Robert WILSON
DOB: Code A
Died: 19 October 1998

# SUMMARY OF CONCLUSIONS

Mr Robert Wilson a 74 year old gentleman with known severe alcoholic liver disease who was admitted with a complex and painful fracture of the left upper humerus. His physical condition deteriorates at first in hospital, with alteration in mental state, renal impairment and subsequent gross fluid retention. He then starts to improve and is transferred to the Gosport War Memorial Hospital for further assessment and possible rehabilitation or continuing care. He is started on regular oral strong opiate analgesia for pain in his left arm and rapidly deteriorates and dies within 5 days of admission.

There is evidence of both poor, and in my view negligent, medical practice at the Gosport War Memorial Hospital. The use of the drug chart is also significantly deficient.

#### 1. INSTRUCTIONS

To examine the medical records and comment upon the standard of care afforded to the patient in the days leading up to his death against the acceptable standard of the day.

#### 2. ISSUES

- 2.1. Was the standard of care afforded to this patient in the days leading up to his death in keeping with the acceptable standard of the day.
- 2.2. If the care is found to be suboptimal what treatment should normally have been proffered in this case.
- 3 CHRONOLOGY/CASE ABSTRACT. (The numbers in brackets refer to the page of evidence in the police files).
  - 3.1 Robert Wilson a 74 year old gentleman in 1998 attended Queen Alexandra Hospital, Portsmouth A&E Department on the 21<sup>st</sup> September 1998 (125-127) with a fracture of the left femoral head and tuberosity (169).
  - 3.2 Mr Wilson had suffered many years before with Malaria and Diphtheria (143) but was first noticed to be abusing alcohol at the time of an endoscopy in 1994 (313). In 1997 he was admitted to

hospital with a fall, epigastric pain and was found to have evidence of severe alcoholic liver disease (129). During the 1997 admission, an ultra sound showed a small bright liver compatible with cirrhosis and moderate ascites (129). His Albumin was very low at 19 (150) and a bilirubin was 48 (129). All these are markers of serious alcoholic liver disease with a poor long term prognosis. His weight was 100 kgs (152). There is no record of follow up attendance.

- When he attends A&E it is originally intended to offer him an operation on his arm, which he refuses. However, he is kept in A&E overnight for observation (161-2). It becomes apparent by the next day that he is not well, is vomiting (163) and he is needing Morphine for pain (11). His wife is on holiday (11) and it is not thought possible for him to go home so he is transferred on 22<sup>nd</sup> September to the Care of the Elderly team at the Queen Alexandra Hospital (163).
- The day after admission he is no longer thought fit enough to have an operation on his arm, although he would now be prepared to. He is recognised to have been an extremely heavy drinker with considerable oedema and abdominal distension on admission (167). He has abnormal blood tests on admission including a mild anaemia of 10.5 with a very raised mean cell volume of 113 and his platelet count is reduced at 133 (239). Five days later his haemoglobin has fallen to 9.7 and the platelet count has fallen to 123 (237). There are no further full blood counts in the notes, although his haemoglobin was normal with haemoglobin of 13 in 1997 (241).
- He is noted to have impaired renal function with a Urea of 6.7 and a Creatinine of 185 on admission (209) and on 25<sup>th</sup> September Urea of 17.8 and a Creatinine of 246 (203). He is started on intravenous fluids on 27th September (12) and his renal function then continues to improve so that by the 7<sup>th</sup> October both his Urea and Creatinine are normal at 6.1 and 101 (199).
- His liver function is significantly abnormal on admission and on 29<sup>th</sup> his albumin is 22, his bilirubin 82 (he would have been clinically jaundice) there is then little change over his admission. On the 7<sup>th</sup> October is albumin is 23 and his bilirubin also 82 (199). His AST is 66 (171).
- 3.7 His vomiting within 24 hours of admission may have been due to alcohol withdrawal but he had also been given Morphine for pain (11). He is started on a Chlordiazepoxide regime (11) as standard

management plan to try and prevent significant symptoms of alcohol withdrawal. This has some sedative effects as well.

