



21 DECEMBER 1988

LOCKERBIE



**A PERSONAL ACCOUNT OF No. 33 SQUADRON'S
RESPONSE TO BRITAIN'S WORST TERRORIST DISASTER**

BY GRAHAM LOWE

To Bronnie and Amy

MEMORIES OF LOCKERBIE

by Graham Lowe

On Wednesday 21 December 1988 the television programme I was viewing at home with my family was interrupted by a 'News Flash', the forerunner to 'Breaking News'. It was early evening and the reports were suggesting that a large gas explosion had occurred in a small town in Scotland. However, throughout the evening and the following days it became clear that this was an aircraft crash of an unusual magnitude. It took several more days before the press had confirmation that a large passenger aircraft was involved and that suspected terrorism was a speculative assumption. Later, after the probability of a terrorist bombing increased, reporters like John Harlow of the Daily Telegraph were writing that "...the first items of debris landed on the town and surrounding area 94 seconds after the bomb detonating and causing an impact force equivalent to 1.6 on the Richter Scale." The horror of what had happened to N79PA, a Boeing 747-121 called *The Clipper Maid of the Seas*, 31 000 feet above the Solway Firth was about to be unveiled to the world.

Because the majority of the fuselage and wing structure had landed on the small Scottish town of Lockerbie, the incident quickly became known as the Lockerbie Disaster, and over the next few days the need to send helicopters to assist the emergency services became apparent. "Ambulances came from as far away as Edinburgh, Livingston and Glasgow. Helicopters quartered the sky in a search for any survivors and Territorial Army volunteers plus Royal Air Force staff from Carlisle were also helping to try to wrest some order out of the widespread confusion." (The Scotsman 22 December 1988). A 33 Squadron Puma - XW209 - that had answered an operational callout to RAF Aldergrove on 21 December was retasked to the area on 22 December and returned to Odiham on 23 December.

As the Squadron had shut down for Christmas only the duty crews were available to respond. As to the nature of operations of 33 Squadron at that time, whenever a station 'shut down' period occurred, the need to increase duty crew levels and prepare some aircraft to respond quickly was paramount. Some of the aircraft were 'roled' to specific tasking requirements that would take quite a time to generate if the Duty Crew were called in. For example, one aircraft was prepared for winching operations, should the need arise. Another had extra Ferry Tanks fitted. All these were in addition to the standard role fit for the 'S&D' aircraft. As for the groundcrews there was the standard Duty Crew, which was on a 1 hour standby; for Station Shut Downs, there was a Standby Duty Crew on a 2 - 3 hour standby. As



"...A fleet of 12 helicopters from as far away as Hampshire, two RAF mountain rescue teams and a coastguard team from nearby Kirkcudbright joined Scotland's biggest emergency rescue operation. A special landing zone was organised by officers at Lockerbie police station, which was set up as the disaster headquarters."

(The Scotsman 22 December 1988)

this was the Christmas period it was common practice for individuals to swap between the Standard and Standby Duty Crews and then inform the Senior Non-Commissioned Officer in Charge (SNCO I/C) of the Duty Crews. This allowed for a certain amount of flexibility over the holiday period.

At the time I was with my family at home in Alton. However on Boxing Day, Monday 26 December 1988, my family and I were at the 'Outlaws' in Havant. I had advised Engineering Operations (Eng Ops), and the SNCO I/C the Duty Crew, that I would require a 2 hour window if called out. It was envisaged at that time that should aircraft be needed to respond to this emergency it would most likely be a Chinook, as that had a greater lifting capacity. In informal 'coffee bar' discussions the view has often been taken that the reason the Puma was called for was because it created far less downdraught. We knew the downdraught from a Chinook was capable of causing light aircraft to flip over and Army tents to fly away, so there was a risk that its down draught could cause the light, but large, pieces of the aircraft structure to be blown away or fly dangerously when lifted. Whatever the reasoning, it was the standby Pumas and crews who received the first call. During the early evening of 26 December my 'Outlaws' received a call from RAF Odiham Eng Ops. I

was duly handed the phone and told that I was to report to the Squadron ASAP!

My family remained in Havant and I hot footed back to the Squadron at Odiham. On arriving it became apparent that not only aircraft and crews were being prepared to deploy to Lockerbie but that an engineering contingent would also be necessary. The decision was made that an engineering party would be chosen from the groundcrew personnel from both Standard and Standby Duty Crews. It was also agreed that to support two aircraft, initially, the groundcrew contingent should be able to cover all aircraft trades and therefore a minimum of four experienced groundcrew were required. Along with me - Corporal Graham Lowe - an A Eng Tech A, commonly known as a 'Rigger' - there would also be:

Junior Technician Karl 'Shaky' Bamforth (A Eng Tech P ('Sooty/Props' - Propulsion)

Corporal Pete Barnby (A Eng Tech AV ('Fairy' - Radios)

Corporal Tim Perera (A Eng Tech E('Lecky' - Electrician)

The officer nominated as Officer in Charge (OIC) of the 33 Squadron detachment was Squadron Leader John Cooke, the Training Flight Commander at the time, who had been part of the crew diverted from Aldergrove before Christmas. John was a very experienced Air Loadmaster and helicopter crewman. We quickly began running around to collect what we needed, noting that we had very limited space for our equipment. This included the Supplementary Tool Kit (supplementary to the Crewman's Tool Kit carried on the aircraft); some basic spares, mainly 'C' Stores; and part of the Aircraft Maintenance Manual, in particular, the Topic 3 suite. The Topic 1 took up too much room and it was thought that should we need a specific spare it would be easier to signal or phone through with the Part Number and Topic 3 reference.

Two aircraft were allocated to deploy to Lockerbie: XW209 and XW236 . On Wednesday 28 December both aircraft departed Odiham. I believe that XW236 was flown by Flight Lieutenant Steve Deverall and the crewman was Flight Sergeant Dave Coombes. I do not recall the crew on XW 209; however, from memory the other aircrew involved during the Lockerbie task were:

Squadron Leader Peter Culverhouse

Squadron Leader Alex Smyth

Flight Lieutenant Paul Johnson

Flight Lieutenant Pete Rowlinson

Flying Officer Jack Robson

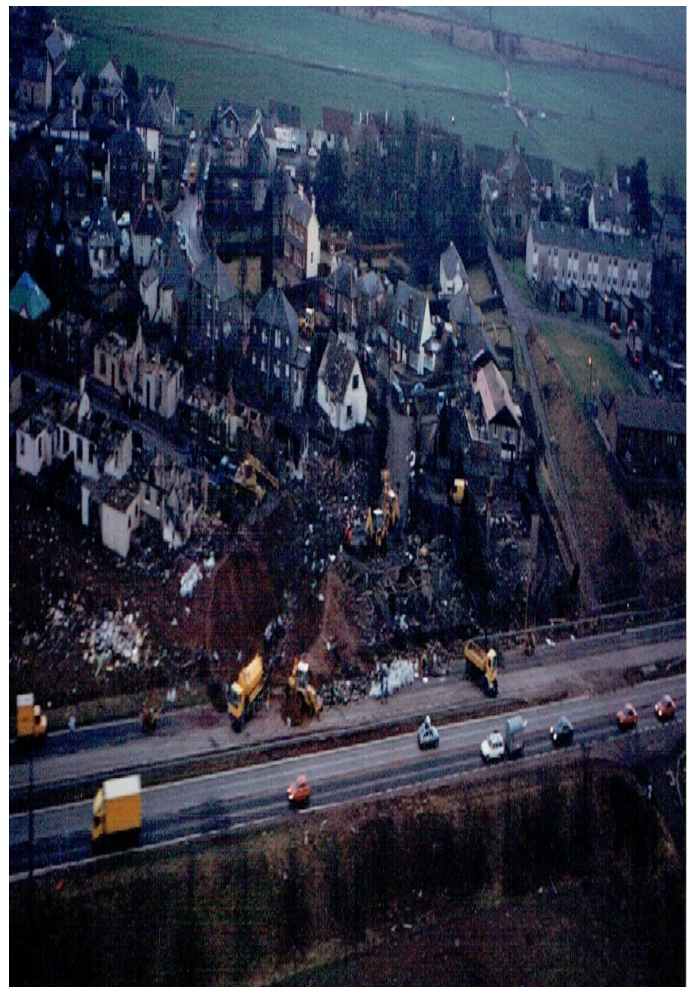
Sergeant Drew Murray

Not all of the individuals listed above were in the initial deployment and it is likely that Paul Johnson, Pete

Rowlinson, Jack Robson, Dave Coombes, Drew Murray and Richie Rees were on the initial deployment.

All of the personnel required for the deployment flew up to Lockerbie in the two aircraft, along with the minimal equipment that we had managed to cobble together. There was no vehicular land party and the vehicles that were required were organised and acquired at Lockerbie. The flight up there as I recall, sitting in the back of one of the aircraft, was low level. Pete Barnby said,, "I flew left hand seat in Flying Officer Robson's aircraft and remember the problem finding a route over the hills due to low cloud, a few passes up a few valleys trying to find a clear path, and a low hover over a council wagon at some stage!" Karl Bamforth said, "I have a vague memory that the flight up there was interesting, with low cloud, snow and it getting dark, trying to get over the hills without climbing into cloud". We arrived at Lockerbie and flew round the town prior to landing at the Junior School sports field, where we were to initially operate from.

It was then that we saw the main impact point on Sherwood Crescent. Karl Bamforth remembers "On the



Above: Sherwood Crescent, Lockerbie - this is where the fuselage, consisting of the main wing box structure, impacted, igniting 91 000 kg of jet fuel contained in the aircraft tanks.

approach to the school there was a big hole in the pavement, I cannot remember what was in there but I think it was maybe an engine. A local farmer ploughed up the grass to hide the dents made where bodies landed". Karl's comment refers to one of the engines buried in a bus stop, which we travelled passed each day on our way to and from the Junior School.

The control centre for the disaster was in the Lockerbie Academy, which is where Squadron Leader Cooke and the aircrew received their tasking. This was about half a mile away from where the two Pumas were operating from. They were initially based at the Lockerbie Infant and Junior School, I am not sure if this is the correct title for the school as the school no longer exists at that location. We set up in the staff room of the school and the aircraft were sited on its sports field. We shared the Staff Room with members of the Air Accident Investigation Branch (AAIB) and RAYNET, formerly 'Radio Amateurs' emergency NETwork' and the 'Radio Society of Great Britain). RAYNET liaised between all of the Emergency Services, as different radio communications were used, therefore RAYNET provided a link. Some RAYNET operatives flew with the Pumas as additional crew, so that an air and ground communication link could be provided. The RAYNET organisation was controlled by RAYNET Incident Officer Ron Cowan (see photograph below). Ron gave daily briefings to all of the agencies at the Academy Incident Control Centre. It was whilst sharing this facility at the school that a radio cassette recorder was found and the AAIB guy suspected that this was the source of the incident.

There was no accommodation available in Lockerbie, mainly due to the Press getting in there first. So once we arrived we had to find a hotel in Dumfries, approximately half an hour away by road. It was decided that the whole party should, if possible, be



Above: The destroyed bus stop that the aircrew and ground crew drove by each day. The engine that hit the bus stop is visible in the centre of the picture.

located in one hotel - and so begins the story of Scottish Hotels! At first we were accommodated in the Waverley Hotel, but the standard was not all that good. In fact one of the pilots, Pete Rowlinson, ended up having suspected food poisoning and was unfit to fly, which resulted in Flight Lieutenant Arthur Bennett receiving a call to join the detachment for a couple of days. Arthur was on leave at the family home in West Kilbride and agreed to assist, despite having none of his own flying gear with him. Arthur borrowed some of Squadron Leader Cooke's kit, and his log book records the following flight details:



The Detachment's Control Centre in the Lockerbie Infant & Junior School, set up in what was the Staff Room.

Left:

Top Picture showing an exhausted Sergeant Richie Rees, who made the mistake of falling asleep after a long and exhausting days' tasking. The other aircrew (along with a little help from some of the groundcrew) secured him to a chair so he would not fall off!



Lower Picture, Corporal Pete Barnby, the detachment's A Tech AV 'Fairy', manning the radios.



Bottom Pictures:

Left—the 'Ops map', showing the designated Area of Operations around Lockerbie.

Right - Underslinging a Police Launch from the HLS at Lockerbie School. (see page 20)



29 Dec 1988 Puma HC Mk1 XW234 Self & Rees 1hr10

Task: Underslung Loads at Lockerbie

I flew Left Hand Seat with him that day and it was quite strange having a captain in T-shirt, jeans and trainers - a bit like S & D, apparently!

On 31 December 1988, Hogmanay, we were quite looking forward to a night off. As we did not have any tasking the next day, or in the morning at least, we settled in the bar of the Waverley at around 19:00 hrs to participate in the great Scottish tradition. However, the bar staff and hotel management informed us that the bar would shut at 20:00 hrs. To our horror we asked "What do we do?" to which came the reply, "We can sell you a slab of beer if you like"! Fortunately all was not lost as we were invited around to the Guest House some TSW (Tactical Supply Wing - 'Stackers', running the helicopter refuelling point) guys were staying in and Hogmanay was restored! That was the last straw with the Waverley Hotel and resulted in us moving to another one, the Queensberry Hotel, which was far superior and larger too! The staff could not do enough for us. Pete Barnby recalls, "I got a plastic Hart's head from the second hotel's bar, after asking the staff, they couldn't do enough for us. Total opposite to the first place who couldn't even provide hot water on all floors!" I wonder if the aforementioned plastic Hart's head still resides in the present 'Harts Head' Squadron Bar at Benson? This was not the only 'gizit', according to David Coombes: "I seem to recall some yellow high viz Police jackets found their way back to Odiham!" I wonder if they are also kept as Squadron memorabilia?

