Galloway Glens Landscape Partnership

Can You Dig It?

Community Archaeology Project

Data Structure Report

1.2.g High Ground Wrecks and the Royal Observer Corps

by Sarah Krischer, Thomas Rees and Claire Williamson

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Quality Assurance

This report covers works which have been undertaken in keeping with the issued brief as modified by the agreed programme of works. The report has been prepared in keeping with the guidance of Rathmell Archaeology Limited on the preparation of reports. All works reported on within this document have been undertaken in keeping with the Chartered Institute for Archaeologists' Standards and Policy Statements and Code of Conduct.

Signed Claire Williamson…….. Date …..10th December 2020……

In keeping with the procedure of Rathmell Archaeology Limited this document and its findings have been reviewed and agreed by an appropriate colleague:

Checked L McKinstry…….. Date …..10th December 2020……

Quality Assurance Data

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Introduction

1. This Data Structure Report describes works undertaken for the sub-project on the Wrecks - Corserine Hill, carried out as part of the Galloway Glens Landscape Partnership (GGLP) community archaeology project *Can You Dig It?* This report presents the results from a walkover survey carried out on two (**S3** and **S4**) of the five high ground wrecks identified through the Research Design (Krischer & Rees 2019), and also site visits to the four Royal Observer Corps (ROC) posts (**S6**-**S9**).

2. The works were carried out by volunteers supported by Rathmell Archaeology staff. The structure of the works was drawn from advice and guidance from officers of GGLP, Dumfries and Galloway Council and members of local heritage societies.

Historical & Archaeological Background

3. The Research Design identified five high ground wrecks and four ROC outposts within the Galloway Glens Landscape Partnership area (Krischer & Rees 2019). While the ROC posts are not designated, all wrecks are covered by the Protection of Military Remains Act 1986. This act covers the wreckage of all military aircraft (including non-UK aircraft) that crash in the United Kingdom.

High Ground Wrecks

4. A brief historical and archaeological baseline for the wrecks on the Corserine has been lifted from the Research Design for the sub-project (Krischer & Rees 2019, 3-4):

> *The Corserine is a fairly remote hill near St John's Town of Dalry, Dumfries and Galloway, with a height of 814m. It is the highest of the Rhinns of Kell hills. The main summit is a wide flat plateau, with a broad, gently sloping, ridge on the northeast side and steep downwards slopes on the other sides. A second, slightly lower summit known as Carlin's Cairn (807m) lies to the north of the main summit, at the end of a wide ridge. There have been five High Altitude Wrecks on the Corserine between 1939 and 47; all of these took place at night, during the winter months. The majority of the wrecks were crashes, which took place during training, a dangerous undertaking with a casualty rate as high as 25% of the course in some cases (Hastings 1979, 173).*
>
> *The first wreck was an Anson Mk.I DG787 from the No.12 Elementary and Reserve Flying Training School, Prestwick **S1**. The aircraft left Prestwick on a training run on the 9th of January 1939 and its burnt out remains were found by a shepherd on the lower slopes of Corserine hill the next day. All four crew members were killed. Their bodies were retrieved by the RAF shortly after the crash but the remains of the aircraft were left in place. A burnt out scar from the crash is visible on the hillside, in addition to large pieces of the wreckage, including the engines (Clark 2016a).*
>
> *A Tiger Moth (L6932) crashed nearby on the 10th of January 1939 while searching for the Anson **S2** (Clark 2016a). This, the second high ground wreck, was a much more minor incident and the remains were salvaged (Smith 1989, 30), making it unlikely that any visible wreckage will be visible at this site.*
>
> *The third high ground wreck took place on the 23rd of October 1942 when an Avro Anson Mk.I (serial no. DG787) **S3** from the Air Navigation and Bombing School failed to return from a night navigation exercise over the Isle of Man. Two days later the Home Guard around the Rhinns of Kells reported the plane had crashed into one of the nearby hills. On the 26th of October the Wigtown RAF Mountain Rescue (No.1 AOS) located the site. The bodies of the four members of the crew were recovered as were all large pieces of wreckage (Clark 2016b). One of the Navigators, Flight-Lieutenant Vaclav Jelinek, was buried at Kirkinner Cemetery, Wigtown (Gillon 2011). As with **S1** a scar is visible on the hillside at the point of impact. The site is likely to be 150m north-west of the summit trig-*

point. A few small pieces of wreckage remain including a battery.

