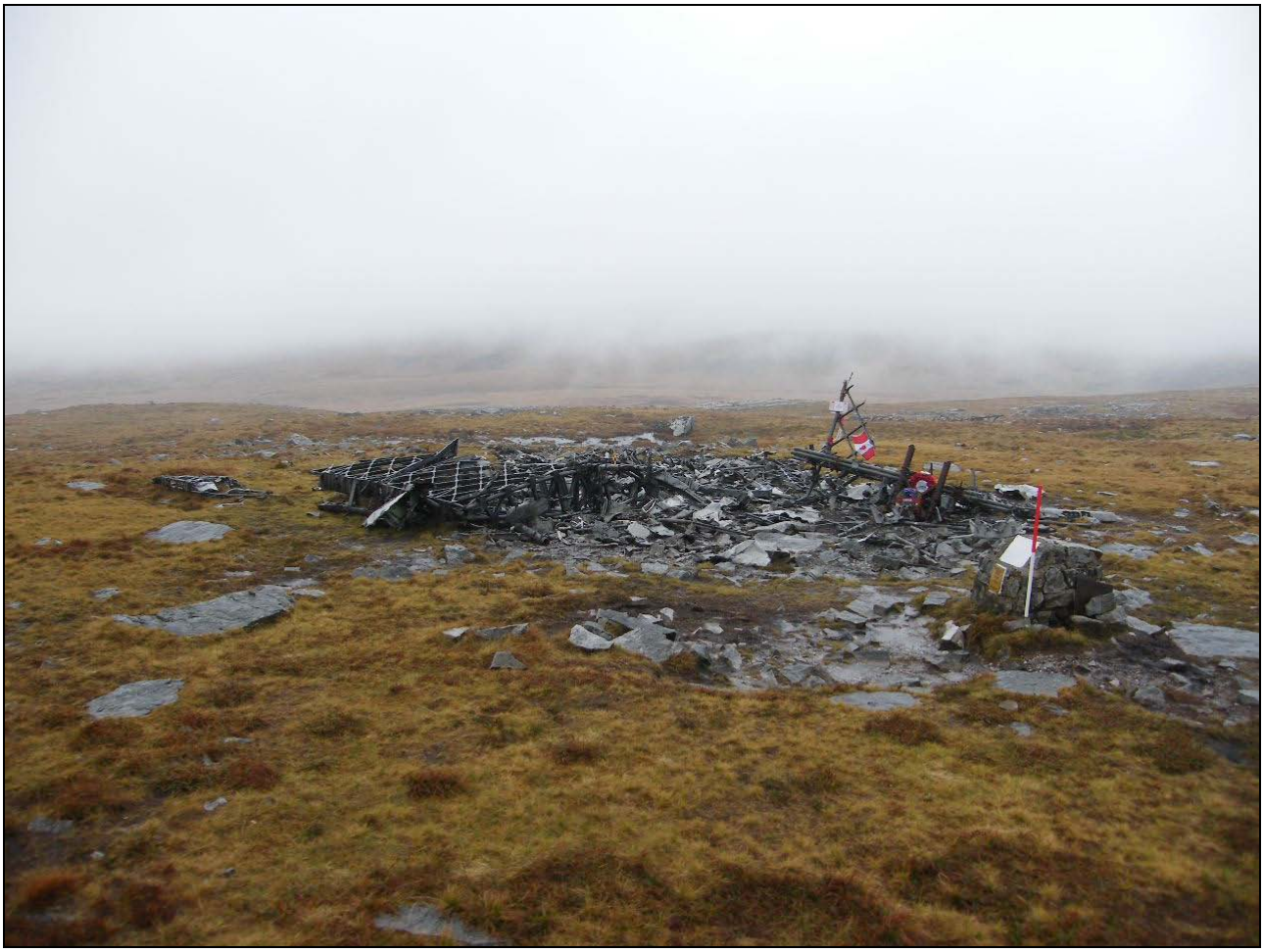
CPAT Report No 1249

Military Aircraft Crash Sites

SCHEDULING ENHANCEMENT PROGRAMME



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Llywodraeth Cymru
Welsh Government

THE CLWYD-POWYS ARCHAEOLOGICAL TRUST

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Military Aircraft Crash Sites

SCHEDULING ENHANCEMENT PROGRAMME

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February 2014

Report for Cadw

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Cover photo: The remains of Vickers Wellington MF509 and the memorials to its Canadian crew (CPAT 3732-0047)

CONTENTS

1 INTRODUCTION

1.1 This report describes the results of a thematic study of military aircraft crash sites in east and north-east Wales carried out by CPAT and funded through grant-aid from Cadw as part of a pan-Wales project. The work comprised an initial desk-top study, followed by field visits to sites in the period between November 2013 and March 2014.

2 BACKGROUND

2.1 The project arose from discussions at the Twentieth-Century Military Sites Working Group for Wales. Set up in 2003, this group helps Cadw to identify the most important sites of this period in Wales and works to make the public more aware of their significance. Concerns were raised by members of the group as to the dwindling resource and the need to compile coherent, accurate information in order to:

a) assist Welsh heritage managers in providing advice
b) provide the MoD with a full database of crash sites in Wales to aid decision-making with regard to licensing recovery operations
c) alert Cadw to crash sites that could be scheduled to afford an extra level of protection.

2.2 It was also felt that the compilation of such a database would support improved monitoring and protection of the sites identified.

2.3 Each military aircraft crash site is designated as a Protected Place under the Protection of Military Remains Act 1986. British aircraft are Crown property, German aircraft are considered 'captured property surrendered to the Crown', and for American aircraft the MoD acts as the representative of the American government (EH 2002). Any intervention on a site requires a licence approved by the Joint Casualty and Compassionate Centre (JCCC) of the Ministry of Defence (MoD). Licences will not be granted where either human remains or unexploded ordnance are anticipated.

3 PROJECT METHODOLOGY

3.1 The four Welsh Archaeological Trusts are working to agreed guidelines in order to deliver key information to Cadw. This project has been approached in a way that mirrors previous scheduling enhancement projects undertaken by the Welsh Archaeological Trusts with grant-aid from Cadw, with the object of identifying sites that merit designation and enhancing the regional Historic Environment Record.

3.2 The sites considered here represent only a percentage of the aircraft crashes that have occurred within the study area. Crashes of civilian aircraft have been specifically excluded, as have crashes at the three military airfields of Hawarden, Sealand and Wrexham (Spencer and Hankinson 2012). Airfield crashes will inevitably have been cleared soon afterwards, and there will therefore be no physical remains which could be assessed.

3.3 Work on the project commenced in August 2014 with a desk-top assessment, initially based on a pan-Wales database of crash sites both on land and at sea, identified (largely from secondary sources) by Deanna Groom at the Royal Commission on Ancient and Historical Monuments in Wales (RCAHMW). A pilot project on aircraft crashes was undertaken by the Gwynedd Archaeological Trust in 2011-12 (Steele 2012); this included further processing and enhancement of the dataset by Nina Steele, which identified the Welsh Archaeological Trust region in which each crash site lay. Information was then added to the

dataset from RCAHMW's National Monument Record (NMR), and cross-checked against the Historic Environment Record (HER) to ensure completeness. The final phase of the desk-top work involved the examination of primary and secondary sources to supplement the database and provide as full a picture as possible of the resource (see also Section 4 below).

3.4 The resulting point-based locational information for the crash sites varied greatly in accuracy: many sites could only be placed within the appropriate 1km grid square. This still represented an improvement on the information available at the start of the project, when only 44 of the 134 records that formed the original data had any locational information attached to them. All of the 238 sites in the completed database are now located to at least the nearest 1km grid square.

3.5 Each site was then assessed to determine whether a site visit would further inform the assessment process. Site visits were considered when:

- Sites were thought to retain sufficiently coherent evidence to merit preservation in-situ;
- Sites were associated with a memorial;
- Another site lay in close proximity to those selected using the first two criteria.

3.6 The site visits refined the locational information, and this was enhanced by the creation of polygonal data to define the extent of the crash sites (where this could be determined). The recording of the surviving evidence at those sites visited comprised a general description of the site with locational data for the wreckage and also noted any evidence which might assist in understanding the events which led to the crash. Photographs were taken of significant objects and features. However, no concerted attempt was made to identify individual fragments of wreckage, as this was beyond the scope of the project and would have added significantly to the time required. Data from the site visits is presented in Appendix 2.

3.7 The grid references derived from the visits and desk-top work were subsequently used to generate altitudes for each crash site and an analysis of the results is contained in Section 5, below. This point-based GIS data was fed back into the regional Historic Environment Record to inform future heritage management and development control. Throughout this report, any numbers in brackets, except where they relate to written references, refer to the Primary Record Number (PRN) assigned to the site in the Historic Environment Record.

4 SOURCES OF DATA

4.1 *RCAHMW Database of Downed Aircraft*

The initial source of information for the project was the *Database of Downed Aircraft* compiled by Deanna Groom at RCAHMW. This was examined and augmented with new information, including additional data developed for site classification and management purposes, by Nina Steele at the Gwynedd Archaeological Trust (Steele 2012). One hundred and thirty aircraft crash sites in terrestrial, intertidal and maritime contexts were identified in the CPAT region, and formed the basis of the project database.

4.2 *National Monuments Record (NMR)*

Data from the National Monuments Record provided to the Welsh Archaeological Trusts as part of the Extended National Database exchange was compared to the *Database of Downed Aircraft* and the project database was updated where necessary. At this stage, a total of 134 aircraft crashes had been identified.

4.3 *The Historic Environment Record (HER)*
There were relatively few records of crash sites in the CPAT HER, the majority of which were at the former RAF airfields and thus outside the scope of this study, as mentioned in 3.2, above. Only seven relevant sites were recorded that were not also contained in the National Monuments Record. Information from these records was appended to the dataset once the records of RCAHMW had been compiled.

4.4 *Written and Documentary Sources*
There are various written works that include information about crash sites in the region, most of which were published as guides to those interested in the subject and these normally contain a selection of sites. Some are specific to the area of the study as with Doylerush (1993), while others include information about the region within a wider study, such as Earl (1995). More general publications on the subject include De la Bedoyere (2001), which provides a useful overview. The works consulted provided additional sites and further information on known sites, and these were appended to the database where appropriate.

4.5 The three volumes of the *Wings Across the Border* series by Derrick Pratt and Mike Grant, subtitled *A History of Aviation in North Wales and the Northern Marches* and published between 1998 and 2005, deal more broadly with the subject but provide important information regarding crash sites gathered from primary sources studied at the National Archives, setting these within their regional context.

4.6 Written and documentary sources have been complemented by online research. This included detailed historical information about specific crashes, as well as more accurate location and condition reports. Finally, information collected by Mark Walters of CPAT has also been added to the record.

5 THE CRASH SITES

5.1 The completed database contained 238 individual crash sites. This included the 134 records provided by the sources described in paragraphs 4.1 and 4.2 at the commencement of the project and the 7 additional sites recorded in the HER. The map on the following page shows the distribution of crash sites, as they stand at the completion of the fieldwork.

5.2 A wide range of aircraft are represented, most of which are Second World War in origin. The earliest crashes date to 1922: a pair of Bristol F2b's, which crashed in different locations in north-east Wales while in transit from Ireland to RAF Shotwick (later RAF Sealand). Aircraft from the 1930s include examples of the Hawker Hart biplane, two of which crashed in the area while on navigational exercises.

5.3 With the advent of the Second World War, the number of crashes in the study area increases from 4 in 1939, to an average of about 37 a year from 1940-44, with a high point of 43 in 1943, decreasing to 9 in 1945. This is partly explained by a widespread and large-scale increase in all aviation activities during this period, but is also more directly a consequence of the area being deliberately selected for training. Training types appear in the database (26 Miles Masters, 11 Avro Ansons and 10 Airspeed Oxfords), and many of the larger aircraft (4 Avro Lancasters, 7 Handley Page Halifaxes and 19 Vickers Wellingtons), which crashed in the study area, were also involved in training flights. The Supermarine Spitfire had largest number of crashes for a single aircraft type in the study (44); many of these flights were also likely to have been training exercises. However, even experienced crews could encounter navigational or technical problems, and occasionally

aircraft became casualties after raids on enemy territory, when they became lost owing to poor visibility and overshot their bases in England.