We travelled daily from the hotel. The groundcrew in a Sherpa, and the aircrew either by Sherpa or Land Rover. I cannot remember how we got the vehicles, they could have been loaned to us either by MOD at Carlisle or by TSW. There was also a hire car for Squadron Leader Cooke. The groundcrew went directly to the School in Lockerbie, where the aircraft were parked and operating from, so that they could be prepared for the day's tasking. The aircrew went to the Academy to plan for the day. Most days the groundcrew would go in early to start aircraft preparation and one of us, usually Pete Barnby, would return in the Sherpa to the hotel and pick up the remaining aircrew who had not gone in the hire car.

On one occasion, in the first couple of days, we had all finished for the day and we were having pre-dinner drinks in the bar of the Waverley Hotel. The aircrew were having a briefing for the next day's tasking and there was a little disagreement on Ferry Tank fit. The operating area was huge, with wreckage strewn over an 850 square mile area. The task was to fly to the East and undersling large pieces of the aircraft back to a pre-arranged pick up point near a road. The concern was both the weight and distance that the aircraft were to

operate, and to alleviate the need to return for refuelling, or to use an alternative refuelling point. Ferry Tanks would give the aircraft the range and time on task, but would the Underslung Loads (USL) be too heavy? After several "Fit the Ferry Tanks/ Don't fit the Ferry Tanks" it was decided that the weight of the cargo, being large but light aircraft bits, would not be detrimental and therefore the decision to fit the tanks was made. David Coombes: "The USLs were not that heavy and so having the extra fuel saved flying hours". By this time the groundcrew had had a pint but had stopped at one until a decision was made! Fitting the tanks meant that the groundcrew would have to return to the site, a journey of about 30 minutes. It was decided to do it this way as if there were any problems we would have the rest of the night to resolve them, as opposed to an early morning start that may delay the tasking if a problem occurred. We think that we got back to the Waverley Hotel in time for 'Last Orders'.

One evening, returning back to the hotel from the operating site, two of our Land Rovers were involved in a Road Traffic Accident. Although I do not recall the details I have some comments from some of the others who were there at the time and I have managed to piece together the incident. David Coombes was the only member of the Puma party involved and was in one of the Land Rovers; he thinks it could have been on New Year's Eve. Besides David it appears that the other personnel on board were TSW guys and the Land Rovers were theirs. The accident was caused by a local man who took the corner, in the dark, on the wrong side of the road. The lead Land Rover appeared to have been hit head on. The car then clipped the following Land Rover, which caused it to flip and roll down the road. Dave Coombes was in the second Land Rover: "We managed at least one complete roll before coming to a stop on our side. I remember trying to kick out the glass of the back door in order to escape. My brain assumed the door would be buckled, but the glass did not break. Then the person next to me in the back reached forward and tried the handle...the door fell open on to the road! We got out and started running up to the car, I remember tripping on some debris in the road which sent me flying, possibly that was when I damaged my knee!"

The car driver apparently had 'had a few' and had been in the pub for most of the day. After David Coombes managed to exit the stricken vehicle he noticed a Police motorcyclist, apparently riding home after work, and also remembers a nurse arrived. David continued, "... The policeman riding his motorbike home arrived about one minute after the crash. He radioed for an ambulance, plus a local nurse was in the second car that arrived from the other direction. I remember trying to get in to the car, an Austin 1800 - like the old RAF staff cars - to pull the driver out, but the nurse

stopped me and told me not to bother..." The car driver died at the scene. David goes on, "The engine compartment was half the size it should have been, the driver's door was crumpled, we were on the back seat reaching over to get to him, and the whole car was full of junk, spanners, tools. He must have been a mechanic." The other casualties were remarkably light, David Coombes suffered an injured knee and the driver of the lead Land Rover suffered a broken nose. This was one of the TSW guys as none of our personnel, with the exception of David Coombes, were involved. This was amazing as only the front seats had seat belts and the occupants in the back were all unsecured. All of the injured attended A&E at one of the Dumfries hospitals. David Coombes: "I remember Drew Murray pushing me around Dumfries hospital A&E in a wheelchair, whilst having to wait our turn to be seen. My knee was just bruised and sore, and I must have been flying the next day as there are no gaps in log book entries that period."

The aircraft serviceability was generally good; however, one day an aircraft returned with hydraulic oil smeared copiously down the Sliding Cowling and Tail boom. Initial investigation resulted in locating the leak coming from one of the main rotor servo manifolds. As I was the 'Rigger' I cracked open the joint and inspected the connection. All looked OK so after searching for a suitable new crush washer in the 'C' stores pack, hastily put together before departing Odiham, to my horror I found that we didn't have one! Faced with this dilemma I cleaned the old crush washer as much as I could and refitted it. After various attempts I managed to stem the leak to a dribble, sufficient enough to let the aircraft fly safely in short bursts. I inspected the washer after every trip.



This is where the Topic 3 came into its own. We identified the part and phoned through the part number and Air Publication (AP) details to Odiham Eng Ops. The next day some crush washers arrived by post, thanks to the Duty 'Stacker' (storeman) at Odiham - it was Christmas stand down after all! We were then faced with a very oily aircraft! The only cleaning solution that was available was AVTUR - aircraft fuel. Unfortunately this resulted in spillage on the wheels, which if left would require a wheel (or wheels!) to be changed. Something else we did not have! To decontaminate the wheels we purloined blackboard chalk from the school and, using a rolling pin and bowl borrowed from the Staff Room, we proceeded to crush the chalk in the makeshift pestle and mortar. Tim Perera, seen in the photograph above, said, "I recall the Chalk incident, crushing sticks of teachers' chalk



Above left: The Groundcrew Ops Caravan at Lockerbie, with the TSW refuelling points behind.

Above right: The view down the road from the Ops caravan towards the aircraft on their hard standings.

using a rolling pin in a bowl from the school kitchen. It took me ages to get a fine powder!!" This wonderful improvisation eventually produced a sufficient quantity to do the job.

That was not the only improvised and makeshift solution that we adopted. The aircrew helmet microphone covers were getting damaged, which then created high noise levels on the aircraft intercom system. We solved this particular issue by manufacturing replacements using a Bath Sponge! On another occasion an aerial needed repairing and Pete Barnby resealed it after a visit to a DIY shop in the town. As Tim Perera told me, "Whilst we were at the school, I also remember assisting Pete in sealing an aerial with bathroom sealant."