The fourth high ground wreck is a de Havilland Mosquito N.F. Mk.II (Serial no. DD795). The two members of the airplane crew were trainees from the No.9 Course at No.60 OTU which was stationed at High Ercall in Shropshire. On the night of the 20th of January 1944 they left High Ercall for a night cross country flight and failed to return. The site of the crash ***S4*** *on the Corserine was not discovered until the 11th of February as the wreckage had been covered by snow shortly after the incident (Clark 2016c). The bodies of the crew members were retrieved by the 50 airmen from No.1 AOS at Wigtown (RAF Mountain Rescue) on the 12th of February, however the aircraft wreckage was left in place. The impact site is visible as a scar 700m east of the summit cairn near the "Scar of the Folk" with a large amount of associated wreckage.*

The fifth High Altitude Crash on occurred near the second summit of Corserine, Carlin's Cairn. A Douglas Dakota (Serial no. K-14) belonging to the Royal Belgian Airforce flying from Brussels to Prestwick airport crashed near the summit on the 10th of April 1947. This was the first crash of the newly created Belgian Air Force. All six men on board perished in the crash and the bodies were retrieved by RAF the next day and repatriated to Brussels. The site was reported as having a large number of visible remains in 1989 (Smith 1989, 30).

Royal Observer Corps Posts

5. The Research Design also gives a brief historical and archaeological baseline for the Royal Observer Corps posts within the area, copied here (Krischer & Rees 2019, 4-5):

> *The second subset amongst this resource comprises four Royal Observer Corps outposts located throughout the Galloway Glens Landscape Partnership area. Established in 1925, the Observers Corps was founded to provide the detection, identification, tracking, and reporting of aircraft over Great Britain (Air Ministry Information Bureau 1951). The system expanded to cover the majority of the country by 1939, with the final post established at Portree in 1941. There were three main phases of operation during the history of the Observer Corps; the first was tracking aircraft during the Second World War; the second tracking soviet jets in the late 1940s and 50s; and the third marked by the transition into nuclear monitoring posts from the early 1960s (HQ ROC 1970).*
>
> *The Observers Corps was mobilized on the 24th of August 1939 and remained in service throughout the war. The corps was granted the tile "Royal Observer Corps" by King George VI in 1941 in recognition of the group's service during the first years of war (Wood 1976, 111).*
>
> *From 1938 the ROC posts were to be provided with wooden huts containing a bed, equipment store and stove. However, provision of these huts was slow and at many posts the observers constructed their own structures (Wood 1976, 54). There is therefore no uniform design for Second World War era observer posts. The corps was de-mobilised on the 12th of May 1945, following the end of the war in Europe.*
>
> *There are four ROC posts within the study area. These are at Castle Douglas* ***S6****, Carsphairn* ***S7****, St John's Town of Dalry* ***S8*** *and Parton* ***S9****. All of these posts were established in 1940. In 1943 the Castle Douglas and Parton posts were equipped with flares to warn aircraft of high ground, code name "granite"* (*Wood 1976, 329). In addition, the Parton post was equipped with "Augmented Granite" in 1943. This was a system of High Frequency transmitters producing a high ground warning signal in an approaching aircraft in combination to the normal system of flares (Wood 1976, 277). All of these posts were part of the Ayr group (No. 33). The posts where mainly concerned with planes flying to Prestwick airport, which was the eastern terminus of the North Atlantic Air-ferry route. Posts*

to the south and south-east of the airport tracked aircraft being brought in from the US and Canada to support combat operations (Winslow 1948, 189).

*At the St John's Town of Dalry **S8** post a pile of rocks is visible in the vicinity of the later posts that represents the remains of the World War 2 post. No visible remains of World War 2 posts can be seen at the other examples.*

During 1947 the ROC was reformed in response to the need to track Soviet jets, with a particular emphasis placed on expanding the ROC network in Scotland due to the risk of airspace intrusion from the north (Dalton 2017, 5). This role was to be short-lived, with improvements in radar and interceptor jets negating the need for direct, visual observation over land. By 1965 the ROC had abandoned this role. The corps was reorganized in 1950 and the Ayr section was moved from the Scotland group to the Western Group. In 1953 the Ayr group was renumbered No. 25 (Wood 1976, 210).