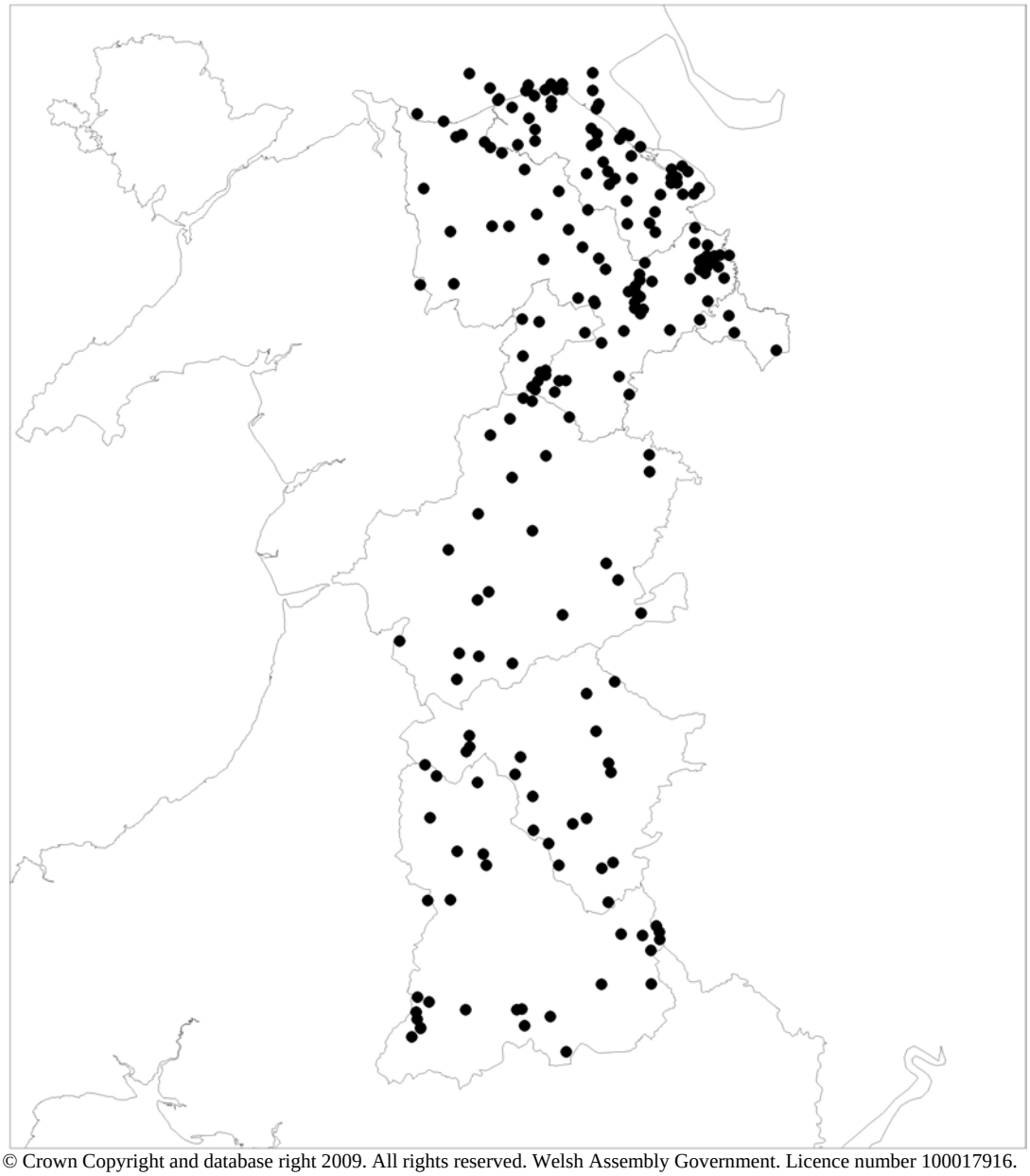

Fig. 1: Distribution map of crash sites in the study area

5.4 Each crash has its own unique and often poignant story. One example was the crash of Supermarine Spitfire P7295 in December 1942 on the Berwyn Mountains. The aircraft crashed into the main ridge between Cadair Berwyn and Cadair Bronwen; the pilot survived the impact but died from exposure. Westland Lysander T1655 was sent the following day to search for the Spitfire, and became a victim of the downdraughts caused by winds crossing the ridge; it crashed in the valley of the Nant Cwm-llawenog, less than 1km away from the Spitfire, and the pilot died. The crashes were only discovered some days later by a local shepherd (Mike Grant, pers comm).

5.5 Many British aircraft types were of course flown by Commonwealth aircrew. The memorials at these sites testify to a continuing recognition of the contribution of crews from other countries. The case for protection and conservation of such sites for their memorial value is made by Vickers Wellington MF509, which crashed near Carreg Goch on the Black Mountain on 20 November 1944; the sister of one of the crew visited the site for the first time in 2006, 62 years later.

5.6 American aircraft types are also represented in the database, ranging from fighters engaged in training flights to bombers returning from missions over France. Some American types were used by the Royal Air Force and had British crews, such as Lockheed Hudson V9046, engaged on a search and rescue mission and fortunately equipped with radar, which found on returning to its base in Cornwall on 21 January 1943 that poor visibility precluded a landing; the pilot decided to head for the coast of south Wales, where the order to bale out was given as there was no improvement in the conditions, and all landed safely near Swansea. The aircraft carried on flying for another 60 miles before finally crashing near a farm at Beguildy in Radnorshire, no doubt puzzling the farmer who rushed to the scene expecting to find the bodies of the crew (Doylerush 1993, 81-2). Another example is Grumman Avenger FN821, which was an American design used by the Royal Navy; it crashed on the mountains near Llangynog in Powys while in transit from Gosport to the Orkney Islands.

Fig. 2: The impact site and disturbed wreckage of Grumman Avenger FN821, in forestry near Llangynog, Powys (Photo CPAT 3732-0123)

5.7 There are relatively few crash sites of German aircraft in this part of Wales. All are twin-engined bombers, including a Dornier Do17, a Heinkel He111 and a Junkers Ju88, and it is most likely that all were involved in raids on the north-west of England, as the Welsh hills provided a route from north-west France which avoided the worst of the anti-aircraft defences. The crash site of the Junkers used to have a plaque erected in memory of the crew, but this seems to have been removed in recent years.

5.8 Military gliders are also represented among wartime crash sites. These were used as military hardware and personnel transport, designed to deliver a concentrated force behind enemy lines for specific operations. The most famous of these is probably that which involved the taking of bridges in Normandy in the immediate prelude to D-Day in June 1944, but gliders were also used in large numbers in Sicily in 1943 (Operation Ladbroke), at Arnhem in 1944 (Operation Market Garden) and in the crossing of the Rhine in 1945 (Operation Varsity). All of the main allied glider types are potentially represented, including the Waco Hadrian (of American origin), the General Aircraft Hotspur, the Airspeed Horsa (the most plentiful British type used), and the General Aircraft Hamilcar, a heavy lift glider capable of carrying a small tank or a large artillery gun and its tender. Some of the evidence in the HER relating to gliders probably concerns war surplus material, sold off after 1945 for private use, but single crashes of the Hotspur, Horsa and Hamilcar types have definitely been recorded. Hamilcar HH922 is perhaps the most interesting of these as it was one of the prototypes and crashed on 11 January 1945 when it became detached from its towing aircraft, probably while carrying out endurance testing in the run up to the Rhine crossing.

Fig. 3: Part of the wing centre section of Hamilcar HH922, including a tow release fitting, in the Wartime Aircraft Recovery Group Museum at Sleap, Shropshire (Photo CPAT 3732-0110)

5.9 After 1945 the frequency of crashes decreased markedly. Between 1946 and 1960 there was on average one aircraft lost per year, with never more than three in any one year. Some wartime aircraft types continued in service and are represented in the database, but the most numerous type during this period was the De Havilland Vampire, of which 9 crashes are recorded. These became operational just as the war ended and never saw combat.

5.10 In the following three decades the crash rate declines further, averaging one every three years. These were often accidents which occurred during low-flying exercises, such as Fairchild A10 Thunderbolt 80-0231 of the USAAF, which crashed in the Black Mountains on 6 February 1990 while practising low-level attacks in misty weather conditions. The last recorded crash was that of Sepecat Jaguar T2A XX843, from 54 Squadron RAF, which was

involved in a mid-air collision with civilian Cessna F152 (G-BMHI) while low-flying over the village of Carno on 29 August 1991; both pilots were killed, but the aircraft captain in the Jaguar survived and there were no casualties on the ground.

5.11 Memorials at crash sites vary from a simple pile of stones to a more permanent monument with a plaque recording the names and origin of the crew. Sometimes the memorial can be located away from the crash site itself, such as those at the churches of Pentrefoelas (Halifax DT626), Aberedw (Jaguar XZ386), Llanbedr, near Crickhowell (Boeing Fortress 42-5903) and Callwen, Glyntawe (Anson L9149). Most crashes are not commemorated in any way and it is interesting to speculate on the reasons why some are chosen. In the Brecon Beacons, for example, the single aircraft type that most often has an associated memorial is the Wellington, and this may be something to do with the structural design of the aircraft, meaning more wreckage has remained on site and subsequently provided a focus for those wishing to create a memorial to aircrew in general, the isolated locations no doubt have some bearing on the preservation of wreckage as well.

Fig. 4: The memorial to the pilot of Jaguar XZ386 on the wall surrounding Aberedw churchyard (Photo CPAT 3732-0092)

5.12 In more recent decades increased interest in what is now termed aviation archaeology led to attempts to recover parts of aircraft at some of the sites. Some of this recovery work has been well-informed and well-intended, with comprehensive historical research and careful recovery and relocation to a museum context. However other recovery projects appear to have been undertaken illegally by collectors of aircraft parts, who have not sought permission from the Ministry of Defence and not taken into account the possibility that sites may still contain human remains and unexploded ordnance (De la Bedoyere 2001, 20-23). Indeed, during the course of this study, a small amount of skeletal material was observed at a crash site which had involved a high-energy impact and this demonstrates the potential for unrecovered human remains at all but the most innocuous crashes.

6 ANALYSIS OF THE RESULTS OF THE PROJECT

6.1 Although the readily accessible sources have been searched for crashes and supporting data, due to limited time and resources primary sources have not been examined. These would include any information in the National Archive, and 'accident record cards' and 'aircraft report cards' held by the MoD with copies at the RAF Museum, Hendon. As a result, the database will not have included all of the sites in the study area.

6.2 As noted above, only a percentage (10.5%) of the sites known from desk-top sources have been examined in the field. A photographic and written record was made of those sites which were visited: these provided an up-to-date assessment of the appearance and condition of the crash site, whether there was any surviving evidence of the aircraft, and whether it was possible to identify the point(s) of impact. One product of the visits has been the definition of the site area for each crash, including the identification of any debris trails.

6.3 Consequently, it is clear that there is some potential for an archaeological study of these sites to shed further light on the circumstances of individual crashes. Even in this limited study, analysis of the impact points, where these are visible, has been found to provide information on the likely direction of flight and the nature of the landing. More detailed investigations of some sites may be able to develop a ‘forensic’ approach.

6.3 An attempt has been made to analyse information regarding the elevation at which crashes occurred and this is presented in Table 1, below.

Table 1: Analysis of the elevations at which crashes occurred in the study area

Elevation (m OD)	Area (km^2)	% of total area	No of crashes	Area per crash (km^2)
0-100m	875	11.8	86	10.2
100-200	1421	19.0	35	40.6
200-300	1958	26.1	38	51.5
300-400	1769	23.7	20	88.5
400-500	1060	14.2	25	42.4
500-600	309	4.1	15	20.6
600-700	68	0.9	13	5.2
700-800	15	0.2	5	4.0
800-900	0.3	<0.01	1	0.3

6.5 The key figure to bear in mind from the table is the ‘area per crash’, which allows for the wide variation in total area between different elevations. The smaller the figure here, the greater the concentration of crashes. It is clear from this that, in statistical terms at least, there is a clustering of crashes at sea level and just above, as well as on ground above 600m OD. Crashes in mountainous districts are not surprising as these often occurred in poor weather conditions, when the crews were not always aware that they were flying over high ground and may have descended looking for places to land or information that would enable them to pinpoint their position. The sea-level crashes are a different matter and various possibilities can be considered, including the presence of gunnery and bombing ranges which would necessitate low flying and its risks. Perhaps the most significant factor is that the airfields in the area, namely Hawarden, Sealand and Wrexham, were all at low elevations, the two first named on the flat ground next to the estuary of the River Dee. While crashes at the airfields have been excluded from the programme of work, the surrounding areas would still have seen the most air traffic.

6.6 One of the clear results of the study has been to highlight the fact that the majority of the crashes are related to training activity, rather than active operations. This is not surprising, given that the area lies away from the main targets of the German Luftwaffe. Clearly it is essential that aircrews training for low-level operations do so in mountainous terrain, but as this study has shown, this is not without risks – particularly in poor weather and with limited navigational aids.

6.7 This project is unique in the personal connection of living relatives with aircraft crash sites. In many cases relatives may either have visited the crash or wish to do so in the future. Each crash site represents a personal tragedy for one or more families. Phyllis Burns, the sister of W. J. Allison who died in the crash of Wellington MF509 (see 5.5 above), on visiting the crash site 62 years later, recalled 'I remember the last time I saw him … he walked down the street, as he turned the corner my mother said "I'm never going to see my son again"'.