- 3.8 His physical condition in hospital deteriorates at first. He is noted to have considerable pain for the first 2 3 days, he is found to have extremely poor nutritional intake and has eaten little at home (12). His renal function deteriorates as documented above. He is communicating poorly with the nursing staff (28) and is restless at night on 30<sup>th</sup> September (30). His Barthel deteriorates from 13 on 23<sup>rd</sup> September to 3 on the 2<sup>nd</sup> October (69), his continued nutritional problems are documented by the dietician on 2<sup>nd</sup> October (16). In the nursing cardex he is vomiting, he has variable communication problems, he is irritable and cross on 1<sup>st</sup> October (30). On 4<sup>th</sup> October (16) his arm is noted to be markedly swollen and very painful and it is suggested he needs Morphine for pain (31). The following day he knocks his arm and gets a laceration (16).
- There is ongoing communication with his family which is complicated by inter-family relationships between his first wife's family and his current wife. The plan by 6<sup>th</sup> October is that he will need nursing home care when he leaves hospital and his Barthel at this stage is 5 (16) (69). However on the 5<sup>th</sup> the nursing cardex note that he is starting to improve (32) although, he remains catheterised and has been faecally incontinent on occasion.
- On 7<sup>th</sup> October is now more alert and is now telling the staff that he wishes to return home (17). The nursing staff notes that he is now much more adamant in his opinions (33). However on 8<sup>th</sup> he had refused to wash for 2 days (18). He is then reviewed at the request of the medical staff by a psycho-geriatrician. The opinion is that he has early dementia, which may be alcohol related and depression. He is noted to be difficult to understand with a dysarthria (117-118). He is started on Trazodone as an antidepressant and as a night sedative, he is still asking for stronger analgesics on 8<sup>th</sup> October (35). The letter also mentions (429) "rather sleepy and withdrawn....... his nights had also been disturbed."
- On the 9<sup>th</sup> October an occupational therapy assessment is difficult because he is reluctant to comply and a debate occurs about whether he is capable of going home (19). By the 12<sup>th</sup> October (21) his Barthel has improved to 7 (69) so Social Services say that he no longer fits their criteria for a nursing home and he should now be considered for further rehabilitation (21). The nursing cardex notes that his catheter is out (35) he is eating better but he

still gets bad pain in his left arm (36). His arms, hands and feet are noted to be significantly more swollen on 12<sup>th</sup> October (36). His weight has now increased from 103 kgs on 27<sup>th</sup> September to 114 kgs by 14<sup>th</sup> October (61,63). However his Waterlow score remains at "high risk" for all his admission (71). A decision is made to transfer him for possible further rehabilitation, although the medical review on 13<sup>th</sup> October states in view of the medical staff and because of his oedematous limbs, he is at high risk of tissue breakdown. He is also noted to be in cardiac failure with low protein and at very high risk of self neglect and injury if he starts to take alcohol again. He currently needs 24 hour hospital care (21).

- On 14<sup>th</sup> October he is transferred to Draed Ward and the notes (179) say "for continuing care". The notes document the history of fractured humerus, his alcohol problem, current oedema and heart failure. No examination is documented. The notes state that he needs help with ADL, he is incontinent, Barthel 7, he lives with his wife and is for gentle rehabilitation. I am unable to read four words. The single word on the line above incontinence, two words after lives with wife (this may be a street address) and the word in front of gentle mobilisation.
- The next medical notes (179) are on 16<sup>th</sup> October and state that he had declined overnight with shortness of breath. On examination he is reported to have a weak pulse, unresponsive to spoken orders, oedema plus plus in arms and legs. The diagnosis is "? silent MI, ? liver function" and the treatment is to increase the Frusemide. The nursing cardex for 14<sup>th</sup> October confirms he was seen by Dr Barton, that Oramorphine 10 mgs was given and he was continent of urine. On 15<sup>th</sup> October the nursing notes (265) state commenced Oramorphine 10 mgs 4 hourly for pain in left arm, poor condition is explained to wife. The evidence from Mr Wilson's wife (Gillian Kimbley) is that he looked dreadful and was incomprehensible at lunchtime on the 15<sup>th</sup> October, a very significant change from the morning of the 14<sup>th</sup>.