*Across most of Britain during the early 1950s the variety of observation posts inherited from World War II were replaced by Orlit observation posts. There were two styles, Orlit A and B. Orlit A was a ground level observation post of pre-cast concrete panels that formed a rectangular structure measuring 3.05m by 2.03m in plan, divided into an open observation area and a flat roofed shelter and store (Brown et al. 1996, 127). Access was by a door into the shelter, from where a sliding door gave access to the observation area (where the plotting chart stood). The Orlit B model was the same post erected on concrete legs with an access ladder. The St John's Town of Dalry posts **S8** were recorded as having an Orlit A structure. In addition, a concrete slab base is recorded at the Parton post (**S9**) which is likely to be the remains of an Orlit A.*

In 1955 the establishment of the United Kingdom Warning and Monitoring Organisation (UKWMO) led to a transformation in the role of the ROC from tracking hostile aircraft to being the field force for monitoring blasts and fallout in the event of a nuclear war. The above-ground posts were vulnerable to blast and had little fallout protection; consequently a nationwide programme was implemented to place the entire ROC network of posts underground in hardened bunkers (Wood 1976, 15). These new 1960s monitoring posts typically replaced the contemporary network of ROC observation posts. Underground bunkers were constructed at all four Posts within the study area in the early 1960s (Wood 1976, 329).

The overall standardised dimensions of the underground reinforced concrete bunker were 5.80m by 2.44m by 2.13m. The ladder access shaft, with an adjacent ventilation shaft, was at one end of the post with access from the base into the main chamber. At the other end of the main chamber was a second ventilation shaft. Both ventilation shafts were fitted with protective louvres. Two additional pipes ran to the surface from the centre of the main chamber, a smaller 'blast pipe' and a larger 'probe pipe'. The entire monitoring post was buried 0.91m (3 feet) below ground level (Dalton 2017, 17).

*The area for the posts was required to have a minimum of 50 feet of level ground with no nearby features to obstruct the instruments. The site had to available to buy or let for at least 21 years and had to have a right of access via a three foot wide path to a public road. The majority of these posts were situated at the site of pre-existing aircraft posts. However, at St John's Town of Dalry **S8** the land was unsuitable and the new post was moved to an area close to the existing Orlit post (Dalton 2017, 21).*

The UK monitoring network progressively contracted over the latter part of the 20th century and the ROC was officially announced as disbanded in 1991. While there was supposed to be a system for dismantling the posts, many Corps members were unconvinced and so in many cases Posts were simply left intact

> *(Dalton 2017, 99). The communication equipment was owned by BT who visited posts to remove equipment following the disbandment. However, in a number of cases the equipment was determined to not have any re-use value so was simply left in place. Additionally, BT maintained phone links to some posts long after stand-down (ibid.)*
>
> *Following the closure of the posts many reverted back to their original landowners, with the Ministry of Defence expected to demolish the post and return the land to its original condition. However, in many cases the MoD agreed to pay local farmers to allow the posts to remain intact in order to avoid the expensive demolition process. Many posts were also sold off at this point, with a number purchased by telecommunication companies as sites for mobile phone masts (Dalton 2017, 163). Since 1991 the majority of sites have simply been left to decay and ownership has become increasingly difficult to determine.*

Previous Archaeological Works

6. Details are given about the earlier archaeological interventions (Krischer & Rees 2019, 11):

> *Due to the nature and relatively modern date of these resources the scope of the archaeological interventions has focussed upon survey work. An individual who has been particularly active in this respect is David J. Smith, who conducted extensive visits to wreck sites as research for this volume on High Ground Wrecks published in 1976 (updated in 1989). He visited the sites of all wrecks included in this study and gives a broad summery of the nature of the remains.*
>
> *In 2008 the site of the 1947 Dakota crash was explored by the Dumfries & Galloway Aviation Museum along with members of two Belgian Aviation societies. This was followed by the unveiling of a memorial plaque for the victims of the crash at the Aviation Museum in August 2008 (Decock 2009).*
>
> *Three of the air crash sites were visited by members of the Peak District Air Accident Research Group who published their research on their website in August 2016 (see References). They photographed the wreckage and provided extensive background research into the nature of the accidents and the responses to them.*
>
> *The ROC posts have all been recorded by members of the Subterranea Britannia group as part of their study of ROC and UKWMO posts (see References). The posts within the study area were visited by the group in 2002. Photographs of the upstanding remains were taken, as well as notes regarding the condition of the sites and coordinates for their locations. In addition, the Parton nuclear post was entered by members of the group in 2015, who documented its condition and the material culture that remained, including furniture, signage and maps (see References).*

Project Works

7. The archaeological works comprised a walkover survey of two of the five high ground wrecks located on the Corserine (**S3** and **S4** in Krischer & Rees 2019), and site visits to the four known ROC posts (**S6** to **S9** in Krischer & Rees 2019) within the Galloway Glens area (Figure 1; Table 1). For ease of reference and to maintain consistency, the site numbers assigned to each site in the Research Design (Krischer & Rees 2019) will remain the same for this report. **S1**, **S2** and **S5** were not visited during this phase of works and, as such, will not feature here.