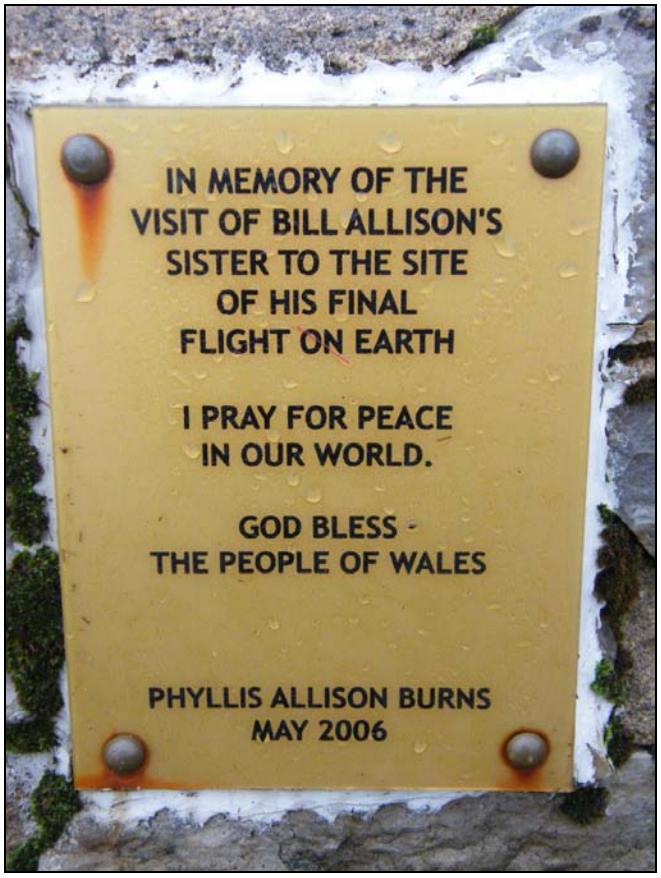

Fig. 5: The plaque added to the memorial for Wellington MF509 following the visit of one of the relatives (Photo CPAT 3732-0032)

6.8 The related topic of those memorials which have been erected to the victims is something which has received little detailed attention. These are clearly items that give the sites in question additional value as they demonstrate a continuing interest in the site and often display poppies and other commemorative material that has been left there by members of the public. Occasionally, as in the case of Wellington MF509, family members may also have left commemorative objects. The difficulty with formulating a response comes when deciding who has ownership of these memorials and who is responsible for their upkeep.

7 DISCUSSION OF PROTECTION OPTIONS

7.1 The aims of the project are briefly described in paragraph 2.1, and this mentions the potential for scheduling some sites in order to ensure their protection. The need for that protection is clear, given the loss of material from such sites through unauthorised recovery and erosion. Scheduling has a significant part to play here, though there are other methods which may also be appropriate in individual cases, and which introduce other factors that need to be considered.

7.2 There are for instance philosophical considerations. The question of intent is significant: unlike most other forms of site designated as Scheduled Ancient Monuments, aircraft crash sites are formed by accident – there is no conscious relationship between the 'monument' and the surrounding landscape as there would be in the creation of a burial mound or a castle, for example. The landscape is something which is important, however, in that the crash may well have occurred as a direct result of the nature of the topography and its interaction with the local climate. The lack of a conscious relationship does not, of course, preclude designation - the same is true of shipwreck sites - and the Ancient Monuments and Archaeological Areas Act 1979 specifically includes aircraft and their remains in the definition of the term 'monument'.

7.3 As noted above these sites are already protected under the Protection of Military Remains Act 1986. Any intervention requires a licence approved by the MoD. In practice the Welsh Archaeological Trusts are consulted by the MoD when applications for such licences are being processed, but this does not obviate the case for designation, in that once a site has been designated, due weight would then be given to a purely archaeological point of view when considering the merits of any application for work at the site in question. The historical and archaeological significance of the site could then be given full consideration, something which is not referenced in the 1986 Act. Designation as an SAM would add a further tier of protection and an applicant wanting to recover an aircraft would have to gain both an MoD licence and Scheduled Monument Consent and would not be able to proceed lawfully unless both were obtained.

7.4 Thirdly, on a purely practical level, there is the question of the scale and usefulness of a designation boundary on the ground. Designation may work in a straightforward way when considering the ground impressions that show the point of impact of the aircraft, but is rather more difficult when considering wreckage which is more (or less) portable and is not necessarily *in situ*, having generally been moved out of its original position soon after the crash or in the years following. In some cases the potential debris field may occupy a considerable area.

7.5 As noted above, some considered and well-resourced recovery projects have been undertaken, and designation, where appropriate, needs to be thoughtfully implemented. It may be worthwhile highlighting the potential for future options at the point of scheduling, to ensure that any conservation work which may become necessary at some point in the future has already been flagged up as a reasonable response. It is also appropriate to make sure that the standards used in recovery work are sufficiently high, so that all possible information is recovered, along with any artefacts. As such, the current approach whereby any proposed recovery notified to the Ministry of Defence is subject to external scrutiny via the development control archaeologists of the Welsh Archaeological Trusts, is one that must be maintained and enhanced.

7.6 Approaches to protection, through existing heritage management frameworks, might perhaps be considered; such consideration should include who is given responsibility for administrating and delivering it. One mechanism which might be employed is the Historic Environment Feature (HEF) definition used in the Glastir scheme to identify archaeological

sites and monuments, thus enabling them to be managed from the point of view of agricultural activity. Clearly, this would need adaptation for use on remote sites in mountainous terrain.

7.7 Another option - regardless of the designated status of a particular site - would be the erection of markers at selected sites. These would set out the history of the crash and also include a statement on its legal status. All correspondence and publicity regarding these sites should include a statement on the legal position. The need to preserve and maintain any existing memorials may be something which needs to be considered in the longer term.

7.8 It may be worthwhile recording a small number of the more important sites in detail, particularly those where designation is considered to be an appropriate response. This could be accomplished by creating a detailed survey showing all of the structural and earthwork remains, and combining this with photography to provide a baseline for monitoring. This may also assist in determining the effectiveness of, or need for, additional designations in the future.

Fig. 6: Recording the high-energy crash site and debris of Avro Lancaster W4929 in the Black Mountain (Photo CPAT 3732-0026)

7.9 This is a diminishing resource worthy of protection for future generations, but some of the characteristics of the sites can make this a difficult process. It is all too easy for an uninformed person to pick up a piece of wreckage and either make off with it completely or move it elsewhere, thereby removing it from its true context. Ground impressions can also be, and indeed often have been, levelled out and thereby hidden from scrutiny, altering our perception of the surviving resource. In light of these comments, public interest and co-operation are clearly important aspects which need to be fostered, while making sure that the legal aspects regarding aircraft crash sites, whether designated or not, are properly

considered and understood by a wider audience. The dissemination of information to the public is probably one of the better ways to ensure that the importance of the sites is recognised and may be an effective means for preservation in the long term. In terms of designation, it is apparent that this is a useful tool for a number of the more significant sites, but new thinking may be required to preserve permanently those that are left undesignated. Approaches which are too prescriptive may be unhelpful in not allowing creative conservation of aircraft remains, where this is appropriate, potentially alienating responsible enthusiasts.

8 ACKNOWLEDGEMENTS

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APPENDIX 1

LIST OF CRASH SITES IN THE STUDY AREA (Ordered by aircraft type, mark and serial number)

Aircraft	*PRN*	*NGR*
AIRSPEED HORSA I DP837	130331	SJ0854
AIRSPEED HORSA II TL195	85274	SJ0775
AIRSPEED HORSA IX TK946	85275	SJ0374
AIRSPEED HORSA IX TK979	85276	SJ3168
AIRSPEED OXFORD I L4618	130393	SJ3169
AIRSPEED OXFORD I N4568	130327	SJ0632
AIRSPEED OXFORD I R6019	130254	SJ1774
AIRSPEED OXFORD I PH242	130207	SO2535
AIRSPEED OXFORD II N4731	130274	SJ3167
AIRSPEED OXFORD II P6800	130335	SJ2348
AIRSPEED OXFORD II X7064	130336	SJ1746
AIRSPEED OXFORD II BM824	130332	SJ0631
AIRSPEED OXFORD II ED128	130334	SJ1081
AIRSPEED OXFORD V LW743	130333	SO1740
ARMSTRONG WHITWORTH SISKIN III J7149	130252	SJ2965
ARMSTRONG WHITWORTH SISKIN IIIDC J9207	130305	SJ3268
ARMSTRONG WHITWORTH WHITLEY IV K9038	130337	SJ1082
ARMSTRONG WHITWORTH WHITLEY V P5057	130338	SN9594
ARMSTRONG WHITWORTH WHITLEY V BD204	130240	SJ0082
ARMSTRONG WHITWORTH WHITLEY V EB410	130339	SJ2133
ARMSTRONG WHITWORTH WHITLEY V LA766	130296	SJ2653
AVRO ANSON ?	130190	SH9587
AVRO ANSON I K6228	130292	SJ2619
AVRO ANSON I L9149	130194	SN8221
AVRO ANSON I N4966	130261	SJ2544
AVRO ANSON I N5019	130216	SN9461
AVRO ANSON I N5050	130262	SJ1085
AVRO ANSON I N9617	130326	SJ0631
AVRO ANSON I N9745	130208	SO2633
AVRO ANSON I N9776	130271	SJ0570
AVRO ANSON I N9879	130209	SO2634
AVRO ANSON I EG186	130287	SJ1780
AVRO LANCASTER I R5736	130253	SH8767
AVRO LANCASTER I W4326	130210	SH9509
AVRO LANCASTER I W4929	130196	SN8223
AVRO LANCASTER III JB471	130217	SN9049
AVRO VULCAN B2 XH536	130198	SN9121
BLACKBURN BOTHA I L6237	130257	SJ2276
BOEING B-17E FORTRESS 41-9098	130324	SJ0733
BOEING B-17F FORTRESS 42-25791	130308	SJ0777
BOEING B-17F FORTRESS 42-5903	130205	SO2425
BOEING B-17F FORTRESS 42-5906	130224	SO0163
BOEING WASHINGTON B1 WF502 (ex 44-61894)	130279	SJ1754
BOULTON PAUL DEFIANT I N1575	130341	SO1091
BOULTON PAUL DEFIANT I N1770	130258	SJ0082
BOULTON PAUL DEFIANT I T3999	130281	SJ3752
BOULTON PAUL DEFIANT I T4008	130282	SN9180
BRISTOL BEAUFIGHTER	110450	SJ3653
BRISTOL BEAUFIGHTER ?	130191	SN8318

BRISTOL BEAUFIGHTER IIF R2271	130251	SJ2275
BRISTOL BEAUFIGHTER VI X8261	130304	SH9376
BRISTOL BEAUFIGHTER X NE203	130342	SJ2348
BRISTOL BEAUFORT I AW351	130228	SH8680
BRISTOL BLENHEIM IV L4873	130321	SJ1032
BRISTOL F2b	130385	SJ1971
BRISTOL F2b J6706	130386	SJ0679
CONSOLIDATED B-24H LIBERATOR 42-95036	34358	SJ0528
CONSOLIDATED PB4-Y1 PRIVATEER 38753	130197	SN8423
DE HAVILLAND CHIPMUNK T10 WB747	130278	SJ2375
DE HAVILLAND MOSQUITO II DZ684	130233	SJ3952
DE HAVILLAND MOSQUITO II DZ747	130303	SJ4140
DE HAVILLAND MOSQUITO FB VI HJ787	130343	SO2491
DE HAVILLAND MOSQUITO VI HX863	130290	SH9984
DE HAVILLAND QUEEN BEE K8669	130344	SN8763
DE HAVILLAND TIGER MOTH II N6937	130263	SJ2760
DE HAVILLAND TIGER MOTH II N9390	130270	SJ3469
DE HAVILLAND TIGER MOTH II T6160	130283	SO2097
DE HAVILLAND VAMPIRE FB5 VV530	130346	SJ1259
DE HAVILLAND VAMPIRE FB5 VV566	130219	SN8541
DE HAVILLAND VAMPIRE FB5 VZ106	130195	SN8220
DE HAVILLAND VAMPIRE FB5 VZ871	130218	SN8541
DE HAVILLAND VAMPIRE FB5 WA305	130275	SJ2446
DE HAVILLAND VAMPIRE FB5 WA394	130276	SJ1184
DE HAVILLAND VAMPIRE FB5 WA417	130277	SJ0173
DE HAVILLAND VAMPIRE T55 5C-YA	130325	SJ1132
DE HAVILLAND VAMPIRE T55 T-334	130345	SJ2360
DORNIER DO17Z (2682) 7T+LL	130412	SH9860
DOUGLAS C-47 SKYTRAIN 41-7803	130312	SJ1646
FAIRCHILD A10 THUNDERBOLT 80-0231	130206	SO2431
FAIREY BATTLE I L5755	130239	SJ0930
FAIREY FULMAR II N4074	130347	SJ2550
FOLLAND GNAT T1 XR952	130215	SH9250
GENERAL AIRCRAFT HAMILCAR I HH922	130328	SO1570
GENERAL AIRCRAFT HOTSPUR II HH253	130348	SO1154
GLOSTER GLADIATOR K7927	130349	SJ2616
GLOSTER GLADIATOR K8045	130350	SJ2616
GRUMMAN AVENGER I FN821	113538	SJ0125
HANDLEY PAGE HALIFAX II W1238	130220	SO0650
HANDLEY PAGE HALIFAX II BB221	130235	SJ3653
HANDLEY PAGE HALIFAX II DT626	130212	SH8650
HANDLEY PAGE HALIFAX II/V DG2**	130351	SJ2862
HANDLEY PAGE HALIFAX III LW366	130352	SN8941
HANDLEY PAGE HALIFAX V DG358	130417	SO0694
HANDLEY PAGE HALIFAX V LL541	130221	SN9267
HAWKER AUDAX K2011	130398	SJ4937
HAWKER HART (T) K4931	130317	SJ2551
HAWKER HART (T) K4932	130318	SJ0719
HAWKER HENLEY L3440	130238	SH9003
HAWKER HUNTER F4 XE680	130353	SN9180
HAWKER HUNTER F6 XJ637	130354	SN9370
HAWKER HURRICANE I L1791	130329	SJ3954
HAWKER HURRICANE I L1870	130330	SJ3853
HAWKER HURRICANE I L1989	86022	SJ3650
HAWKER HURRICANE I P2566	130403	SJ1774