On 16<sup>th</sup> in the nursing cardex he is "seen by Dr Knapman am as deteriorated overnight, increased Frusemide". The nursing care plan (278), states for 15<sup>th</sup> October, settled and slept well, Oramorphine 20 mgs given 12 midnight with good effect, Oramorphine 10 mgs given 06.00 hours. Condition deteriorated overnight, very chesty and difficulty in swallowing medications. Then on 16<sup>th</sup> it states has been on syringe driver since 16.30 hours. From the analysis of the drug chart, Mr Wilson received the Oramorph at midnight on 15<sup>th</sup> and then 06.00 hours 10 mgs

Oramorph on 16<sup>th</sup>.

- 3.14 The next medical note is on 19<sup>th</sup> October which notes that he had been comfortable at night with rapid deterioration (179) and death is later recorded at 23.40 hours and certified by Staff Nurse Collins. The nursing cardex mentions a bubbly chest late pm on 16<sup>th</sup> October (265). On the 17<sup>th</sup> Hyoscine is increased because of the increasing oropharyngeal secretions (265). Copious amounts of fluid are being suctioned on 17<sup>th</sup>. He further deteriorates on 18<sup>th</sup> and he continues to require regular suction (266). The higher dose of Diamorphine on the 18<sup>th</sup> and Midazolam is recorded in the nursing cardex (266).
- 3.15 Two Drug Charts: (see table). The first is the Queen Alexandra drug chart (106-116). This records the regular laxatives, vitamins and diuretics given for his liver disease. The reducing dose of Chlordiazepoxide stops on 30<sup>th</sup> September for his alcohol withdrawal and the Trazodone started for his mild depression and night sedation. In terms of pain management Morphine, slow IV or subcutaneous 2.5 – 5 mgs written up on the prn side and 5 mgs given on 23<sup>rd</sup> September and 2.5 mgs twice on 24<sup>th</sup> September. Morphine is also written up IM 2 – 5 mgs on 3<sup>rd</sup> October and he receives 2.5 mgs on 3<sup>rd</sup> and 2.5 mgs on 5<sup>th</sup>. He is also written up for prn Codeine Phosphate and receives single doses often at night up until 13<sup>th</sup> October but never needing more than 1 dose a day after 25<sup>th</sup> September. Regular Co-dydramol starts on 25<sup>th</sup> September until 30<sup>th</sup> September when it is replaced by 4 times a day regular Paracetamol which continues until his transfer.

In summary, his pain relief for the last week in the Queen Alexandra is 4 times a day Paracetamol and occasional night time dose of Codeine Phosphate.

3.16 The second drug chart is the drug chart of the Gosport War Memorial Hospital (258-263). His diuretics, anti-depressant, vitamins and laxatives are all prescribed regularily. The regular Paracetamol is not prescribed but is written up on the as required (prn) part of the drug chart. This is never given. Regular prescriptions also contains Oramorphine 10 mgs in 5 mls to be given 10 mgs 4 hourly, starting on 15<sup>th</sup> October (261). 10 mgs is given at 10 am, 2pm and 6 pm on 15<sup>th</sup>, 6am, 10 am and 2 pm on 16<sup>th</sup>. A further dose of 20 mgs at night given at 10 pm is given at 10 pm on 15<sup>th</sup> October. Although these prescriptions are dated as given on the 15<sup>th</sup> October it is not clear if they were written up on the 14<sup>th</sup> or 15<sup>th</sup>.