Due to the numbers of personnel now operating out of the school it was decided that Helicopter Operations should move to a different site. This was not far away. In fact it was at the other side of the school's sports field. The new location was a housing development site that only had the roads put in, while the rest of the site was scrubland. Positioned on the road was a caravan, which was supplied by the local Women's Refuge Organisation (see photographs on previous page).

The groundcrew operated out of this caravan and the aircrew remained at the Academy. We used to ferry the aircrew to and fro in the Sherpa on most occasions; however, due to communication difficulties the aircrew either had to find another means of transport or walk!

A few days before we moved from the first operating base at the Lockerbie Infant and Junior School we were issued with a 'Mobile Phone' (see picture below) which really was 'state of the art' in 1988! Sadly, however, its ability to hold a charge was abysmal. When fully charged it displayed 4 pixels and although we put it on charge overnight, every night, the charge diminished from 3 to 2 to just one pixel in the end.

The phone was used for general communications back to Odiham and to talk to the aircrew operations room in the Academy, mainly for discussing transport or role changes. It eventually got so bad that I only managed to use it to phone through the stats to Odiham Eng Ops each day. We also had a Storno Radio which we used to



communicate with the aircraft; I recall the callsign was 'Motley'.

Next to the caravan was the TSW refuelling point, with the aircraft being positioned on the hard standings off the road. At some point we were joined by a Squirrel Helicopter (AS 350) from PLM Helicopters Ltd , its role was mainly reconnaissance. Karl Bamforth said, "I flew in the clockwork helicopter, flying over scrap yards trying to identify if there was any aircraft wreckage mixed with the junk." The 'Clockwork' that Karl refers to is a joke that we carried out on the PLM Pilot. We - I think it was actually Pete Barnby - fabricated a cardboard 'Clockwork Key' covered in black 'Bodge Tape' because, compared with the 'mighty Puma', the Squirrel helicopter "...must be clockwork powered." The pilot, who just happened to be ex-Army Air Corps, took it all in good humour as he discovered the key during his aircraft walkround checks. The Squirrel flew the AAIB guy out to the crash site when the report was received that they may have found the container floor that held the bomb. This floor was brought back to the site via a Puma later on that day.

As much of the debris was quite small it was decided that the best way of collecting it, after the location was logged and items marked, was to use commercial skips (see picture below). David Coombes recalls, "... 'Skip for hire!' There was so much small sized



The 'Clockwork Helicopter' - the AS350 Squirrel helicopter provided by PLM Helicopters Ltd, with the Pumas parked in the background.



The TSW team and their aircraft refuelling bowser can be seen behind the tail of the Squirrel, watching the pilot wind up his aircraft before take off.

wreckage up on the hills, that they decided to position skips at various places and the search teams would then drop off what they had collected at specific points." It was decided that the best and safest way to transport the skips to and from the crash site was by placing them in a cargo net and underslinging them. We soon discovered that the skips were 'V Heavy' and even getting a lot of troops around the skips it was impossible to place them in the nets correctly. We then arranged through the Skip Hire company to have a Skip Lorry and driver on site to position the skips in the nets. When the driver and his lorry arrived and we told him what we wanted he initially thought we were pulling his leg. He eventually understood and although very apprehensive we managed to place all the skips correctly and they were airlifted to the appropriate locations.

There were a lot of volunteers and emergency services personnel required to cover the massive crash site in Search Teams and the quickest and most efficient way was to transport them by air. The need was declared by operations and the groundcrew set up a passenger movement process. As none of us had any real idea how to organise this process we were aided by the aircrew and managed to cobble something together. Not all of the passengers were human, we had some dog teams to carry. One day we noticed a dog wearing standard issue Ear Defenders. When asked why, the handler replied, "He doesn't like noise!"

The support from the local people was fantastic. Whilst at the caravan we were regularly visited by locals giving us all sorts of stuff. Karl Bamforth: "Someone kept delivering food and cake to the mobile home while we were out." This support was not just limited to visitors, it also came from the local businesses. Again Karl Bamforth remembers, "I broke my watch strap but when we got it repaired in Lockerbie they did it for free and wouldn't let us pay. Same when we sent out for fish and chips." This was very overwhelming as these people had suffered a major disaster that in every way was life changing; eleven local people were killed in Lockerbie. Tim Perera said, "The fish and chip run made me feel very humble. The people of Lockerbie were amazing and so hospitable."

As mentioned earlier the crash site was massive, with David Coombes estimating they were working in "... an operating area that stretched all the way across to Northumberland and the Otterburn Ranges." The daily tasking included recovery of luggage back to Lockerbie, deployment of search teams, picking up wreckage and netted loads of wreckage and moving them to a roadside edge for recovery. David Coombes recalls, "The farmer had a few extra furrows in his field as we ended up dragging some of the items. Getting them off the ground was tricky, but the Joint Helicopter



Above: Lifting wreckage onto a trailer.

Below: The crewman's view of the underslung load, looking down the Puma's centre hatch in the cabin.





Above: A tagged and marked door hatch.
Below: Some of the seats from Pan Am Flight 103.

Above: Part of the Boeing 747 fuselage.
Below: Sergeant Drew Murray standing next to an APU.





Above: Part of the tailplane of the Boeing 747.



Above: Carefully lifting the tail section.



Above: Tundergarth Hill, where the remains of the forward section were found.



Above: Tundergarth Hill. The PSP was laid to assist the rescue teams to access the wreckage. This photograph was taken a day after the nose section was removed to AAIB centre at CAD (Central Ammunition Depot) Longtown.

Support Unit (JHSU) teams used ratchet strops and simply hooked them on to the aircraft 8ft strop." The search teams were not only looking for the remains of the victims but also identifying and marking the debris accurately using GPS. David Coombes explains, "The teams spent long days on the hills. Each item of wreckage was evidence and so its position had to be logged using GPS, a tag written out and attached to a marker that went in the ground. The item of wreckage was then tagged; of course, the unique serial numbers had to match up with the tag marking the ground position. Wreckage that could be carried was then taken to the skips. The larger items were collected as USLs and taken to the nearest road."

Some of the debris was quite large while others were quite small and light, as the pictures overleaf show. David Coombes again: "A couple of tail/wing sections were massive and we had issues lifting them due to their weight and size." Other items were quite recognisable, like the aircraft seats and the Auxiliary Power Unit (APU) next to Drew Murray. It was thought that some victims could have landed in some of the lakes around the area; therefore, on one occasion, we needed to undersling a Police launch for Police divers searching in inaccessible locations.