HAWKER HURRICANE I P3768	130244	SJ3370
HAWKER HURRICANE I V6885	130284	SJ0783
HAWKER HURRICANE I V7001	130355	SJ2446
HAWKER SIDDELEY BUCCANEER T5 XW525	130356	SN8565
HAWKER SIDDELEY HARRIER GR3 XZ973	130320	SJ0531
HEINKEL HE111 P-4 (2908) G1+HP	130415	SJ3550
JUNKERS Ju-88A-6 (3459) 5K+DW	130315	SO1354
LOCKHEED HUDSON	110451	SJ3553
LOCKHEED HUDSON III N7253	130313	SJ1556
LOCKHEED HUDSON III V9046	130314	SO1477
LOCKHEED HUDSON III V9127	130357	SN8187
LOCKHEED P-38F LIGHTNING 42-12579	130306	SJ0329
MILES MARTINET I HN888	6869	SO1764
MILES MARTINET I HP227	130288	SJ2447
MILES MARTINET I HP242	130289	SJ1881
MILES MARTINET I JN294	130234	SJ0584
MILES MARTINET TT1 NR482	130358	SJ0443
MILES MASTER I N7415	130391	SJ3559
MILES MASTER I N7432	130394	SJ3169
MILES MASTER I N7441	130273	SJ3370
MILES MASTER I N7442	130272	SJ2749
MILES MASTER I N7445	130265	SJ3542
MILES MASTER I N7477	130392	SJ4043
MILES MASTER I N7479	130266	SO1646
MILES MASTER I N7807	130359	SJ2133
MILES MASTER I N7872	130267	SJ3754
MILES MASTER I N7900	130396	SJ3853
MILES MASTER I N7937	130268	SJ0381
MILES MASTER I N7944	130269	SJ1783
MILES MASTER I N7967	130404	SJ2468
MILES MASTER I N7998	130395	SJ3853
MILES MASTER I T8376	130397	SJ2067
MILES MASTER I T8635	130410	SJ2364
MILES MASTER II AZ697	130229	SJ1166
MILES MASTER II AZ698	130230	SJ4050
MILES MASTER II AZ729	130231	SJ3450
MILES MASTER III W8640	130409	SJ3551
MILES MASTER III W8773	130286	SN8555
MILES MASTER III W9093	130362	SJ2446
MILES MASTER III AZ855	130232	SJ4154
MILES MASTER III DK799	130363	SO1979
MILES MASTER III DL339	130360	SO0453
MILES MASTER III DL570	130361	SN8555
NORTH AMERICAN HARVARD I N7077	130264	SN9180
NORTH AMERICAN HARVARD IIB FX249	130364	SJ2858
NORTH AMERICAN P-51 MUSTANG I AG400	130365	SJ1662
NORTH AMERICAN P-51 MUSTANG I AG502	130225	SJ1669
NORTH AMERICAN P-51 MUSTANG I AG535	130366	SJ1669
NORTH AMERICAN P-51 MUSTANG I AG585	130226	SJ3565
NORTH AMERICAN P-51 MUSTANG I AG597	130227	SJ3565
NORTH AMERICAN P-51 MUSTANG I AP216	130402	SJ1285
NORTH AMERICAN P-51 MUSTANG III FX898	130367	SJ2445
PANAVIA TORNADO GR.1 43+24/G74	130368	SN8565
PERCIVAL PROCTOR III HM305	130203	SO1525
PERCIVAL PROCTOR III HM360	130204	SO1934

PERCIVAL PROCTOR IV NP216	130199	SO0021
PERCIVAL PROCTOR IV NP306	130223	SO2334
PERCIVAL PROVOST T1 WV547	130280	SH9974
REPUBLIC P-47C THUNDERBOLT 41-660	130307	SJ3746
REPUBLIC P-47C THUNDERBOLT 41-6195	130309	SH9159
REPUBLIC P-47C THUNDERBOLT 41-6203	130310	SJ2241
REPUBLIC P-47D THUNDERBOLT 42-7897	130211	SJ1540
REPUBLIC P-47D THUNDERBOLT 42-7960	130311	SJ0506
REPUBLIC P-47D THUNDERBOLT 42-75090	130416	SJ0509
SEPECAT JAGUAR GR.1 XZ386	130369	SO0846
SEPECAT JAGUAR T2A XX843	130370	SN9795
SUPERMARINE SPITFIRE I K9821	130387	SJ3559
SUPERMARINE SPITFIRE I K9840	130371	SJ0260
SUPERMARINE SPITFIRE I K9876	130319	SJ3755
SUPERMARINE SPITFIRE I K9892	130372	SJ2544
SUPERMARINE SPITFIRE I K9895	130388	SJ3559
SUPERMARINE SPITFIRE I K9981	130293	SJ2573
SUPERMARINE SPITFIRE I K9994	130294	SJ0583
SUPERMARINE SPITFIRE I K9995	130295	SJ1783
SUPERMARINE SPITFIRE I L1043	130237	SJ3565
SUPERMARINE SPITFIRE I L1082	130390	SJ2275
SUPERMARINE SPITFIRE I N3066	130405	SH9875
SUPERMARINE SPITFIRE I N3225	130373	SJ0743
SUPERMARINE SPITFIRE I N3235	130400	SJ1777
SUPERMARINE SPITFIRE I N3276	130260	SJ1783
SUPERMARINE SPITFIRE I P7990	130411	SJ0984
SUPERMARINE SPITFIRE I P9327	130249	SH9476
SUPERMARINE SPITFIRE I P9559	130250	SH9875
SUPERMARINE SPITFIRE I R6829	130407	SJ3268
SUPERMARINE SPITFIRE I R6989	130255	SJ1876
SUPERMARINE SPITFIRE I R7062	130256	SJ2168
SUPERMARINE SPITFIRE I R7081	130389	SJ3456
SUPERMARINE SPITFIRE I R7117	130408	SJ3267
SUPERMARINE SPITFIRE I X4167	130297	SJ2547
SUPERMARINE SPITFIRE I X4173	130399	SJ1285
SUPERMARINE SPITFIRE I X4425	130299	SH9078
SUPERMARINE SPITFIRE I X4588	26368	SO0118
SUPERMARINE SPITFIRE I X4605	130300	SJ2472
SUPERMARINE SPITFIRE I X4642	130301	SJ1447
SUPERMARINE SPITFIRE I X4713	130302	SJ2446
SUPERMARINE SPITFIRE I X4899	130406	SJ1969
SUPERMARINE SPITFIRE I X4913	130200	SO0121
SUPERMARINE SPITFIRE IIA P7295	130323	SJ0733
SUPERMARINE SPITFIRE IIA P7692	130245	SJ0584
SUPERMARINE SPITFIRE IIA P8181	130246	SJ3365
SUPERMARINE SPITFIRE IIA/IIB P7979	130374	SJ1800
SUPERMARINE SPITFIRE IIB P8546	130247	SJ2760
SUPERMARINE SPITFIRE IIB P8665	130248	SJ0762
SUPERMARINE SPITFIRE V P7692	130401	SJ1285
SUPERMARINE SPITFIRE VB AA933	130242	SJ3041
SUPERMARINE SPITFIRE VB BL830	130375	SJ1952
SUPERMARINE SPITFIRE VB BM113	130241	SJ1783
SUPERMARINE SPITFIRE VB BM824	130243	SJ0734
SUPERMARINE SPITFIRE HFIX/LFIX/LFXVI TE210	130376	SJ2448
SUPERMARINE SPITFIRE F22 PK385	130192	SJ1786

TAYLORCRAFT C/2 (AUSTER) ES956 (ex G-AFNW?)	130377	SN9549
UNKNOWN GLIDER	87235	SJ1284
VICKERS WELLINGTON I L4230	130378	SO1863
VICKERS WELLINGTON IC N2813	130259	SN9368
VICKERS WELLINGTON IC R1465	130201	SO0620
VICKERS WELLINGTON IC R1491	130380	SJ2229
VICKERS WELLINGTON IC R1534	130379	SO0266
VICKERS WELLINGTON IC R1597	130222	SN9547
VICKERS WELLINGTON IC HE103	130298	SJ0115
VICKERS WELLINGTON IC HF911	130418	SH9768
VICKERS WELLINGTON III X3608	130381	SJ1226
VICKERS WELLINGTON III X3785	130213	SH9723
VICKERS WELLINGTON III BJ601	130236	SO0082
VICKERS WELLINGTON III BJ697	130316S	SN8318
VICKERS WELLINGTON III BK258	130382	SN9584
VICKERS WELLINGTON VIII T2520	130202	SO0813
VICKERS WELLINGTON X LR125	130214	SJ0437
VICKERS WELLINGTON X MF509	130193	SN8116
VICKERS WELLINGTON X (Later T10) PG312	130340	SN9184
VICKERS WELLINGTON XIII HZ699	130291	SJ1839
VICKERS WELLINGTON XIV HF136	130383	SJ3566
WESTLAND LYSANDER III T1655	130322	SJ0734
WESTLAND LYSANDER IIIA V9515	130285	SO0459
WESTLAND LYSANDER TTII R2035	130384	SO1847

APPENDIX 2

SITES VISITED DURING THE PROJECT

AVRO ANSON I L9149 PRN 130194 SN8221

On 17/1/1939, Avro Anson L9149 was being used for navigation and observers training flying by the Southampton Training Aviation Company based at Hamble. The plan had been to fly to Coventry via Cardiff, but the aircraft ran into thick cloud and rain and lost radio contact. Consequently, lost and disorientated, it flew into the ground to the south of Fan Brycheiniog at 770m. There is wreckage at this location and 190m to the north.

The Anson was being used for a navigation and observers instruction course and was assigned to Hamble. The aircraft encountered thick cloud and rain and lost radio contact. Consequently, lost and disorientated, it flew into the ground south of Fan Brycheiniog at 770m on 17/1/1939. Two crewmembers were killed but 2 survived. There is wreckage at this location, but also about 200 yards north, towards the summit. (Brecon Beacons National Park, 1995, Identification Guide Aircraft Crashes in the National Park, ID 2)

A memorial has been situated at GR8221, Fan Brychieniog and a small stone has been placed at the entrance to Callwen Church, Glyntawe. A photograph of the wreckage is included on pg17. The crew comprised pilot Flt Off R N Coombes; aircraftsman M Mabbot and two civilians, John MacDonald and L A Prescott. The pilot and aircraftsmen were badly injured and trapped inside the plane. Prescott went for help, heading south, and came across Tir y Cwm farm, where he raised the alarm. The rescue party searched all night, but did not locate the plane until 6am the next day, by which time Mabbot had died from his injuries and exposure. MacDonald was able to walk down after receiving first aid. It took five hours to carry Coombes out in a parachute. He was transported to Swansea hospital, but died soon after. The plaque in Callwen Churchyard was erected by the Southampton Training Aviation Company to commemorate the local people who undertook the search in appalling weather conditions. (Doylerush 2008, 20 and 111)

This Avro Anson was one of 21 delivered to the RAF in September 1938. It was assigned to 9 ERFTS and crashed into a mountain at Ystradgynlais, 14 miles northeast of Swansea on 17/1/1939. (Halley 1985a, 60)

Delivered to the RAF by Avro at Chadderton to contract 690658/37. Flew in bad weather into Bannau Bryncheiniog, Ystragynlais, 14 miles northeast of Swansea. (Halley 1979, 104)

The Anson had left the Air Services Training airfield at Hamble on a navigation and observers instruction course. The plane was to fly to Coventry via Cardiff. Air Service Training Ltd erected a mountain rescue kiosk at the Gwyn Arms, Glyntawe above the door of which was inscribed 'In grateful recognition of available services rendered by local inhabitants to the pilot and crew of a training aircraft which crashed 17th January 1939.' This structure has since been demolished. (Durham and Jones 1982, 9-10)

Site visit 22/11/2013

Very little evidence could be found of the crash site. A few stones have been piled together to form a cairn 1m in diameter and 0.4m high at the approximate location of the crash, and there are two melted lumps of aluminium, a few bolts and small airframe pieces in an adjoining hollow. This measured about 5m by 3m and is assumed to represent the point of impact of the aircraft. No further evidence was revealed by an area search around this locality.