3.17 On a further sheet of this drug chart (262) regular prescription has been crossed out and prn written instead. Oramorphine, 10 mgs in 5 mls, 2.5 - 5 mls 4 hourly is then prescribed on this sheet. It is not dated but it would appear 10 mgs is given at 2.45 on 14th October and 10 mgs at midnight on 14th October. Further down this page Diamorphine 20 – 200 mgs subcut in 24 hours from Hyoscine 200 – 800 micrograms subcut in 24 hours. Midazolam 20 – 80 mgs subcut in 24 hours are all prescribed. It is not clear what date these were written up. The first prescription is 16<sup>th</sup> October and the 20mls of Diamorphine with 400 micrograms of Hyoscine are started at 16.10. On 17th October, 20 mgs of Diamorphine, 600 micrograms of Hyoscine are started at 5.15 and the notes suggest that what was left in the syringe driver at that stage was destroyed (262). At 15.50 hours on 17th October, 40 mgs, 800 mgs of Hyoscine and 20 mgs of Midazolam are started and on 18<sup>th</sup> 60 mgs of Diamorphine, 1200 micrograms of Hyoscine (a new prescription has been written for the Hyoscine) and 40 mgs of Midazolam are started in the syringe driver at 14.50 and again the notes suggest the remainder that was previously in the syringe driver is destroyed.

Drug	Date prescribed	Prescribed as	Prescriber	Given		
Morphine	22/09	2-5 mgs IV/SC PRN 4 hourly	(at QAH)	23/09 1540 5 mgs 24/09 0615 2.5mgs 24/09 0645 2.5mgs		
Morphine	03/10	2-5 mgs I/M PRN 4 hourly	? (at QAH)	03/10 2319 2.5 mgs 05/10 0200 2.5 mgs		
Codeine Phosphate	23/09	30mgs 6 hourly PRN	? (at QAH)	23/09 2 doses 30 mgs 24/09 3 doses 30 mgs 25/09 1 dose 30 mgs		
CoDydramol	25/09	2 tabs 6 hourly Regular	? (at QAH)	25/09 3 doses 26/09 – 29/09 4 doses each day then stopped		
Codeine Phosphate	8/10	15-30 mgs 4 hourly PRN	? (at QAH)	08/10 09/10   1 dose 12/10   each day 13/10		
Paracetamol	30/09	TT 6 hourly Regular	? (at QAH)	30/09 – 06/10 Many missed doses until the 07/10 – 14/10. 4 doses a day		
Paracetamol	14/10	1 gram 4 hourly, PRN	Barton (at GWMH)	Never given		
Oramorphine	Undated but probably 14/10	2.5-5mls of 10 mgs in 5mls 4 hourly, PRN (regular crossed out)	Barton (at GWMH)	14/10 1445 10 mgs 14/10 2345 10 mgs		

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Oramorphine	15/10	10mgs 4 hourly regular	Barton	15/10 15/10 15/10 16/10 16/10 16/10	1000 1400 1800 0600 1000 1400	10 mgs 10 mgs 10 mgs 10 mgs 10 mgs 10 mgs
				No further prescription recorded by drug chart. But prescription not crossed off or stopped		
Oramorphine	15/10	20mgs nocte Regular	Barton	15/10	2200	20 mgs
Diamorphine	Undated, possibly 16/10 but might well have been 14/10	20 – 200mgs S/C in 24 hours PRN (Regular crossed out)	Barton	16/10 17/10 17/10 18/10	1610 0515 1550 1450	20 mgs 20 mgs 40 mgs 60 mgs
Midazolam	Undated, possibly 14/10; or 16/10 or 17/10	20-80 mgs S/C in 24 hours PRN (Regular crossed out)	Barton	17/10 18/10	1550 1450	20 mgs 40 mgs