It is sometime forgotten that other RAF units were involved with this rescue/recovery. Some of the unsung heroes were from the Repair and Salvage Squadron (RSS) based at RAF Abingdon. The Aircraft Salvage and Transportation Flight (AS&TF) of RSS, commonly known as 'Crash and Smash', was heavily involved with aircraft recovery as it is one of their main tasks, both in peacetime and war. The JHSU was also heavily involved, dealing with any situation where USLs were required. Both of these organisations worked tirelessly together on the nose section of the Boeing 747 up on Tundergarth Hill, near Lockerbie.

The picture of the stricken aircraft's nose section, as shown on the front cover, was, and perhaps remains, the most well known image of this horrific disaster. After the incident on 21 December it was reported directly that life on board the nose section still existed and therefore the task was very much a rescue task. However, when it was confirmed that there was no one alive then the crash recovery could be undertaken in earnest. The nose section was a large piece of the airframe and it would need to be airlifted at some point. The task then for JHSU and AS&TF was to construct a tunnel under the nose section so that a lifting strop could be positioned. This task also necessitated being in close contact with human remains, which was quite traumatic for those involved. David Coombes: "The JHSU Army guys, plus the RAF 'crash and smash' team, were not very happy having to work so close to the dead bodies of the 747 crew.

Initially there was no way that the pilots could be cut from the wreckage, so it took a few days to get the lifting gear, the strops etc positioned. The smell in the cockpit was not good and typical service humour kicked in to help the guys deal with it. The JHSU guys would talk to the dead crew each time they were working on site to prepare for the big lift. Some matting was put down and then a road crane lifted the nose section to allow final prep and removal of the crew. A Puma then lifted the whole nose section and took it to Easttriggs bomb dump, just on the coast. I think that is where they put the majority of the wreckage." After the Nose Section was removed all that was left to mark the site was the matting that was laid to assist removal. David Coombes recalls, "...it was on national TV. Richie was the crewman."

As previously touched upon, communication between the organisations involved could be challenging and therefore the need for RAYNET operatives were essential. As it was winter in Scotland the weather was pretty poor some of the time, which led to some interesting flying! On one occasion a Puma was tasked to pick up search teams in the mountains. However, the weather was atrocious and after several attempts the RAYNET passenger came into his own. Karl Bamforth: "One day we flew into the mountains trying to pick up a rescue team, we had one of those amateur radio guys on board. We were flying up a fire break with the rotors in cloud. Unable to get any higher or land, we had to do a sort of hovering three point turn before descending back down into the valley. We were unable to contact operations or the rescue team. The amateur radio guy stepped in and made contact with surprising ease and requested the search team to walk down to a better location. We descended into the valley and found a car park next to an A road. It was deserted and we landed in the car park only to find out it was loose gravel. After getting everything arranged with the search team we flew back up to collect half of them. When we got back it was starting to get dark, there were a few vehicles waiting for us, including a police car. Not wanting to land on the gravel again the captain carried out the Green Cross Code drill then landed in the centre of the road, causing some panic as the police suddenly realised what we were doing and tried to block traffic. We did the same trip again but by the time we got back the road was well and truly closed with flashing lights everywhere." David Coombes remembers the weather conditions and the challenges that existed during these tasks. In response to Karl's comments, David said, "I'm not sure if I was the crewman on those trips, but your account is so typical of what we ended up doing each day. Typical SH - keep pushing to get the job done. I had forgotten about the volunteer radio people. RAYNET? They certainly helped us out several times, but then there



Above: At the top of the steps, Flight Lieutenant Paul Johnson (Pilot) taking the salute. Behind him in the front row, from left to right are: Flying Officer Jack Robson (Pilot); Sergeant Richie Rees (Crewman); Sergeant Drew Murray (Crewman). Corporal Tim Perera (Engineer) is just visible behind Sergeant Rees, and Corporal Graham Lowe (Engineer) is behind Sergeant Murray.



Above - from left to right: Sergeant Drew Murray, Sergeant Richie Rees, Corporal Tim Perera, Corporal Graham Lowe, Corporal Pete Barnby and Junior Technician Karl 'Shakey' Bamforth.

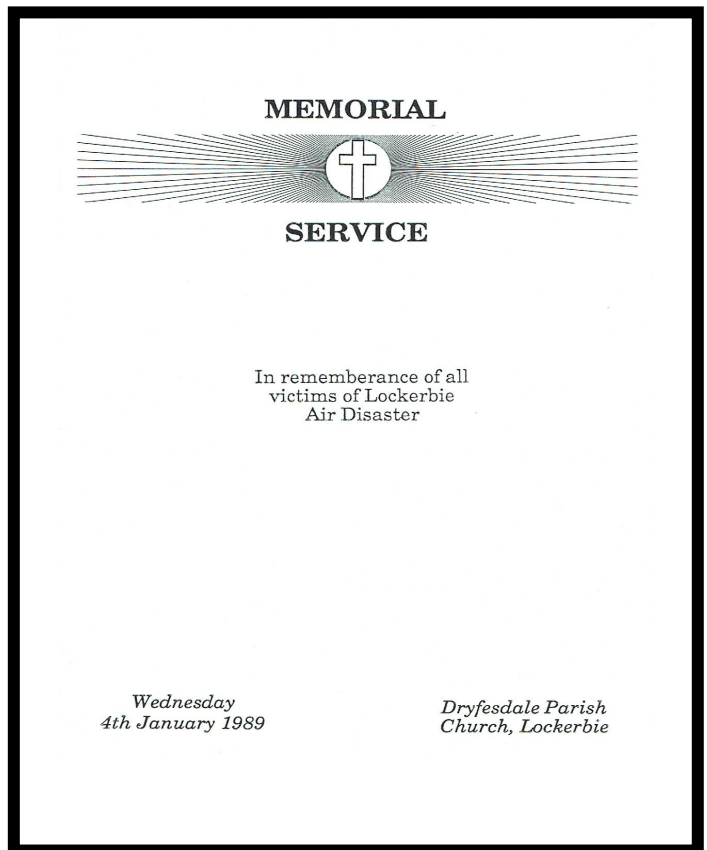
were possibly people scattered all over the area within a few days of the crash providing rebro sites from their cars and vans ..."

On Wednesday 4 January 1989 a Memorial Service was held in the Dryfesdale Parish Church in Lockerbie for the 243 passengers, 16 crew and 11 local people who had died as a result of the terrorist bomb. The congregation not only included the 'great and the good' but also local townspeople and relatives of the dead, some having flown in from the USA as Americans had made up the majority of the passengers of Pan Am Flight 103. There were also representatives of the emergency services, and volunteer organisations involved in the incident. David Coombes said that the "... picture of the Memorial Service reminded me that I ended up driving the hire car that Squadron Leader John Cooke was using. He insisted on being dropped off outside the church! I can't remember if I actually managed to get inside to the service." The day after the service many of the detachment personnel went to the Church to pay their respects.

