troops would have been, and was, their priority. The MIA of 2005 was as sophisticated a risk assessment as could be devised taking into account all the competing interests including prevention of a large variety of diseases and other hazards to health. Of course, it is natural for the Claimant to focus on the particular disease which has afflicted him, in this case Q fever with chronic fatigue syndrome, but it needs to be put into the context of what was facing the Defendant prospectively when each deployment of troops was made and the avoidance of hindsight is thus important.

58. As explained by Swanwick J in *Stokes'* case, an employer must be continually alert to changing information and evidence and reassess as appropriate. Clearly, the information available to the Defendant in 2005 was not the same as the information available to it when the Claimant was deployed in 2011. The question is whether the approach and response of the Defendant to the additional information coming through from the ground and in particular from Camp Bastion necessitated a reassessment of the risk and a change of the policy.

59. In my judgment the critical evidence in this regard actually came from Dr Healy and was reflected in Mr Huckle's submissions. In the course of those submissions, I asked Mr Huckle whether there was a danger in a case such as the present that the court

concentrates on the actual disease which has been contracted and then looks back retrospectively at what was done or not done whilst, prospectively, there were many potential diseases including hepatitis A, hepatitis B and malaria for which chemoprophylaxis might be appropriate. In answer, Mr Huckle said:

> "My Lord, I think my answer to that is I can see how one might think there would be a danger, but the danger should be dealt with in the process of risk assessment and the steps appropriate to take to meet such risks that are identified and assessed.
>
> Mr Justice Martin Spencer: But you can't assess one particular disease in isolation can you?
>
> Mr Huckle: I don't think you can, no, and in fact it is part of our very case, of course, as my learned friend relies upon this, that Dr Healy was prepared to concede that if one was only looking at the question of Q fever, would one start Doxycycline prophylaxis just to deal with that? His conclusion was that no-one would have on the information that was then available. But the point here was that bearing in the mind that there was already a regime, if you like, of anti-malaria prophylaxis, and bearing in mind that a relatively small and cost-effective change of that regime would also have dealt with the risk of the Rickettsials, as we say was the case with other Allied Forces, then it was a reasonable step to take."

The effect of this was that it was conceded that it was not incumbent on the Defendant to consider the risk of Q fever in isolation and that Doxycycline would not be independently prescribed as chemoprophylaxis for Q fever, without reference to the other risks. In my judgment, this concession is highly significant. In the end, the Defendant was principally concerned with malarial prophylaxis and the issue was whether it should have changed its malarial prophylaxis to take account of the risk of the Helmand fevers including Q fever. But given that the priority for the Defendant was malaria prophylaxis, and it is conceded that the Defendant was entitled to prioritise malaria prophylaxis, in my judgment the Defendant was entitled to take as its starting point the fact that the existing regime of prophylaxis for malaria was apparently effective. The burden was thus on anyone advocating change of regime to justify that change principally in terms of malaria prevention. The Defendant was, in my judgment, fully entitled to take a cautious approach and wait for the evidence to be much more complete than it was in 2011 before taking such a significant step. The approach of Gp Capt. Green (and Air Cdre Walton) was just such a cautious one from a public health standpoint and in my judgment HHJ Baucher was correct to conclude that firstly there had been an appropriate risk assessment (the MIA of 2005), secondly that this assessment had been kept under review, and thirdly, that the Defendant was not in breach of duty in failing to carry out a full reassessment and change the regime of prophylaxis to Doxycycline. Instead, in keeping with its duty as an employer, the Defendant, through its medically qualified staff, left the position open for more evidence to emerge before taking such a radical step as to change the chemoprophylaxis regime for malaria for 20,000 troops every year.

60. In the circumstances, in my judgment HHJ Baucher was correct to dismiss the claim in relation to the issue of breach of duty and the appeal must fail on this ground.

Issue 3: The approach of the judge to tolerability

61. This issue relates to the question whether a person, in this case a soldier, who is prescribed medication for the purposes of prophylaxis will not tolerate the drug either because of its side effects or because he chooses not to take the drug as prescribed. In its skeleton argument, the Respondent submitted that,

> "When assessing the appropriateness of a change of chemoprophylaxis to Doxycycline, tolerability was inevitably an appropriate matter for the Respondent to have regard, because a soldier who does not tolerate the drug may either become ill as a consequence of it, or may choose not to take it, hence becoming at risk of infection."