#### 4. TECHNICAL BACKGROUND / EXAMINATION OF THE FACTS IN ISSUE

- This section will consider whether there were any actions so serious that they might amount to gross negligence or any unlawful acts, or deliberate unlawful killing in the care of Robert Wilson. Also whether there were any actions or omissions by the medical team, nursing staff or attendant GP's that contributed to the demise of Robert Wilson, in particular, whether beyond reasonable doubt, the actions or omissions more than minimally, negligibly or trivially contributed to death.
- The principle underlying medical problem in Mr Wilson is his alcoholic liver disease. There is no doubt that he had hepatocellular failure based on long-standing alcohol abuse, with evidence at least back to his admission in 1997 where he has evidence of portal hypertension giving him a significant ascites. He also at that stage had a low albumin and a persistently raised bilirubin, hall-markers of a poor medium to long-term prognosis.
- 4.3 The presenting problem on admission was his complex fracture of his left upper arm, which ideally would have had an operative repair. First he refuses this, and then by the time he agrees it his physical status has significantly deteriorated to a point that he was not fit for an anaesthetic. He gets continual pain from this arm throughout his admission. His admission treatment is strong opiate analgesia; this is then replaced by regular oral mild opiate

analgesia and finally by regular Paracetamol supplemented by mild oral opiate analgesia (Codeine Phosphate) at night. There is no doubt though that he does have continuing pain from this arm.

- 4.4 His health deteriorates for at least the first 7 - 8 days after his admission. He develops impaired renal function; there is evidence of change in mental state with comments on poor communication, sleepiness, irritability and restlessness, and "dysarthria". There are a number of possibilities for this. The first possibility is that he is having alcohol withdrawal, combined with the sedative effect of Chlordiazepoxide to prevent marked symptoms of alcohol withdrawal delirium. The psycho-geriatrician wonders if he has alcohol related dementia plus some depression. I believe it is very likely that he has early hepatic encephalopathy, a change in mental state that goes with hepatic failure. This includes disturbed consciousness with sleep disorder, personality change and intellectual deterioration. It is often precipitated by acute events including gastro-intestinal blood loss and drugs, in particular opiates. There is other evidence of major impairment to his liver function including a reduced platelet count, (suggesting an enlarged spleen due to portal hypertension), his bilirubin which is significantly higher than his previous admission and his persistent very low albumin. His haemoglobin does fall during admission. It is possible that he has had a small gastro-intestinal bleed at some stage but this is not pursued.
- Despite all of this, there is a an improvement in his condition recorded in both his better functioning on the ward with the nursing staff, his greater alertness and communication improvement. The fact that his catheter can be removed and he becomes continent and that his overall measured functional status through the Barthel score improves to a point that Social Services will no longer place him in a nursing home, although he clearly needs nursing care. However, his weight dramatically increases by 11 kgs during his admission and this will be almost entirely fluid retention going to his abdomen, legs and potentially his chest. This is not adequately managed medically.
- He is transferred on 14<sup>th</sup> October for ongoing assessment, possible rehabilitation and decisions about long-term care arrangements. No examination has been recorded on admission by the medical staff. Not even a basic clinical examination has been undertaken or if it has, was not recorded.
- 4.7 The only management that is really needed at this stage is to continue the management that was ongoing from the Queen

Alexandra Hospital while carefully addressing the fluid balance problems. However the regular oral analgesics that he was on are not written up regularly, no explanation is given for this. Strong opioid analgesia is written up and two doses of 10 mgs Oramorphine are given on the day of transfer, the 14<sup>th</sup> October. At the Queen Alexandra Hospital the single doses on the 3<sup>rd</sup> and 5<sup>th</sup> October had been at 2.5 mgs. Regular Oramorphine to a total dose of 50 mgs is then given on the 15<sup>th</sup> October. It is now being given regularly and it is not clear whether the original intention to give it regularly was from the admission on the 14<sup>th</sup>, though the prescription is clearly written and starts at 10 am on 15<sup>th</sup>. There is no documentation in the nursing or medical notes to suggest the patient was seen by a doctor on 15<sup>th</sup> when the decision to start the regular dose of Morphine appears to be made.