Whilst relaxing after the day's work in the local RAFA Club in Dumfries one evening, or it may have been the Royal British Legion Club, we - the ground crew - heard a report on the BBC Six o'clock News saying that an aircraft had crashed on to the embankment of the M1 motorway near Kegworth in Leicestershire while attempting to make an emergency landing at East Midlands Airport. Karl Bamforth recalls, "We were all in the bar when there was a news flash about the crash of BM 092 on the M1 at East Midlands. Eighth of January? That had a big impact on all of us." As Karl states we were all a little shaken over this. The staff in the RAFA / RBL were a little confused about our reaction until we told them who we were and what we were doing in Scotland. They didn't give us any free beer though!

Although the task did not finish for the Pumas until later in the month, the groundcrew who had deployed initially were relieved on 10 January 1989, when we were replaced by Sgt John Coleman and others, including Stan Matheson. The aircrew were rotated on a sporadic basis but I think the 'Boss', Squadron Leader Cooke, remained until the end of Puma operations.

This account is what I can remember of the operation. However, I could not have produced it without the aircrew input from David Coombes and the other groundcrew members: Karl 'Shakey' Bamforth, Pete Barnby, Tim Perera and also one of the guys that replaced the initial crew, Stan Matheson. The majority of the operational comments come from David Coombes. All of the 33 Squadron personnel who were involved with this operation are



now retired from the Services.

As many of us know, Richie Rees went on to become a pilot and would later return to 33 Squadron Leader to command the OC AMF Flight. Richie was a unique, popular and talented individual and he is also acknowledged as the man who started the annual Puma Reunion in London while he was working in the MOD. Sadly, Richie became seriously ill in 2004 and lost his battle with leukaemia on 8 March 2005.

In discussions with the 33 Squadron Association Chairman, Dave Stewart, about an article to mark the 30th Anniversary of Lockerbie that recorded the Squadron's involvement with the historic event, we agreed that it would be fitting to dedicate this piece of writing to Richie's two daughters, Bronnie and Amy, who were not born when their father was up at Lockerbie, and who were still young when he passed away.

Photograph Acknowledgements: All photographs were supplied by Graham Lowe, except for the picture of Ron Cowan at the RAYNET briefing board (page 11), which came from Ron Cowan himself. David Coombes provided the pictures of Tim Perera crushing chalk (page 14), the Puma with a netted skip (page 15) and the Puma lifting the tail section (page 19). The mobile phone picture (page 15) and the black and white picture of the nose section on Tundergarth Hill (page 19) are open source from the internet, as is the picture of the nose section on the front cover, and the front page of the Daily Mirror (page 21).

Extract from 'Lockerbie's Last Secrets' by Jonathan Mayo

(Published in the Daily Mail, Saturday 15 December 2018)

In the weeks leading up to the 30th anniversary of the disaster that befell Pan Am Flight 103 on 21 December 1988 over Lockerbie there were several Press and TV articles looking back at the events that Graham has covered so well, and in such detail, in the previous pages.

As his article was written with an eye to archiving it for future reference in the 33 Squadron History Room and on the 33 Squadron Association website, for completeness I have added this extract from the Daily Mail that gives future researchers and historians a summary of the situation as it occurred on the Maid of the Seas and in and around Lockerbie on that dreadful evening.

I have also added some of the comments given to me while researching the article by some of the aircrew who were part of 33 Squadron's initial response as events were unfolding that night. Our hope is that this article will jog a few more memories, produce a few more photographs and 'dits', and encourage others to recount their memories from other national and international emergencies, operations, tasks and exercises that 33 Squadron has been involved in over the years: Bosnia, Kosovo, The Gulf, Jamaica, Mozambique....

Thank you Graham, and your fellow contributors, for putting this excellent article together as a contribution to 33 Squadron's historical records, especially as we approach the 50th anniversary of operating with the Puma in 2021. You have set the bar high for others to try to match, or beat.

Dave Stewart

Chairman

33 Squadron Association

18 Dec 18

5.30 pm, Dec 21, 1988

At Gate 14, in Heathrow's Terminal 3, passengers for Pan Am Flight 103 are starting to board the Maid of the Seas. The Boeing 747 has been refuelled for the 3,000 mile flight to New York and the last of the luggage is being loaded. Bags and Christmas presents for friends and family are being placed in overhead lockers. In Row 23 are the Rattan family returning from New Delhi after attending a relatives' wedding. Earlier, on the first leg of Flight 103 from Frankfurt on a Boeing 727, three year old Suruchi Rattan, dressed in a distinctive red dress, entertained a man in the row behind with stories of her uncle's big day....In an aluminium baggage container in the aircraft's forward cargo bay

area is a light brown suitcase. It contains a Toshiba 'BomBeat' radio cassette player. Placed inside is 450 grams of Semtex plastic explosives attached to a timer. The suitcase is only 25 inches from the skin of the 747's fuselage.

6.04 pm

The Jumbo moves away from the gate and begins to slowly taxi towards Heathrow's runway 27R. At the controls are two American pilots: 55 year old Captain Jim MacQuarrie, who has over 4,000 hours' experience flying 747s; and First Officer Ray Wagner with 5,000-plus hours' experience.

6.25 pm

In the darkened flight deck, Capt MacQuarrie opens the throttles of the four engines and 330 ton jet begins to move down the runway. Twenty minutes later, Pan Am 103 takes off through thick cloud into the dark sky. On board are 243 passengers and 16 flight crew.

6.58 pm

Cabin crew are serving drinks and handing out headphones for the in-flight movie, 'Crocodile Dundee II'. The plane levels off at 31,000 ft. "Good evening, Scottish. Clipper One Zero Three. We are level at three one zero," Capt MacQuarrie says to Prestwick Air Traffic Control. "Good evening," replies air traffic controller Alan Topp. "Route direct to five nine, north, one zero west." He watches the 747 move across his radar screen as a bright green cross. Pan Am Flight 103 is six miles above the Scottish border.

7.02 pm and 50 secs

The Semtex bomb in the suitcase detonates, creating a 20in hole in the fuselage. Massive cracks instantly appear along the fuselage's aluminium skin, which starts to peel off. The lights in the cabin go out and the plane depressurizes. It starts to pull apart. The flight deck recorder captures the sound of the nose section breaking away, which is blown back, hitting the right wing and smashing off one of the engines, then the tail assembly. The main cabin is now exposed to the elements and, as the plane disintegrates, most of the passengers are thrown from the fuselage into temperatures of -46°C. They are rendered unconscious by lack of oxygen. Anything not fixed down is thrown from the plane.

At Prestwick Air Traffic Control, Alan Topp stares at his screen as Pan Am 103 transforms from one green blip into five.

7.03 pm

As the main cabin section reaches 19,000ft, it drops vertically and the disintegration accelerates. Only about 15 row of seats remain fixed to a section of floor. The full-length streamlined wing, 200ft long and containing 20,000 gallons of fuel, is falling fastest at a speed of around 500mph. The engines are still running and No3 engine is burning fuel as it falls – looking like a fireball.