For the Appellant, Mr Huckle submitted that, in relation to breach of duty, tolerability was rightly characterised in the court below as a, "red herring". He submits that the judge's review of this question from paragraph 172 of her judgment is a, "flawed attempt to justify a decision that the Respondent never took". The learned judge is criticised for asking herself the wrong question, namely would it have been reasonable decision for the MOD to choose the existing regime of Chloroquine and Proguanil ("CQPG") as its malarial chemoprophylaxis over Doxycycline on grounds of tolerability. He submitted, "In this the judge makes the same error as did the Respondent, namely approaching the matter as primarily one of *anti-malaria* chemoprophylaxis it being an assumed given (despite the contentions of Lt Col Bailey and others to the contrary) that malaria required to be guarded against in the Herrick 15 deployment. The correct question was: Would it have been a reasonable step to protect the men against the identified risk of contraction/development of QF/QFCFS to prescribe them Doxycycline as chemoprophylaxis? The correct question allows a proper appreciation of the absolute risks of non-tolerance of Doxycycline."

62. The problem with this submission, as it seems to me, is that it runs contrary to the concession made that the MOD was not required to give chemoprophylaxis against Q fever: see paragraph 59 above in this judgment. The burden of the Appellant's case was that Doxycycline should have been given as the anti-malarial prophylaxis because of its added benefit of guarding against Q fever. Having made this concession, the Appellant then resiles from it in suggesting that the learned judge asks herself the wrong question.

63. It would appear that tolerability played at least some part in the decision of the MOD not to change its regime of chemoprophylaxis. This is reflected in paragraph of 172 of the judgment of HHJ Baucher where she said:

> "When considering a change of regime Col Ross said that in public health 'When you introduce an intervention you have to weigh up whether it is going to do more harm than good and the benefit of that intervention and in some of the discussions whilst I had been an advocate for thinking of using Doxycycline as the alternative to Chloroquine and Proguanil I then considered the

> significant side effects may be more significant with Doxycycline … the one we had available in the UK was the one that was more likely to cause gastro-intestinal side effects and other side effects.' He said that as a public health physician he needed to consider the evidence. I do not accept Mr Huckle's assertion that, 'tolerability is a red herring'. I consider the Defendant was entitled to have regard to the tolerability of Doxycycline."

On this basis, it would appear that tolerability did form part of the Defendant's decision.

64. Significant evidence was adduced from the experts relating to the relative tolerability of CQPG and Doxycycline. However, this was not evidence available to the Defendant when making its decisions in 2011. In her judgment, the learned judge stated:

> "177. I consider the paper by Saunders published in 2015 provides the most assistance when considering the question of tolerability."

However, this was not a paper which was available to the Defendant at the relevant time. It would certainly be relevant to questions of causation, namely, had the Defendant changed its chemoprophylaxis to Doxycycline, whether the new regime would have been effective but that was not the context in which the expert evidence and the various studies and papers referred to by the experts was being considered. In that regard, to a certain extent, I agree with Mr Huckle that in relation to breach of duty, much of the evidence on tolerability was indeed something of a red herring. In my judgment, though, questions of tolerability were ones which the Defendant was entitled to take into account in considering any change of regime and appear to have formed part of the reasoning for not changing the regime as reflected in the evidence of Col Ross referred to by the learned judge. It is enough that there was material in existence at the relevant time, 2011, for questions of tolerability to play at least some part in the decision made by the Defendant. At paragraph 181 the learned judge said:

> "In the light of this material the Defendant had to give careful consideration to any change of policy. Given those factors and the complete lack of evidence that Doxycycline worked as a prophylaxis for Q fever, coupled with the attendant problems of tolerability of the drug I find the Defendant was entitled to keep to its existing regime. It was not required to change its chemoprophylaxis and did not fail in its duty of care to the Claimant."

65. This was a finding the learned judge was entitled to make on the evidence before her and I cannot say that the finding was "wrong" given that the role of an appeal court is one of review of the decision below and not a re-hearing.

Issue 4: Whether the Claimant would have been compliant with a regimen of Doxycycline chemoprophylaxis

66. In the light of her findings on breach of duty the learned judge considered that she could deal with causation issues relatively briefly and I take the same view. At paragraphs 194 – 198, the learned judge, having considered the evidence, concluded that, had the Claimant been prescribed Doxycycline instead of CQPG, "He would [not] have taken it any more frequently than he took the prescribed regime". This was a reference to the fact that, in the Claimant's medical records, there is an entry on 23 May 2012 that he told the Senior House Officer that he, "took Proguanil/Chloroquine anti-malarials while in Herrick about 50% of the time." This was consistent with the audit of troops which suggested that compliance with chemoprophylactic medication was poor.