- The decision to give Morphine on the 14th and then the regular 4.8 Morphine, at this dose, on 15<sup>th</sup> October is crucial to the understanding of this case. ".....the effects of hepatitis or cirrhosis on drug deposition range from impaired to increased drug clearance in an unpredictable fashion..... the oral availability for high first class drugs such as Morphine.....is almost double in patients with cirrhosis compared to those with normal liver function. Therefore the size of the oral dose of such drugs should be reduced in this setting" (Harrison). In my view the decision to give the significant doses of Morphine on the 14th then the regular oral doses of high oral doses of strong opiates on 15<sup>th</sup> was negligent. The appropriate use of weaker analgesics had not been used, though these had apparently controlled his symptoms the previous week in the Queen Alexandra Hospital as he had not received strong opioid analgesia after the 15<sup>th</sup> October. The dose of Morphine used, particularly in the presence of severe liver disease, was very likely to have serious implications (see para 4.4).
- 4.9 By the 16<sup>th</sup> October there has been a very significant clinical deterioration overnight and Mr Wilson is examined by Dr Knapman. He is noted to be unwell and unresponsive to spoken orders. While it is possible that Mr Wilson has gone into heart failure due to his salt and water retention documented previously, his unresponsiveness is almost certainly, in my view, to be because of a direct cerebral effect of the Morphine or that he is being precipitated again into Hepatic Encephalopathy (see para 4.4). The situation may or may not have been still reversible on 16<sup>th</sup> October but he was probably now entering a period of irreversible terminal decline. However, it would still have been appropriate to have obtained senior medical opinion as to whether

other management should be considered. In my view, the failure to obtain senior medical opinion was poor clinical practice. This criticism could be made of Dr Knapman on the 16<sup>th</sup> October and certainly of Dr Barton on the 15<sup>th</sup>, as the patient was seen by Dr Barton on the 15<sup>th</sup> October (as suggested by her statement to the police). The situation was unrecoverable by the 17<sup>th</sup> October.

- On the afternoon of the 16<sup>th</sup> he is started on a syringe driver. 4.10 Although prescribed by Dr Barton there is nothing in the notes to document the decision to start is a medical or nursing decision. He is started on a syringe driver containing Diamorphine and Hyoscine. Diamorphine, Hyoscine (and Midazolam) are all compatible in the same syringe driver. Hyoscine is particularly useful for patients with a large amount of secretion as is documented in this case. The increase in dose of Hyoscine on the 17<sup>th</sup> was an appropriate decision. When starting Diamorphine in a syringe driver it is conventional to do it at a dose of 2 or 3 to 1 i.e. at most half the dose of Diamorphine in the syringe driver than was being given orally. On 15<sup>th</sup> October 50 mgs in total of Oramorphine was prescribed, it was reasonable to start 20 mgs in the syringe driver on 16<sup>th</sup> October. The dose of Diamorphine is increased on both 17<sup>th</sup> and 18<sup>th</sup> and Midazolam is started on 17<sup>th</sup>. Apart from comments about secretions in the nursing cardex, there is no rationale for the increase in dose of Diamorphine or the addition of Midazolam provided in either the medical or nursing notes. It is not clear whether the decision to increase the dose is a medical or nursing decision. I have indicated in section 3 that there are significant problems with the use of the drug chart in Gosport which seems to have been used in an irregular fashion.
- 4.11 It is my view the regular prescription and dosage of Oramorphine was unnecessary and inappropriate on the 14<sup>th</sup> and 15<sup>th</sup> October and in a patient with serious hepatocellular dysfunction was likely the major cause of the deterioration, in particular in mental state, on the 15<sup>th</sup> and the 16<sup>th</sup> October. In my view it is beyond reasonable doubt that these actions more than minimally contributed to the death of Mr Wilson.