Forty-six seconds after the bomb detonates, Pan Am Flight 103's wings hit Sherwood crescent at 500 mph, disintegrating on impact and leaving a crater more than 150ft long and 30 ft deep, vapourising Dora and Maurice Henry and their house at No13, the Somerville family at No15, and Steven Flannigan's family at No16. A fireball shoots up 300 ft and spreads towards the nearby A47 dual carriageway, scorching cars heading south. Drivers swerve to avoid the wreckage. The British Geological Survey seismic monitoring stations in southern Scotland record an event measuring 1.6 on the Richter Scale.

In his farmhouse at Tundergarth, three miles south-east of Lockerbie, farmer Jimmy Wilson is about to sip a cup of tea when the lights suddenly go out. Then the nose containing Pan Am103's flight deck and crew slams into his field.

7.04 pm

Bodies start to fall on Lockerbie. As resident Bunty Galloway runs out of her house, two young women drop out of the sky and land in the street in front of her. Most of the passengers and crew are probably dead before they hit the ground, although one resident will claim to find a woman's body with mud and grass in her clenched hands, as if she had moved after landing. By torchlight people can see corpses and parts of bodies in the streets. Letters, paperwork and money are blowing down the roads. The smell of aviation fuel is everywhere.

7.20 pm

The phone rings in the Heathrow office of Pan Am duty flight controller Brain Hedley. Air traffic control tells him that Flight 103 is lost. Hedley immediately alerts his colleagues at JFK Airport.

7.30pm

RAF Search and Rescue helicopter pilot Geoffrey Leeming is replastering his spare bedroom when colleague Ken Park calls. "Have you been drinking?" Parks asks. "No, Ken. And a Happy Christmas to you, too!" Leeming jokes. But he soon discovers the purpose of Park's question. All crews must fly to Lockerbie to help in the aftermath of what's believed to be a plane crash. He has to be sober.

The first ambulances are leaving for Dumfries and Galloway Royal Infirmary carrying injured Lockerbie residents. Hospitals have been put on standby to receive casualties, but so far there are only two serious and three minor cases. At Tundergarth, Jimmy Wilson and his family are walking across their field towards the 747's nose section. By the light of their torches, the Wilsons can see three bodies. Two are dead, but a third, a stewardess, appears to be moving. June Wilson searches for a pulse but the woman is dead. June's daughter Kate runs to the house for blankets to cover the bodies.

7.33pm

On Channel 4, Peter Sissons breaks the news that a Pan Am 747 has crashed.

7.45pm

PC John Henderson's house is only 100 yards from the crater at Sherwood Crescent. Having led his wife out of danger, he reports for duty at the police station.

8.00pm

American TV networks start running with news of the loss of Pan Am Flight 103.

8.05pm

The Dumfries and Galloway emergency plan for a major incident - designed to deal with an explosion at the nearby nuclear power station, not a plane crash - is activated.

8.45pm

ITN is showing the first live TV pictures of the fires in Sherwood Crescent. In his RAF Wessex helicopter, Geoffrey Leeming is approaching the town. The fires make it look like there is an active volcano in the heart of Lockerbie.

10pm

Many residents are discovering bodies around their homes. Bunty Galloway finds a boy lying on her garden steps. Not realising he is dead, she places a lambswool travel rug over him 'to keep him warm'.

10.30pm

Police have set up a temporary mortuary in the basement of the Lockerbie town hall. A farmer in a pickup truck pulls up. The police help him unload debris, then notice someone fast asleep in the passenger seat wrapped in a coat. They think it is the farmer's son, then realise it is the body of a young boy.

11pm

Ambulances are lined up along Lockerbie's main street, but there is no use for them. There are no survivors

from the plane and all the Lockerbie injured have already been taken to hospital. At a phone box nearby, a queue of journalists wait to dictate their reports of the disaster to their newsrooms.

At the town hall mortuary, a weeping farmer brings in the body of a three year old girl in a red dress. It is Suruchi Rattan.

Midnight

Twenty dog teams are now searching the area. Pan Am 103 was carrying a consignment of sewing needles, so some dogs have injured paws. A local vet is trying to treat them.

1am, December 22

In the St Mungo Arms pub near Sherwood crescent, a group of regulars and reporters are watching footage of the burning town on television in silence. The barman points out an old man standing near the reporters whose wife is missing. When they ask him about his wife, he says quietly: "If she's all right, she'll ken where to find me."

2am

Dr Keith Little of Edinburgh Royal Infirmary, one of the medics searching Sherwood crescent, is finding bodies with metal embedded in them. He is convinced an explosion must have brought the plane down.

7.50am

As dawn breaks, the scale of the disaster is clear for the first time – 120 bodies have been found, but the search continues. A policeman searching fields at Tundergarth near the plane's nose section sees a woman's face staring up at him from a pool of peaty water. Nine other bodies are found later in the marsh.

9am

Geoffrey Leeming is flying his Wessex helicopter over the fields around Tundergarth. From his cockpit he can see bodies scattered across the fields. Each body has a policeman standing watch next to them.

10am

Searching the fields near their home, farmer's sons Stuart and Robbie Dodd spot a long piece of metal with a box attached to it. On its side is printed 'DATA REPRODUCER 1972', it is the Digital Flight Data Recorder and the Cockpit Voice Recorder of Pan Am 103.

11pm

A bouquet has arrived at the town hall. It is from the passenger on the Frankfurt flight with whom three year old Suruchi Rattan had chatted,. The flowers come with a note: 'To the little girl in the red dress who

made my flight from Frankfurt so much fun; you didn't deserve this.'

Aftermath

On January 4, 1989, 100 relatives who lost loved ones gathered in Lockerbie's parish church. Later, a memorial listing the names of all the victims was erected in the cemetery.

Six weeks after the disaster, the search for bodies ended. 259 passengers and 11 Lockerbie residents had been killed.

One week after the crash, Air Accidents Investigation Branch found traces of explosive. A thousand police and Army personnel began a fingertip search of the countryside that recovered more than 10,000 items.

In 2001, Libyan Abdelbaset al-Meghrahi, the only person convicted of the bombing, was sentenced to life in prison. He was released on compassionate grounds in 2009 and died of cancer in 2012.

33 Squadron: Initial Response

Some of the first aircrew involved recall their memories of Lockerbie

"I remember that the Sqn Execs (Squadron Executive Officers) were covering standby over that particular period, having agreed to the request for a 'Non-Execs' Lunch' from Bill Kidd. On the 21st December 1988 Rick Atkinson (OC HQ Flt), John Cooke (JC - OC Trg Flt) and I responded to an operational callout to go to Aldergrove. Flying in XW 209 we picked up the passengers (pax) early that evening, and they told us of the news reports they had been hearing about an aircraft crash in Scotland. All the way to Aldergrove we listened to the World Service on HF and heard how bad it was up at a town called Lockerbie.