The commemorative plaque which lies on the north side of Callwen church was examined. It reads: “Erected by the Southampton Training Aviation Company in gratitude to the men of the

village, who risked their lives and time in searching for one of their aircraft lost on the mountain. 17th January 1939."

AVRO ANSON I N5019 PRN 130216 SN9461

The aircraft was assigned to 15 Operational Training Unit. The pilot got lost in bad weather and flew into Y Gamrhiw on 10 July 1940. Four crewmen were killed, 1 survived. There is a photograph of wreckage on p107. (Doylerush 2008, 106-7)

The Anson was one of 500 delivered to the RAF by Avro, Chadderton, to contract 766119/38 between October 1938 and September 1939. Its service history includes assignments to 75/148/15 OTU. The aircraft flew into a mountain in low cloud whilst lost on a night navigation exercise at Llanwrthwl, near Rhayader on 9 July 1940. (Halley 1993, 159 and Halley 1977, 28)

A fragment of aircraft wreckage (0.3m l, 0.6m w) made of aluminium and with three rivet holes was discovered at SN9462 and is recorded in the HER under PRN 13585. It has been suggested that it came from this aircraft.

Site Visit 7/1/2014

A hollow measuring 10m by 5m and about 0.7m deep was found, containing various skin fragments, the largest measuring 0.8m by 0.3m, and pieces of melted aluminium. Other material visible includes corroded small steel fittings, a piece of perspex, some small pieces of wood, etc. There is a trail of fragments running downslope (to the north-north-east) for about 40m approaching a flooded hollow, and while it was not possible to see any material beneath the water due to high winds, this may have been used to dump material that was not recovered.

It seems clear that the aircraft approached the site from the north-north-west, hitting the ground about 35m (vertically) below the summit of Y Gamriw. The additional location mentioned under PRN 13585 was searched but no evidence of the aluminium fragment was found.

AVRO LANCASTER I W4929 PRN 130196 SN8223

This Lancaster was assigned to 1661 Heavy Conversion Unit and was undertaking a night cross-country exercise from Winthorpe, Nottinghamshire, when it crashed on 5 September 1943 north of Fan Foel at around 620m. The RAF Inquiry stated that there was insufficient evidence available to establish the exact cause but that the aircraft had been underpowered when it hit the ground. Visible wreckage includes bent crankshafts, split propeller hubs and engine blocks, with much general wreckage spread over a large area. All 8 crewmen were killed. (Brecon Beacons National Park, 1995, Identification Guide Aircraft Crashes in the National Park, ID 4)

The aircraft struck Rhyd-wen-Fach, north of Fan Foel at night. Eight crewmen were killed. The authors location suggests the site lies at 490m OD. On 5 September 1993, family members were flown to the crash site from RAF Brawdy and a memorial stone was erected. The crew comprised Sgt N T Duxbury, pilot; Pilot Officer V R Folkerson, navigator; Sgt R Wilson, bomb aimer; Sgt F W Pratt, wireless operator; Sgt L Holding, flight engineer; Sgt J G Curran, mid-upper gunner; Sgt J G Buckey, air gunner and Pilot Officer R F E Johnson, an extra bomb aimer (8 in total). (Doylerush 2008, 28-9, 106 and 111)

Eyewitnesses at Llanddeusant suggested that the aircraft was flying east-south-east as it crossed the village. An image of engine remains is reproduced on p24 (Durham and Jones 1982, 24 and 33-35).

A scar containing distinct impressions made by the fuselage and engines is evident at the site, and indicates the aircraft struck the ground in a steep dive. Parts from the engines and small pieces of

aluminium skinning remain in and around the scar. There is also a memorial plaque at the site mounted on a concrete post. (Wotherspoon, Clark and Sheldon 2009, 47)

Accurate crash location from: http://peakwreckhunters.blogspot.co.uk/2009/04/avro-lancaster-w4929-coded-aj-j_07.html

Apparently there is a 20m by 4m scar left in the hillside by the impact.
http://peakwreckhunters.blogspot.co.uk/2009/04/avro-lancaster-w4929-coded-aj-j.html

Mark. I with Merlin 20 engines (Robertson 1971, p187).

Parts of the aircraft were once in the Abergavenny ATC museum, but this has closed and their current location is unknown. (Mark Walters, pers comm)

Site visit 22/11/2013
The crash site is distinguished by an easily recognisable and partly water-filled hollow which measures about 30m east/west by 7m north/south and clearly shows the frontal outline of the aircraft, except for the port wing tip. The present appearance of the impact hollow is no doubt partly a result of some past attempt at salvage as there are two narrow gullies which have been cut downslope from it in an attempt to drain it. The hollow contains a range of airframe and engine fragments and the force of the impact is highlighted by the crankshafts of two engines, one of which is bent through about 90 degrees. The impact hollow also clearly demonstrates that the impact was near vertical. The area around the impact site was examined by transect walking and produced a scatter of metal fragments from the airframe. These were plotted and show that debris was scattered in a fan shape pointing north-north-east from its origin at the impact point. Altogether the evidence suggests that the aircraft was travelling to the south and impacted the ground with the starboard wing somewhat lower than the port wing after a very steep dive.

In addition to the remains of the aircraft, there is a memorial cairn adjoining containing a concrete plinth on which is mounted an engraved plate, reading: "Er cof am griw Lancaster W4929 HCU; A fu farw yma 5ed Medi 1943; In memory of the Lancaster crew W4929 HCU; who were killed here 5th Sept 1943; PO N T Duxbury, Sgt L Holding, PO T F E Johnson, Sgt R Wilson, Sgt J G Curan, F Sgt F M Buckby (RAAF), Sgt F W Pratt, PO V R Folkerson (RCAF); A bu tawelwch - wedi'r ddrycin faith; This memorial was engraved and presented by Airwork Ltd P+EE Pendine, April 1992". A second small cairn lies nearby, measuring 1m in diameter and 0.4m high.

AVRO VULCAN B2 XH536 PRN 130198 SN9121
The Vulcan had taken off RAF Coningsby, Lincolnshire for a low flying exercise but subsequently crashed on Fan Bwlch Chwyth at about 590m on 11/2/1966. No official reason for the crash was given. Many small pieces remain, but the main parts of the fuselage were recovered by the authorities. All 5 crewmembers were killed. (Brecon Beacons National Park, 1995, Identification Guide Aircraft Crashes in the National Park, ID 7)

The Vulcan was assigned to 12 Squadron. The aircraft took off at 1326 hours from RAF Cottesmore in Rutland. After an hour's flight it descended from 40,000ft to start using its TFR (Terrain following Radar). Another Vulcan preceded them on the route, reducing its height to 5,000ft and maintaining that level. XH536 continued with its low level flight plan and at 1510hours struck the summit of 1980ft Fan Bwlch Chwyth. Wreckage was spread some half a mile along the ridge. The crew were pilot Flt Lt MacDonald; F/O Sutcliffe; Flt Lt R Core; Flt Lt B Waring and Flt Lt E Fuller. All five were killed instantly. (Doylerush, E, 2008, Rocks in the Cloud: High-Ground Aircraft Crashes in South Wales, pg19-20, 107)

Many small pieces of airframe remain at the impact site, within a patch of stony ground. Other fragments of wreckage are scattered over the summit of the hill. This aircraft was not fitted with TFR. (Wotherspoon, Clark and Sheldon 2009, 50)

Site visit 4/3/2014
The aircraft seems to have impacted on the south side of the summit of Fan Bwlch Chwyth and was probably flying in a northerly direction although this cannot be verified. The impact area is only signified by some untypical erosion which may have resulted from the vegetation being killed off by the results of the impact/fuel spillage. Very little visible wreckage remains at the site and only two small pieces, an aluminium rib and a skin fragment, were encountered. Some debris could still be buried beneath the tussocky grass which covers the south side of the summit.

BOEING B-17E FORTRESS 41-9098 PRN 130324 SJ0733
Air crash site of B17 Flying Fortress 41-9098 on 11 August 1942. Source: Rob Evans, Oswestry (From Coflein 7/8/2013).

A large patch of bare earth marks the site on a steep grassy slope. However, little wreckage remains from the aircraft, the first USAAF bomber to crash on high ground in Britain. (Wotherspoon, Clark and Sheldon 2009, 52)

Some parts have been recovered from the site and are in the WARG museum at Sleap.

Site visit 14/1/2014
The disturbed ground where the aircraft crashed is all that signifies the site. Some very small fragments remain but most material has apparently been recovered. The area of disturbance measures about 15m in diameter and lies on a very steep south-east facing slope. The location suggests the aircraft was flying in a north-westerly direction at the time of impact.

BOEING B-17F FORTRESS 42-5903 PRN 130205 SO2425
The Flying Fortress (named ASCEND CHARLIE) was assigned to 390 Bomber Group of the 8th Army Air Force based at Framlingham. The Fortress had taken part in a bombing mission in northwest France and sustained damage in number 1 engine. Bad weather separated it from its formation and it struck the ridge below the Hermitage at around 500m at 21:20hrs. All 10 crewmembers were killed. Numerous small pieces remain. A small memorial was placed at the site, but may have been removed. (Brecon Beacons National Park, 1995, Identification Guide Aircraft Crashes in the National Park, ID 20)

A memorial service was held at Llanbedr church on the 50th anniversary and a plaque with the names of the crew has been placed to the left of the entrance door. There is a cairn of rough stones surmounted by a piece of airframe at the site - photo shown on pg31. (Doylerush, E, 2008, Rocks in the Cloud: High Ground Aircraft Crash of South Wales, pg31, 111)

The documentation supplied relating to this accident primarily consists of a memo requesting information with regard to the death of the ball turret gunner S Sgt Swen A Zetterberg, reported killed in action on 16/9/1943. The correspondence includes replies from the 390th Bombardment Group (H) stating that Zetterberg was on B-17F 42-5903 and was killed when the said aircraft crashed 8 miles north-northwest of Abergavenny. The cause of the crash was given as battle damage and weather. The full crew comprised pilot 1st Lt Herbert I Turner; co-pilot 2nd Lt Frederick M Broers; Navigator 2nd Lt Robert L Schanen; bombardier 2nd Lt Orval Tofte; radio operator S Sgt Phillip Catania; left waist gunner S Sgt Stanley E Mason; tail gunner S Sgt Alfred C Monson; right waist gunner S Sgt John J Peterson; top turret gunner S Sgt Sherman E Rambo; and ball turret gunner Swen A Zetterberg. All were killed. (US Air Accident Record 03720, RCAHMW Digital Collections)

The wreckage was dragged off the hillside and transported away in lorries. The crash site was visited in 1979, when a small scar of bare earth and stone was located on the southern crest of the hill amongst the deep heather. Small pieces of aluminium and cartridge cases were identified. (Durham P and Jones, D, 1982, Warplane Wrecks of South Wales and the Marches, 24 and 33-35).

At the site a metal cross stands on a stone base onto which a memorial plaque is mounted. A large scar where the aircraft burned out contains lumps of melted aluminium and small fragments of airframe. (Wotherspoon, Clark and Sheldon 2009, 54)

Site visit 16/3/2014
The visible impact area is a scar about 10m in diameter, without vegetation, that contains many very small fragments, some of which have been melted. It seems likely that the area is significantly larger, but hidden by heather elsewhere. There is a cairn at the site, about 1m in diameter by 1.3m high, with the largest pieces of wreckage (max 0.7m long) placed on its west side, and there is more melted aluminium there. A metal cross, set in a rectangular plinth of mortared stone, lies nearby and this has an attached brass plaque which reads: "In memory of the crew of Ascend Charlie who lost their lives here on the night of September 16th 1943 while returning battle damaged from action: 1st Lt Herbert Turner, 2nd Lt Frederick Broers, 2nd Lt Robert Schanen, 2nd Lt Orval Tofte, Sgt Philip Catania, Sgt Sherman Rambo, Sgt Stanley Mason, Sgt John Peterson, Sgt Sven Zetterberg, Sgt Alfred Monson."