#### 5. OPINION

Mr Robert Wilson is a 71 year old gentleman with known severe alcoholic liver disease who was admitted with a complex and painful fracture of the left upper humerus. His physical condition deteriorates at first in hospital, with alteration in mental state, renal impairment and subsequent gross fluid retention. He then starts to improve and is transferred to the Gosport War Memorial Hospital for further

assessment and possible rehabilitation or continuing care. He is started on regular oral strong opiate analgesia for pain in his left arm and rapidly deteriorates and dies within 5 days of admission.

- There is evidence of poor medical practice at the Gosport War Memorial Hospital. In particular:
  - The lack of a documented medical examination on admission to the Gosport War Memorial Hospital.
  - The failure to continue his oral analgesic regime on admission.
  - The decision to use strong opiate based analgesic on the 14<sup>th</sup>
     October and at a dose higher than previously needed in the
     Queen Alexander Hospital. In my view a negligent decision that
     formed a major contribution to the clinical documentation that
     occurred over 15<sup>th</sup>-16<sup>th</sup> October.
  - The failure to realise the potential risks of using strong opiate analgesia in the presence of liver failure.
  - The failure to document any reason for starting regular Oramorphine on the 15<sup>th</sup> October.
  - The failure to investigate the possible causes of his deterioration on 15<sup>th</sup> and 16<sup>th</sup> October, or to consider that they might be reversible.
  - The failure to ask for a senior medical opinion certainly on the 15<sup>th</sup>
     October and possibly on the 16<sup>th</sup> October (also see my generic
     report).
  - The failure to document in either the medical or nursing notes the reasons for the decision to start the syringe driver on the 16<sup>th</sup>
  - The failure to document any reason for the increased dose of Diamorphine and Midazolam in the syringe driver on the 17<sup>th</sup> and 18<sup>th</sup>, and whether that was a medical or nursing decision.
- The use of the drug chart in the Gosport War Memorial is significantly deficient. In particular:
  - The prescription of a large range of a controlled drug (see my generic report).
  - The misuse of both the "PRN" and regular sides of the drug chart.
  - The failure to cross out drugs on the regular side of the drug chart when no longer required.
  - The failure to write dosages of controlled drugs in words and figures as well as total dosages to be given.

# 6. EXPERTS' DECLARATION

- 1. I understand that my overriding duty is to the court, both in preparing reports and in giving oral evidence. I have complied and will continue to comply with that duty.
- 2. I have set out in my report what I understand from those instructing me to be the questions in respect of which my opinion as an expert are required.
- 3. I have done my best, in preparing this report, to be accurate and complete. I have mentioned all matters, which I regard as relevant to the opinions I have expressed. All of the matters on which I have expressed an opinion lie within my field of expertise.
- 4. I have drawn to the attention of the court all matters, of which I am aware, which might adversely affect my opinion.
- 5. Wherever I have no personal knowledge, I have indicated the source of factual information.
- 6. I have not included anything in this report, which has been suggested to me by anyone, including the lawyers instructing me, without forming my own independent view of the matter.
- 7. Where, in my view, there is a range of reasonable opinion, I have indicated the extent of that range in the report.
- 8. At the time of signing the report I consider it to be complete and accurate. I will notify those instructing me if, for any reason, I subsequently consider that the report requires any correction or qualification.
- 9. I understand that this report will be the evidence that I will give under oath, subject to any correction or qualification I may make before swearing to its veracity.
- 10. I have attached to this report a statement setting out the substance of all facts and instructions given to me which are material to the opinions expressed in this report or upon which those opinions are based.

## 10. STATEMENT OF TRUTH

I confirm that insofar as the facts stated in my report are within my own knowledge I have made clear which they are and I believe them to be true, and the opinions I have expressed represent my true and complete professional opinion.