67. In response to an argument that, as the Claimant had taken Doxycycline when treated with that drug for Q fever and QFCFS, the court should conclude that he would have taken it as a prophylaxis. The learned judge said:

> "However there is all the difference in the world between taking something that you are prescribed when you are ill and taking something as a preventative measure."

The learned judge said that the only objective evidence gainsays the Claimant's evidence, the objective evidence being the medical record for 2012 and the audit of the Claimant's own tour which showed that 71% did not take the malaria prophylaxis prescribed for them.

68. On this appeal, Mr Huckle submitted that the learned judge failed properly to address the question whether the Appellant would probably have been taking the Doxycycline as prescribed at the time his Q fever developed, namely upon his return to the UK and there is all the difference between soldiers being compliant with prophylactic medication whilst on deployment abroad, (when they may have other concerns and priorities) and being compliant on their return to the UK. He submitted that, on Dr Healy's evidence, the critical period was after the Claimant's return to the UK as the infection didn't present until 19 May 2012 and almost all of the incubation period was after the Claimant's return to the UK. It was the Claimant's evidence that he had been compliant with his anti-malarial medication during this period (the CQPG regime) and there was no reason to think he would not have been equally compliant with Doxycycline had that been the regimen.

69. For the Respondent, Mr Collins submitted that the finding of the learned judge was one of fact with which an appeal court should not interfere. He relied upon the points made in his closing skeleton argument for the trial as follows:

   i) The Claimant did not take CQPG as instructed but only 50% of the time;

   ii) He complained of no side effects with CQPG so this was not the reason for his failure to take his medication. When he took Doxycycline (as treatment for Q fever) his reaction was worse not better than CQPG so side effects would have made him less compliant not more compliant in the case of Doxycycline;

iii) The Claimant's understanding of the risk of malaria was that it was at least as serious as he now knows Q fever to be – he recognised it to be potentially fatal; and

iv) In fact he understood little of the risks but simply accepted he had been told to take the medication.

In the light of those matters, Mr Collins submitted that the judge's conclusion was all but inevitable and it is now impossible for the Appellant to show that it was "wrong". He submits that the submissions on behalf of the Appellant amount to "an attempt to circumvent the Appellant's own evidence."

70. In my judgment, the finding of fact that the Appellant would not have been compliant with chemoprophylaxis in the form of Doxycycline is one with which I am not entitled to interfere. Although the Appellant's arguments would have been powerful ones before the learned judge, they were certainly not ones which inevitably led to an opposite conclusion to the one to which the learned judge came. She heard the Appellant's evidence and on her proper consideration of all the evidence, she reached a conclusion to which she was entitled to come. As Mr Collins submitted, Judge Baucher's finding as to the Claimant's lack of compliance with prescribed prophylactic medication "provides a short answer to the appeal as a whole". In short, the Claimant failed to prove his case in relation to causation on a factual basis.

Issues (v) and (vi): Whether Doxycycline would have been effective to prevent contraction of Q fever and/or QFCFS;

71. In the light of my findings and decision in relation to breach of duty and factual causation (encompassing whether the Claimant would have been compliant with chemoprophylaxis), it is unnecessary for me to consider the remaining causation questions, namely whether chemoprophylaxis using Doxycycline would have been effective in preventing Q fever or Q fever chronic fatigue syndrome. Suffice to say that, again, the learned judge's findings in this regard, namely that Doxycycline would not have been effective to prevent Q fever were findings she was entitled to make based upon the expert evidence and in particular her acceptance of the evidence of Professor Behrens in preference to the evidence of Dr Healy. There was sufficient evidence for the learned judge to come to this conclusion based upon an appreciation of the way in which Doxycycline works as a bacteriostatic drug, namely an antibiotic which stops the bacteria from replicating and allowing the host's own immune system to act rather than as a bactericidal drug, ie one that kills the bacteria. Again, on that basis, I would not be willing to say that the learned judge's decision was "wrong." Her findings were ones to which she was entitled to come on the evidence. I am conscious that this part of the judgment does little credit to the careful and detailed submissions of Mr Huckle QC in this regard but for me to deal with them in detail when it is unnecessary to do so would only have the effect of making what is already a long judgment even longer.

72. In the circumstances, the appeal is dismissed.