The location of the impact suggests the aircraft probably approached the site from the south, which implies the crew had already realised they had overshot their intended destination and may have been trying to determine their position.

The plaque in Llanbedr Church lies on the arch to the right of the font and the list of former incumbents. It reads: "In memory of the Crew of Flying Fortress B17-F No 42-5903 of 571 Squadron 390 Bomb Group U.S. 8th Air Force who lost their lives when their aircraft crashed into high ground near Llanbedr on the night of September 16th 1943. 1st Lt Herbert I Turner Jr, 2nd Lt Frederick M Broers, 2nd Lt Robert L Schanen, 2nd Lt Orval Tofte, S Sgt Philip Catania, S Sgt Sherman E Rambo, S Sgt Stanley B Mason, S Sgt John J Peterson, S Sgt Swen A Zetterberg, S Sgt Alfred C Monson. They were returning damaged and with a wounded crew member on board to their base at Framlingham, Suffolk, from a Bombing Mission over Occupied Europe when they encountered severe weather which contributed towards the accident. This memorial was unveiled on the 50th Anniversary of the event."

BRISTOL BEAUFIGHTER X NE203 PRN 130342 SJ2348
A ferry pilot from 2 FPP lost control of the aircraft in bad visibility and it crashed above World's End on 3/11/1943. The pilot was killed. (Doylerush 1993, 91)

The crater made by the aircraft on hitting the rocky ground still contains small pieces of steel and aluminium alloy, but little is recognisable due to the severity of the impact damage. (Wotherspoon, Clark and Sheldon 2009, 55).

Further information from Mike Grant, as follows. The pilot's name was Flt Sgt John Shepherd RAFVR (1314240) of Cardiff, who was on secondment to 2 FPP in Bristol. He was buried in Cathays Cemetery, Cardiff. A party from RAF Wrexham, who had helped in the recovery, attended the funeral. Wreckage was apparently scattered over a wider area but was collected into the impact crater.

Site visit 20/2/2014
The impact site is clearly visible as an elongated crater measuring 11m north-north-east/south-south-west by up to 5m wide and 1.0m deep. This contains various small aluminium and steel

fragments, including some of the aircraft skin with green, red and white paint. Copper, aluminium and steel tubing is also evident together with other parts, the largest being a section of steel frame which might have been part of the undercarriage. A single, small, wooden cross has been left in the hollow. There are patches of bare ground both 5m and 12m to the west of the crater, which were probably recently exposed during heather cutting, and these contain other small parts which demonstrates that there was probably a spread of items in the area around the impact. At the latter point two fragments of human bone were seen, one of which was fused into some melted aluminium.

BRISTOL BLENHEIM IV L4873 PRN 130321 SJ1032
Complex record for aeroplane crash site. Bristol Blenheim flight L4873. Crashed 23 March 1940. Source: Rob Evans, Oswestry. The records (from Coflein 7/8/2013) comprise five separate areas as described below.

Fragments of plane wreck on surface, includes identifiable pieces of wing (aerolons), with traces of paint (mostly green, with some black/grey and tan), spread over 5m, 10m uphill is gouge 5m long in hill with more (small) pieces, likely wing impact point. Positively identified as Blenheim bomber flight no. ###, crash date ###. (A.C.K. Roseveare & N.A.R. Vaughan, AP, 29/03/2007). NPRN 295335.

Second of five patches of wreck fragments from a Bristol Blenheim, partly buried. (A.C.K. Roseveare & N.A.R. Vaughan, AP, 29/03/2007). NPRN 295336.

Third of five patches of wreck fragments from a Bristol Blenheim. (A.C.K. Roseveare & N.A.R. Vaughan, AP, 29/03/2007). NPRN 295337.

Fourth of five patches of wreck fragments (small) from a Bristol Blenheim. (A.C.K. Roseveare & N.A.R. Vaughan, AP, 29/03/2007). NPRN 295338.

Fifth of five patches of wreck fragments from a Bristol Blenheim. Scattered over 20m, and includes pieces up to 2m, some structural and some identifiable as wing. Adjacent to wreckage (North side) is a hollow, approx. 3m x 7m, possibly formed by impact. (A.C.K. Roseveare & N.A.R. Vaughan, AP, 29/03/2007). NPRN 295339.

The aircraft, from 90 Squadron, broke formation on entering cloud and descended into Foel Wen on 23 March 1940. The crew of three were killed. (Doylerush 1993, 91)

Site visit 16/1/2014
Although the crash site has previously been described as a series of discrete areas in which wreck fragments were found, there are really only two main areas in which debris is clustered. The other fragments of aircraft form a scattered trail of debris, starting on the steep east-south-east-facing scarped slope of the ridge, ascending the slope to the north-west and spreading out into a broader area on the more gently-sloping crest of the ridge. The main impact site is a hollow measuring 8m north/south by 4m east/west, where the aircraft struck the south-facing slope just below a rocky scarp. Another, largely grassed-over, linear hollow just upslope from the second area of debris seems to be full of aluminium fragments and is that previously thought to denote a wing impact point, though it could have been dug in the aftermath as a place to bury debris. The metal fragments retain paint in places and seem to be mainly airframe and wing parts, including steel reinforced aluminium skin sections, and there seems to be a significant amount of this material at the two main locations which is buried beneath vegetation; this may have been done deliberately in the aftermath of the crash. The engines were not visible and may have been recovered.

The surviving visible evidence suggests that the aircraft was travelling in a northerly or north-westerly direction at the time of impact, probably the former. Debris from the impact was

scattered mostly to the south-east and may hint at there having been a series of separate impacts, although the fact that most of the material lies in two main groups suggests that there was some gathering together of debris in the aftermath of the crash. It appears that the site is largely undisturbed and contains a significant proportion of the total wreckage.

CONSOLIDATED PB4-Y1 PRIVATEER 38753 PRN 130197 SN8423

The Liberator was assigned to the US Naval base at Dunkeswell, Devon, and was undertaking a routine night familiarisation training flight when it crashed into Moel Feity at around 580m on 24 August 1944. Small pieces of wreckage remain scattered over a large area. The crew of at least six men were killed. (Brecon Beacons National Park, 1995, Identification Guide Aircraft Crashes in the National Park, ID 6)

The aircraft was a variant with a single tail fin instead of twin fins. It was used by the US Navy for anti-submarine and reconnaissance duties. The crew comprised Lt (jg) John Glennon Byrnes AV(N); Lt (jg) John Neill Hobson, AV(N); Ensign Andrew Manelski, AV (S); Hyman P Holt Jnr, AMM1c; Franklin R Snipe, ARM2; and Donald F Keister, AMM3c. (Doylerush 2008, 35-6)

The accident report card originally listed under the duplicate NPRN 516094 gives the location as Moel Feity, about 10 ft below the mountain crest near Trecastle, Breconshire, and the date 24 August 1944. The crew comprised Lt John Glennan Byrnes (JG) (killed); co pilot Lt (jg) John Neill Hobson Jnr (killed); engineer-navigator Andrew Manelski (n); AMM2c USN, Hyman Price Holt, Jnr (killed); ARM2c USNR, Franking Richard Shipe (killed) and AMM3c USNR Donald Franklin. They were assigned to COMBOMRON 110. The investigators stated that the plane struck at night whilst flying in a broken overcast at 1920ft. It bounced and began to break up immediately. Only the right wing section showed any evidence of fire. The gasoline from the broken tanks burnt as it flowed down the hill. The controls indicated the plane had been in normal flight, on automatic pilot. Contact had been made with St Eval where the pilot intended to make a practice landing. On being refused permission, he continued in the circuit enroute to St Davids and to NAF Dunkeswell. The VHF radio conversations show that he was badly lost but did not realise it. A mix-up with his navigator meant that he had taken off without his ‘mission; and ‘diversion’ folders, which contained all the coding of the ‘occults’ and ‘pundits’ (coded serial light house and field identification lights) and a large amount of other useful navigational information. All pilots were again strictly reminded that they were to take all this information with them. A checklist system for all the paperwork was instigated. (US Air Accident Record 440824 PB4Y 38753, RCAHMW Digital Collections)

The aircraft passed over Glyntawe heading north-west before crashing into Moel Feity close to the Glyntawe-Trecastle road at 1300 feet. The wreckage was soon removed and only small items are present. (Durham and Jones 1982, 35).

Wotherspoon, Clark and Sheldon (2009, 62) note that a number of fragments of aluminium skinning are scattered in the tussock grass on the hilltop, while slightly further south in a peat-filled hollow there are some spars and other small parts.

Parts of the aircraft were once in the Abergavenny ATC museum, but this has closed and their current location is unknown. (Mark Walters, pers comm)

Note that this aircraft was originally recorded as a Liberator, but this was the US Navy version, designated the PRIVATEER. (RH 31/7/2013)

Visited 22/11/2013

There is very little trace of the crash site, bar a small memorial cairn. This has an upright stone painted white in its NW part, is about 1m in diameter, and contains a single fragment of bent aluminium tube. The water-filled hollow nearby is probably the peat-filled hollow mentioned

previously, but there is no visible evidence of wreckage there. A second small cairn, 1m in diameter, contains a single tiny fragment of metal. Overall, the site appears to have been picked clean of metalwork. Much would no doubt have been recovered in the period immediately following the crash, as the site is reasonably accessible from a public road.

The physical traces of the impact seem to show as a series of broadly parallel N/S aligned grooves on the hilltop, where different parts of the aircraft struck the ground. This is supported by the denuded nature of the vegetation, probably a result of ground contamination. The area covered by the impact was approximately defined by taking a series of GPS readings, and these were plotted to give a GIS polygon.

DE HAVILLAND VAMPIRE T55 5C-YA PRN 130325 SJ1132
Air crash site of DH Vampire 5C-YA on 18 April 1966. Source: Rob Evans, Oswestry. (From Coflein 7/8/2013)

The Austrian Airforce Vampire crashed on Mynydd Tarw while on a test flight due to equipment failure. The crew of two were killed. (Doylerush 1993, 91)

The aircraft took off from Broughton just before mid-day on 18/4/1966 so that the crew, pilot Alan Brandon and flight test observer Tony Chalk, could carry out a flight test following servicing, this being a two-seat training variant of the aircraft. It was thought by the crash investigators that control was lost due to failure of the generator drive, which would have rendered the electrical system inoperative. The aircraft crashed on Mynydd Tarw and both occupants died, the flight test observer being found within the aircraft and the pilot about 200 yds away, having ejected at the last moment. It was thought that the pilot had survived the impact but died due to exposure caused by deep snow cover and poor conditions. Search teams found the aircraft and crew the next day. (http://www.gotech.at/vampire_dh115.htm#5C-YA)

Site visit 16/1/2014
The crash site could not be conclusively identified in low cloud with poor visibility and the crash location, centred on Mynydd Tarw, has therefore been left unaltered. Three possible impact points were identified, one of which was a hollow measuring about 5m by 3m. All locations are on the north side of the ridge running east from Mynydd Tarw, which fits with the suggestion that the aircraft was on a southerly or south-westerly heading at the time of the crash. No fragments of the aircraft could be found and it is presumed that it was comprehensively cleared in the aftermath of the crash, this is something implied in the Austrian web source.

DE HAVILLAND VAMPIRE FB5 VZ106 PRN 130195 SN8220
The Vampire was undertaking a general training flight from RAF Pembrey when it crashed on the west slope of Fan Hir at 620m on 9 October 1953. The cause is not known, nor whether the pilot survived. There was a great deal of wreckage in 1986, but some has since been removed. (Brecon Beacons National Park, 1995, Identification Guide Aircraft Crashes in the National Park, ID 3)

The Vampire was assigned to 233 OCU. (Doylerush 2008, 107)

This Vampire FB5 was one of 215 delivered to the RAF by the English Electric Company, Preston to contract 6/ACFT/2467 between June 1949 and May 1950. The aircraft flew into hills after descending in cloud, 8 miles southeast of Llandovery, Carmarthen on 9 October 1953. (Halley 1985a, 101)

Wotherspoon, Clark and Sheldon (2009, 66) note that substantial remains of the aircraft are scattered at the site. Sections of the wings, both tail booms, the tail plane, the undercarriage legs and the jet pipe from the engine are gathered together on fairly level ground. In the stream to the

north-east are further pieces of airframe from the wings and fuselage pod along with part of the de Havilland Goblin turbojet engine. A photograph on the following page notes that the large items have been arranged into a rough representation of its former shape.