We had expected to arrive in Aldergrove, refuel and fly back to Odiham. However, when we arrived we were told to shut down and call the HQ 1 Group Duty Officer, who told us to stay in Aldergrove overnight and standby for tasking the following day. We were all in immersion suits, JC and I had taken overnight bags but Rick didn't even have a toothbrush with him!

Later, HQ 1 Group told us that we would be picking up Mrs Thatcher on 22 December from Prestwick, and flying her to Lockerbie. We scrounged some VIP kit from the boys at Aldergrove and flew over to collect Maggie early in the morning. We flew her up to Lockerbie and landed near the Police Headquarters, and after receiving a brief at the Incident Room we flew her around all of the sites. We then dropped her back in Lockerbie so that she could give a Press conference. I think we then flew down to the MU (Maintenance Unit) at Carlisle and stayed the night.....

On 23 December we flew down to Glasgow and then back to Lockerbie. I'm not entirely sure what we were doing that day, a number of shuttle runs but I don't remember the pax we were carrying. I do remember that there were a lot of helicopters around Lockerbie, SAR and Chinooks, I think the helicopter operations were being run by Bob Grundy from 7 Squadron. At the end of the day we flew back to Carlisle. My logbook shows that there was a crew change there, and I flew XW 209 back to Odiham with Roger Hilliard as my crewman.

I cannot remember how remember how JC got back home, it was probably on the aircraft that Chris Lobban and Ian Robertson had flown up to Prestwick as the VIP standby aircraft. As Execs we didn't get as much flying as the younger line pilots, we filled our boots over those three days...."

Rob Tizard (OC Ops Flt, 33 Sqn, Dec 1988)

"I was covering the Duty Auth (Duty Authoriser) role on 33 for the 22nd and 23rd December, so I was Duty Auth on Day 2 of Lockerbie. I would have been Duty Auth on the night of the bombing but I attended the 'Not the Execs' Lunch'; the Execs had had their 'Execs' Lunch' lunch a few days earlier. I remember the 'Non-Execs' Lunch' well, lots of down on our knees in a line *à la* seven dwarves and singing 'hi-ho' as we left the restaurant and headed back to the bar. As payback the Execs - Bob Tizard, Rick Atkinson and John Cooke - manned a sortie to Northern Ireland so that we could all go to the pub.....

On Day 2 I re-tasked Bob, Rick and John to fly to Prestwick to fly Maggie Thatcher to Lockerbie. Chris Lobban and Ian Robertson were sent to Lockerbie on the night of the crash and they were also re-tasked on Day 2 to act as the back-up crew for Maggie Thatcher. As expected I had awful problems reining Chris Lobban in, he had gone off touting for business and nobody had any idea what he was up to or where he was!

I suspect that John Cooke just stayed in Lockerbie as the Det Comd (Detachment Commander) which explained the completely plausible story of him spending days in his immersion suit, a story I vaguely remember.....

Arthur Bennett (Pilot, 33 Squadron)

Yes, I did go to Lockerbie, on the 21st December. We had the non-execs lunch. That is why the flight commanders were covering standby crew. I got a call in the Mess at about 1830. As the only crewman contactable I was on my way, with Lobban and (Fit Lt Ian) Robertson, and we flew up on the 21st in XW214. We were tasked to go to Lockerbie, but had to go via Upavon, Fingingley and Leconfield., picking up kit and other people. The weather was really bad and after two and a half hours flying Chris said there was no point pushing on to Lockerbie. So we stayed at a hotel in Carlisle. Next morning, after about 3 hours sleep, we pushed on but were tasked to fly to Prestwick to act as back up for JC's crew. I spent the night of 22 December sleeping in the local school in Lockerbie. At the time nobody knew how long we might be there and either Rob Tizard or the aircraft had to get back to Odiham. JC was very keen to stay and was happy if needed to stay over Christmas. So on the 23rd I operated back to Odiham with Rob Tizard in XW209.

No real dits I'm afraid, but I remember that about ten of us aircrew asked a policeman, who was standing outside the Town Hall, where the nearest good pub was. Later, while we were in the pub, there was a quick

flash of us talking to the policeman on News at Ten. He had been standing guard at the Town Hall door as the Town Hall was being used as a makeshift morgue.

I'm afraid I cannot remember who stayed behind. Once back at Odiham I was on the road to Shrewsbury. After Crimbo I did hear that that JC had got back for Christmas, probably in XW214, with Lobban and Robertson. The crew stayed behind in case they were needed to remove bodies etc but the Chinook guys did that gruesome task.....

Roger Hilliard (MACR, 33 Squadron)

DAILY Mirror

Friday, December 23, 1988 FORWARD WITH BRITAIN ★ 20p

WHO COULD
DO THIS?



AFTERMATH OF DISASTER: The cockpit of the Jumbo lies in a field . . . amazingly, the windscreen wiper is still intact



DEVASTATION: Houses were wrecked and hundreds left homeless when the Jumbo crashed into the small town of Lockerbie

By NICHOLAS DAVIES in London and STEWART DICKSON in New York

PAN AM were warned a bomb would be planted on one of their planes — just two weeks before their Jumbo jet exploded in a ball of flame over Scotland.

America passed on the warning to all governments and airlines but they did NOT tell their passengers.

When Pan Am were asked last night why passengers were not told of the threat to flights from West Germany to the United States, a spokesman in New York said: "It is the airline's policy not to discuss publicly any threat to the airline."

Two hundred and fifty-eight people died on Pan Am's Flight 103 from Heathrow to New York. At least 17, including four children, from the Scottish border town of Lockerbie died when the 18-year-old Jumbo exploded over it.

The anonymous bomb warning was made on December 5 to the US Embassy in Helsinki.

Terrifying

The caller threatened that within a month a bomb would be planted on a Pan Am jet from Frankfurt to New York.

The warning was passed immediately to the US State Department, who informed US embassies, all airlines and Interpol.

Pan Am got the message — but they didn't tell any of their passengers.

In Washington yesterday it was claimed that the warning was given by the notorious anti-PLO Abu Nidal Palestinian group.

After the warning, some embassy staff are believed to have flown to London direct from Moscow and other European cities to avoid Frankfurt.

Tragically, it is feared that they then transferred to the Jumbo jet, unaware that it had called at Frankfurt before flying to Heathrow.

In London, speculation that the Pan Am disaster was sabotage was fuelled by the appointment of

Victims were not told of bomb threat

● Turn to Page 2

LOCKERBIE AIR DISASTER: Pages 2,3,4,5,8,9,16,17 and Back Page