The wreck was largely complete up to 1986, since when some parts have been 'recovered'. (http://peakwreckhunters.blogspot.co.uk/2009/08/dehavilland-vampire-fb5-vz106_6316.html)

Site visit 8/1/2014
The crash site lies near the head of a narrow stream valley (the Haffes), adjacent to a small tributary. There is a concentration of wreckage at one spot, about 10m in diameter, which was probably the original resting place of the aircraft, with the addition of other fragments which previously lay further upslope. Recognisable were the tailplane and elevator, both booms, main jet exhaust, wing sections, one undercarriage leg and a wooden fragment possibly originally from the cockpit. There were numerous other unrecognisable fragments, but the wheels were missing. The tailplane and elevator are detached from the booms and lie upside-down, though on reflection, the aircraft may have come to rest inverted. In the stream bed to the north-east is a large part of the engine, but this is being damaged by the flow of water and is in poor condition. A single small strip of metal with rivet holes was the only other fragment of wreckage found in the area. Recent graffiti has been written on one of the booms, reading "ANDREW EDWARDS 3/2/2007 1/1/13 FOX HUNTER".

Arwel Michael recalled having at some point in the past seen a large block of lead, presumed to be ballast from the aircraft, some metres down slope of the crash site but noted that it was no longer visible. No evidence for this was seen during the visit, though the weather was poor at the time. He also stated that the pilot had been killed in the crash.

The nature of the crash site and its position suggest that the aircraft was flying in a north-easterly direction along the upper part of the Haffes when it collided with the ground. This may have been due to poor weather conditions or unfavourable winds crossing the Fan Hir ridge.

FAIRCHILD A10 THUNDERBOLT 80-0231 PRN 130206 SO2431
The Fairchild was assigned to number 10 Tactical Fighter Wing of the 8th Army Air Force based at Alconbury. The aircraft was being flown by Capt Robert Burrows who was practising low attacks in misty conditions on 6/2/1990 when the plane flew into the mountainside of Tarren yr Esgob. The pilot was killed. Wreckage is spread over a huge area, but the most visible concentration is right at the top of the ridge. (Brecon Beacons National Park, 1995, Identification Guide Aircraft Crashes in the National Park, ID 21)

Pilot named as Capt Robert Burrowes. (Doylerush, E, 2008, Rocks in the Cloud: High Ground Aircraft Crash of South Wales, pg41)

Site visit 16/3/2014
A large area was examined, both around the given grid reference and in the described position on top of the ridge. No evidence was found, so it is assumed that the wreckage was cleared after 1995.

GRUMMAN AVENGER I FN821 PRN 113538 SJ0125
Site of the crash of Grumman Avenger FN821 on 3/2/1944 (CPAT, 2009). Visited by CPAT and GAT staff, Matt Rimmer (aviation enthusiast) and Tilhill Forestry staff on 10/09/09 ahead of harvesting and replanting of forestry (PRN 113539) (CPAT, 2009).

Visit by Matt Rimmer in November 2011 identified that several pieces of wreckage had been illegally removed from the site and that a channel draining the crater had been deepened (CPAT, 2011).

Entry 2: Temp Sub Lt (A) W S Appleby. Wing/Squadron/flight: 848. Ship/Station: HMS LANDRAIL. A/C Type: Avenger. Ac Number: ?. Date of Death: 3/2/1944. Place of Death: Wales. Notes: Killed, aircraft believed crashed in bad weather. From Wellington, NZ, buried Oswestry cemetery. (Royal Fleet Air Arm Museum Database, RNAS Yeovilton, RCAHMW Digital Collections [faaroh.wales.htm])

The aircraft flew into Trum y Fawnog in cloud while carrying a torpedo. The crew of three were killed. (Doylerush 1993, 91)

On the 3rd February 1944 this aircraft from 848 Squadron crashed into Trum y Fawnog during a snowstorm. The aircraft apparently shed a wing before crashing into the ground at high speed, Doylerush says the aircraft was armed with a torpedo. It was on a flight from Gosport to HMS Robin in the Orkney Islands stopping at Machrihanish on the way. It is also said that there were four people killed on the flight but some sources say only three were killed. The known crew who were killed were: 1st Pilot S/L William Seddon Appleby (24), 2nd Pilot S/L Ernest Hartley Green (22), Observer S/L Joe Lupton (21).
(http://militaryaircraftcrashsites.blogspot.co.uk/2013/07/grumman-avenger-fn821.html)

Some parts from the wreck recorded at Fort Perch Rock air museum on the Wirral by Mark Walters.

Originally named Tarpon I (Robertson 1971, p243).

Site visit 26/2/2014
The crash site is in a mature coniferous forestry plantation on the north-east facing slope of Cerrig Trwsgl, which lies at the head of Nant Trefechan, a stream that debouches into Cwm Pennant about 400m south-east of the church at Pennant Melangell. What survives is a disturbed oval crater, measuring about 13m east/west by 6m wide and perhaps 1m deep, which is partially water-filled despite an attempt to drain it by the cutting of a narrow gully at its north-east corner. The crater has a number of piles of wreckage which have been pulled out on its north and south sides, one of which includes the remains of an undercarriage leg and a tyre. Some recent digging has clearly taken place at the eastern end of the crater, which has revealed further material; a small wooden cross has been placed there. Information from Mark Walters is that the eastern end of the crater was probably the place where the cockpit came to rest.

The visit was carried out with Mark Walters and accompanied by John Ferguson of UPM Tilhill Forestry. It is proposed that the area will be harvested in the near future so discussions took place on the most suitable methods to ensure the site was left undisturbed, including the marking of an exclusion zone into which machines will not be allowed. It is proposed that the area be fenced and left unplanted once the trees are removed.

HAWKER HART (T) K4932 PRN 130318 SJ0719

The Hawker Hart, piloted by AP/O N H Brace, crashed in poor visibility into Gwaelod Mountain, near Cammen Mawr, Llanfihangel yng Nghwynfa on 27/1/1937 while on a navigational exercise to RAF Sealand. The pilot died in the crash and is buried in the upper cemetery at Hawarden. An image of the crashed aircraft is reproduced on p152 (Pratt and Grant 2002, 152-3).

Built by Armstrong Whitworth. Rolls-Royce Kestrel X engine (Robertson 1971, p123)

Site visit 26/2/2014
The crash location has been determined by a field visit and comparison with the image reproduced in Pratt and Grant. It is known that the weather conditions were poor, with low cloud prevalent at the time of the crash. It seems clear that the pilot was following the minor road northwards and crashed into the field bank on the west side of the road, east of Gwaelod farm. No evidence of the impact or any wreckage was observed.

JUNKERS Ju-88A-6 (3459) 5K+DW PRN 130315 SO1354
The Junkers Ju-88 of Kampfgeschwader 3 took off from Brussels Evere on 26/4/1942 and was intercepted by Beaufighter X7933 of 255 Squadron from High Ercall. The Ju-88 was shot down and crashed into Gwaunceste Hill, near Glascwm. Two of its crew escaped and were taken prisoner but the pilot and another crew member died in the crash. The two casualties were originally buried in Glascwm churchyard but have since been removed to a military cemetery. The site was visited in 1979 when only small items were identified, and it was noted that the iron cross of one of the crew members was still in the possession of a local farmer, although his farm was not identified. (Durham P and Jones, D, 1982, Warplane Wrecks of South Wales and the Marches, 29-30)

Wotherspoon, Clark and Sheldon (2009, 76) note that the site is now in a plantation of fir trees. Pieces of aluminium are said to be gathered next to a metal post, beside a public right of way, which has a plaque in memory of the two crew members who were killed.

Aircrew named as OB/LT U Brixias and F/W A Liedic and pieces of wreckage recorded in a fire break in a list produced by South Wales Aircraft Preservation Society (courtesy of Arwel Michael).

Site visit 30/1/2014
The forestry has been recently replanted with conifers and the boundary fence renewed. No trace of aircraft remains or the memorial plaque could be seen at the site.

LOCKHEED HUDSON III V9046 PRN 130314 SO1477
The Lockheed Hudson was abandoned by its crew over Swansea, they having become lost during an air/sea rescue mission looking for the missing crew of a Hudson from 407 Squadron. It flew on for another 60 miles, finally crashing into a hill at Maes Gwyn Farm, Bugeildy. Nothing remains at the site today. (Durham P and Jones, D, 1982, Warplane Wrecks of South Wales and the Marches, 26-7)

The aircraft, from 279 Squadron, crashed on 21/1/1943. Having failed to find a missing Short Sunderland, which had ditched in the sea west of the isle of Ushant off the north-west French coast, the pilot found that conditions were so poor on his return to base that it was impossible to land. In the end, he headed for the South Wales coast and ordered the crew to bale out once it was reached, all did so successfully. The aircraft carried on until it ran out of fuel and crashed into Warren Hill, above Maes Gwyn Farm. (Doylerush 1993, 81-82, 92)

Short range version (Robertson 1971, p185).

Site visit 30/1/2014
The impact site was not conclusively found, although the hill was shrouded in fog at the time of the visit. The most likely possibility was an area of grass about 60m in diameter on an otherwise bracken and heather covered hillside, the location given is for the centre of this area. There was no evidence of any wreckage.

MILES MARTINET I HP227 PRN 130288 SJ2447
The Martinet was one of 400 delivered to the RAF by Phillips & Powis, Woodley between August 1942 and April 1943. It was assigned to 41 OTU. The aircraft flew into high ground in cloud near Rhos-on-Sea on 3/11/1943. (Halley, J, 1989 Royal Air Force Aircraft HA100-HZ999, pg86)

Rather different description from Doylerush (1993, 92), who says that this aircraft lost formation in cloud and crashed on Minera Mountain. The pilot was killed.

The latter seems correct given the following two web references:
http://www.rafcommands.com/forum/showthread.php?8342-Flt-Sgt-Jarosz-W-%28780867%29-Martinet-HP227 and http://minerahistory.proboards.com/thread/1038. The location has been determined from the cross which is alleged to be a memorial to the pilot. (RH 25/11/2013)

Site visit 20/2/2014
No evidence of the impact could be seen at the location given, the nearby hollows are bomb craters. The cross is formed of rubble piled into lines measuring 6.5m north-west/south-east by 5m north-east/south-west and up to 0.4m high. Its shape is suggestive of a memorial cross, so it seems to be a reasonable assumption that it was placed in memory of the pilot.

SEPECAT JAGUAR GR.1 XZ386 PRN 130369 SO0846
The aircraft, from 226 OCU, crashed while low-flying at Pantau Farm, Aberedw on 24/6/1987. The pilot was killed. (Doylerush 1993, 92)

Wotherspoon, Clark and Sheldon (2009, 85) note that the aircraft was comprehensively salvaged but that there is a memorial cairn nearby and a plaque in the wall of the churchyard at Aberedw.

Site visit 30/1/2014
The memorial in the churchyard wall reads: 'In memory of Flight Lieutenant Ian Hill RAF killed in an aircrash at the Pantau, Aberedw 24th June 1987'. The memorial cairn and impact site were not found.

SUPERMARINE SPITFIRE I X4588 PRN 26368 SO0118
The Spitfire was assigned to 53 Operational Training Unit (OTU) at RAF Llandow. It was being flown by Sgt D P Carruthers on 23/5/1942. The aircraft crashed above Gwaun Nant Du at around 680 m. The pilot was killed. Some medium and small sized pieces of wreckage had been built into a memorial cairn, but this has since been scattered. The cause was believed to be bad weather and a small error in navigation. (Brecon Beacons National Park, 1995, Identification Guide Aircraft Crashes in the National Park, ID 13)

An image of the cairn is reproduced on p23 of Durham P and Jones, D, 1982, Warplane Wrecks of South Wales and the Marches.

A photograph of the wreckage above Gwaen Nant Ddu. is reproduced in Doylerush, E, 2008, Rocks in the Cloud: High Ground Aircraft Crashes in South Wales, pg15.

Remains of crashed aircraft - Spitfire, crashed on 23/8/1942 (should be 23/5/1942), followed by removal of major pieces (including guns and engines) - comprising scatter of metal pieces, concentrated in an area of 5.6 x 4.5m, but extending up to 30m from this area; also a stone cairn constructed here (0.67m high, 0.74m thick, 0.5m wide). Located on Gwaun Nant Ddu plateau. Extensive views in all directions. (Skeats, R 1995). From HER 8/8/2013.

A corroded metal fragment, potentially from this crash was recorded by R Skeates under PRN 26370 on the scree slope below Graig Fan Ddu.

Parts of the aircraft were once in the Abergavenny ATC museum, but this has closed and their current location is unknown. (Mark Walters, pers comm)

Information from Mike Grant is that this aircraft was assigned to 609 Squadron RAF and probably flew in the closing phase of the Battle of Britain.

Site visit 9/3/2014
The crash site comprises a triangular impact area, which is a wet hollow measuring about 6m across at the base on the south-east and 14m from there to the apex on the north-west. This confirms that the aircraft was flying in a north-westerly direction when it impacted on the hillside to the south-south-east of Corn Du. The conditions at the time of the crash are not known, but it can be speculated that winds crossing the ridge may have been a factor. A small cairn, 1m in diameter and 0.7m high, lies at the east corner of the impact area and various skin and airframe fragments have been gathered and placed there, it seems likely that other wreckage may still be present in the impact hollow as the local soils are wet with a peaty surface horizon. Small wooden crosses, two small Canadian flags, and a perspex plaque have been placed on the cairn. The plaque reads 'Sgt Donald Perry Carruthers crashed Spitfire X4588, 23rd May 1942 Aged 20. R100418 RCAF.' An attempt was made to identify the wreckage fragment seen by Skeates on the scree slopes to the east of Graig Fan Ddu, but it could not be found.

SUPERMARINE SPITFIRE IIA P7295 PRN 130323 SJ0733
Air crash site of Supermarine Spitfire P7295 on 14 December 1942. Source: Rob Evans, Oswestry. (From Coflein 7/8/2013)

The aircraft, from 61 OTU, crashed into Cadair Bronwen in bad visibility. The pilot was killed. (Doylerush 1993, 93)

The engine from the aircraft was recovered and is now in the WARG museum at Sleap, together with that of Lysander T1655, which crashed while searching the area on the following day.

Site visit 14/1/2014
No remains were found at the given location. Mark Walters (pers comm) stated that the aircraft crashed on the ridge above and the pilot died of exposure before he was found.

SUPERMARINE SPITFIRE HF.IX/LF.IX/LF.XVI TE210 PRN 130376 SJ2448
The aircraft, from 631 Squadron, struck Minera Mountain in cloud on 31/8/1945. The pilot was killed. (Doylerush 1993, 93)

Earl (1995, 183-4) mentions that the wreckage has been long since removed, all that remains being scars on the hillside along with small fragments of alloy.

Site visit 20/2/2014
No evidence could be found of the impact or any wreckage within and immediately adjacent to the location given. Possibly lost beneath subsequent heather growth or misplaced.

VICKERS WELLINGTON IC R1465 PRN 130201 SO0620
The Wellington was assigned to 22 Operational Training Unit (OTU) at Wellesbourne Mountford. It was being flown by a Canadian crew on 6 July 1942 on a cross country flight. The aircraft met heavy cloud and it is believed that the pilot descended from the advised 10,000ft to pinpoint his position and struck the top of Waun Rydd. The crew of five were killed and are buried at Hereford. Quite a lot of wreckage has been collected into two piles, from being scattered over a large area. Two of the engines lie at the bottom of the cwm - one in the Caerfanell, the other in a

shallow gully some 300 paces away from the main impact site. A memorial cairn was constructed in 1980 by pupils and staff from Tredegar Comprehensive School and is a recognised Canadian war memorial. (Brecon Beacons National Park, 1995, Identification Guide Aircraft Crashes in the National Park, ID 14)

The memorial stone was erected in 1958 and pupils climb each year and place poppies on the cairn on Armistice Day. The crew comprised Sgt J B Kemp, pilot; Sgt E E Mitell, observer; Sgt K F Yuill, bomb aimer; Sgt H C Beatty, wireless operator; and Sgt J P Hayes, air gunner. (Doylerush 2008, 109 and 111)

The Wellington was one of 550 delivered to the RAF by Vickers, Chester, to contract 992424/39 between August 1940 and May 1941. Its service life included assignments to 214 Squadron and 22 OTU. The aircraft flew into the ground in cloud on a night navigation exercise 4 miles south of Talybont, Brecknock on 6 July 1942. (Halley 1996, 99)

Parts of the aircraft were once in the Abergavenny ATC museum, but this has closed and their current location is unknown. (Mark Walters, pers comm)

Site visit 9/1/2014
The impact site lies just above the rock scarp which overlooks the memorial. It is defined by a shallow groove which runs east-north-east to a hollow containing a range of airframe debris and some armour plate. Further small fragments are visible to the north-east. The memorial is overlooked by the rock scarp above which the aircraft crashed, and comprises a cairn of cemented stones with a plaque which reads: 'At this place on 6th July 1942 the Wellington Bomber R1465 crashed with the loss of all its Canadian crew. Here died R88687 F/Sgt Kemp JB pilot, R71725 F/Sgt Mittel EE, R75322 Sgt Beatty HC, R82352 Sgt Hayes JP, R106035 Sgt Yuill KF. Remember them'.

In close proximity to the memorial are a few groups of debris collected from the crash, comprising a single piece of aluminium sheet, various sections of fuselage and perhaps ailerons collected into a pile measuring 7m by 4m, another pile of material, 8m in diameter, including sections of geodetic fuselage and most parts of the two undercarriage legs, and the remains of an engine nacelle with part of an undercarriage leg still attached.

Only one engine was found, in the bottom of the gully which descends steeply from the memorial. Some of the gearing on the front of the engine remains, but the cylinder heads are missing as are some of the barrels. Markings stamped on it read 'P30329, A763043F (possibly), PEG XVII'. This is possibly the one located "in the Caerfannell" (it is actually in a tributary gully) in the BBNP source, as nothing was found in the main stream gully. The position of the other engine was not apparent. It was subsequently discovered that the tail unit and the other engine had been recovered; they are now in the WARG Museum at Sleap.

The visible remains suggest that the aircraft was travelling towards the east-north-east when it crashed just above Cwar y Gigfran, about 20m (vertically) below the summit of Waun Rydd. It is clear that following the crash, significant amounts of the debris were collected together in the area where the memorial now stands, perhaps by the recovery team at the time, although this is not known with any certainty and some later recovery did occur. The one engine that was found lies much lower down the valley slopes but it seems likely that it was also subject to an abortive attempt at recovery, as it is difficult to imagine how it could have got to that location without being disturbed from its position after the crash. The site is interesting from the point of view that the surviving wreckage represents a recovery operation which was called off and remains frozen in time.

VICKERS WELLINGTON VIII T2520 PRN 130202 SO0813

The Wellington was assigned to 115 Squadron at RAF Marham. It had taken part in a bombing raid on Bordeaux and, in bad weather during its return, became separated and lost. Believing they were over East Anglia, the plane had begun its slow descent but flew into the rocky face of Cefn yr Ystad close to the summit. The crew were killed. Small pieces of wreckage lie amongst the rocks close to the summit and there is still evidence of the fire that engulfed the crashed plane. (Brecon Beacons National Park, 1995, Identification Guide Aircraft Crashes in the National Park, ID 15)

The aircraft took off from Downham Market. On return from Bordeaux, the aircraft radioed Tangmere saying that it was descending believing that it was over Norfolk. A little after 3am on 9/12/1940, the Wellington struck rocks close to the summit and burst into flames. Much of the metal was fused together as a result. Signs of the fire can still be seen and small pieces of wreckage remain amongst the rocks. The crew were killed Pilot Officer A Tindall, pilot; Sgt A Brown, RNZAF, air gunner; Sgt S Howard, wireless operator; Sgt D Mills, second pilot; Sgt H D Ellis, navigator, and Sgt D E Wallace, air gunner. (Doylerush, E, 2008, Rocks in the Cloud: High Ground Aircraft Crashes in South Wales, pg25-56, 109)

The 9 Wellingtons which set off from RAF Marham at 1715hrs were tasked to head for Bordeaux to drop 8 tons of bombs over the area, estimated time of return 0145hr on 9th December 1940. Seven aircraft made it back to base, the last was R1221 at 0205 hours. Two others had landed at Boscombe Down and at Brackley. A report from the direction finding station at Tangmere stated that T2520 call sign 'A' had made radio contact and reported that they were reducing height to conserve fuel. At 0312hrs the Wellington struck the ground. Quarry workers, arriving for work, saw a fire on the hillside but could only recover the bodies of the crew and take them down to the quarry buildings for collection by the authorities. (Durham P and Jones, D, 1982, Warplane Wrecks of South Wales and the Marches, p13-14)

There is a memorial cairn at the crash site (http://www.breconbeacons.org/wellington-bomber)

Site visit 9/3/2014

The crash site lies in an area of rocks to the east of the summit of Garn Felen, the aircraft needed to be only a few metres higher to have cleared the summit and was probably flying on a northerly heading at the time of the impact. The remains of the aircraft comprise some small fragments of airframe, none longer than 0.4m, and lumps of melted aluminium, all of which lie within 10m of the memorial cairn at the site. The rocks around the cairn have clearly been affected by the heat of the fire which followed the crash, and there are others to the south which have been disturbed and may represent the first point of impact. The cairn measures 2m diameter by 1m high and has two wooden crosses set in it with plaques which respectively read: 'Wellington T2520 crashed here 10/12/1940. All were killed' and ‘In memory of the crew of T2520. Rest in Peace.' Two wreaths were also present, one from Tredegar Town Council.

VICKERS WELLINGTON X MF509 PRN 130193 SN8116

The Wellington, assigned to 22 Operational Training Unit at Wellesbourne Mountford, was taking part in a cross country night exercise on 20/11/1944 when it developed trouble in the starboard Hercules XVI engine. It is thought that the aircraft ran into shower clouds and developed ice on its surface. With insufficient power in its port engine, the aircraft lost height and crashed on Carreg Goch at approximately 520m on 20/11/1944. The 6 man crew were killed. There is a great deal of wreckage at the site, with more spreading to the west and northwest. A main wheel and other pieces spread downslope as far as the Giedd. A memorial has been erected inscribed with the names of the crew members. (Brecon Beacons National Park, 1995, Identification Guide Aircraft Crashes in the National Park, ID 1)

The aircraft had taken off from Stratford airfield. It developed trouble in its starboard Hercules engine and began to ice up at the same time. With insufficient power from its port engine, the aircraft began to lose height and struck the rocky ground to the northwest of Carreg Goch. The crew comprised Sgt C Hamel, pilot; Sgt J R Villeneuve, navigator; Sgt J P E Burke, wireless operator; Pilot Officer W J Allison, bomb aimer; Sgt A J Goudie, air gunner; and Sgt G Dusablon, air gunner. All Canadians and all killed. (Doylerush 2008, 29-30, 109 and 111)

The Wellington was one of 600 Xs, XIIs and XIVs delivered to the RAF by Vickers-Amstrong, Squires gate between December 1943 and July 1944. It was assigned to 22 OTU. The aircraft flew into a mountain on a night navigation exercise at Sinc y Geidd, on 20/1/1944. (Halley 1991, 28)

The memorial plaque was placed on the undercarriage leg by the Warplane Wreck Investigation Group of Liverpool. (Durham and Jones 1982, 39).

Parts of the aircraft were once in the Abergavenny ATC museum, but this has closed and their current location is unknown. (Mark Walters, pers comm)

Site visit 8/1/2014
Wreckage covers a much larger area than was apparent from the existing description. The memorial is of stone and concrete with 2 plaques, one for the crew, the other commemorating the visit in 2006 by Phyllis Burns, sister of Bill Allison, one of the crew. Several crosses and poppies had been left there, also a wreath and assorted objects. Laminated notes in a plastic folder prepared by Arwel Michael were held against the side of the memorial by a piece of steel (armour?) plate.

The main wreck site is next to the memorial and contains large sections of both wings with fragments of at least one aileron, parts of the undercarriage legs, one section of an exhaust collector ring and many hundred other small and medium-sized fragments. The whole area was a jumble of wreckage and broken bedrock. The northernmost of the two main sections of wreckage (wings) has Canadian flags mounted on it and wreaths laid against it. Other sections of wreckage include a long tubular section (c.5m long) with attached fragments of geodetic and several other fragments at the top of a small outcrop. Other smaller fragments including a large piece of steel plate lie beneath the outcrop. There was also a section of framework with attached punctured sheet/skin and a section of framework with integral panel incorporating a circular hole. Furthest away from the main wreck site was part of an undercarriage leg atop a heap of rubble/scree. Missing items include the engines, wheels, weapons, plexiglass fragments.

It appears that generally, the wreckage increases in size and frequency as you go from west to east across the area, suggesting the plane was heading east when it struck the slope, either detaching fragments as it went or scattering fragments back down the slope as it continued upslope of the initial point of impact. Some fragments may have been moved around the wreck site, though this is less likely. A plot of the wreckage shows a curved appearance which might suggest the aircraft was attempting to bank to starboard at the time of the impact; it may also have had its wheels down to attempt a landing as these and the undercarriage appear to have been the first items in the debris trail.

WESTLAND LYSANDER III T1655 PRN 130322 SJ0734
Air crash site of Westland Lysander T1655 on 15 December 1942. Source: Rob Evans, Oswestry (From Coflein 7/8/2013). The aircraft, from 61 OTU, struck Cadair Bronwen while searching for a lost Spitfire (P7295). It was caught in a downdraught and the pilot was killed (Doylerush 1993, 93).

The Pegasus engine and some small parts were apparently in the stream bed according to a list of aircraft crashes given to Arwel Michael by Wales Aircraft Museum, Barry, but the engine was subsequently recovered and is now in the WARG museum at Sleap.

Site visit 14/1/2014
No recognisable remains of the aircraft were apparent at the location given. Ground conditions precluded a search of the crags which overlook the site for any impact debris.