8. The walkover survey of the high ground wrecks took place on the 20th of June and 26th of July 2019. The first day of survey was carried out in cold, wet conditions, while the second occurred in extremely hot, bright conditions. The assessment area consisted of open hillside above a large area of forestry plantation. Two crash sites were visited during the surveys: **S3** and **S4**. The works consisted of a photographic record and a

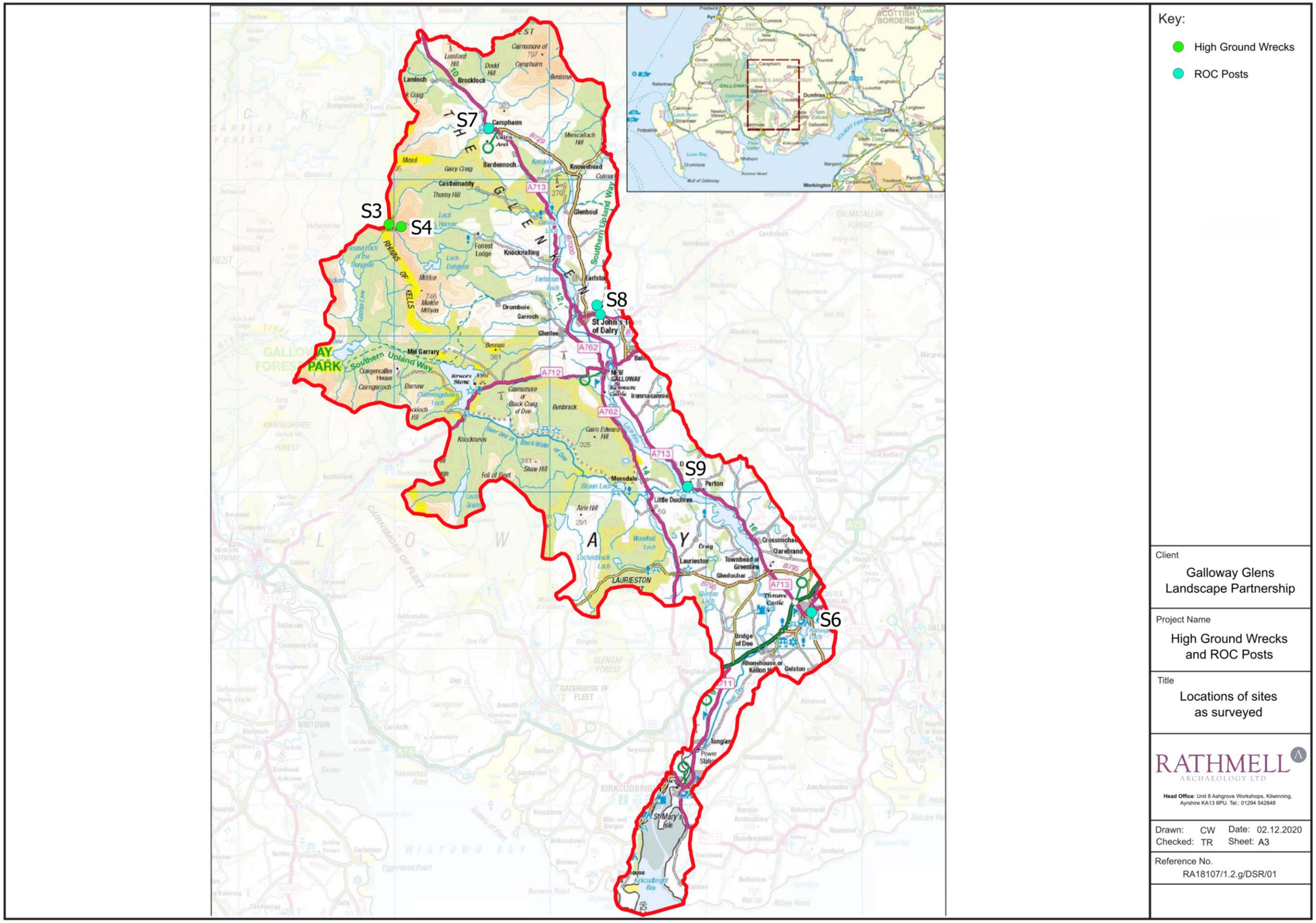


Figure 1: Plan showing locations of the sites recorded during the works

written description of each site, including location, extent and condition.

9. The site visits to the ROC posts were undertaken on the 10th October 2019. The weather conditions were overcast with occasional showers. All four of the ROC posts as identified within the Research Design (Krischer & Rees 2019) were visited, the majority of which sat within enclosed pastoral fields. A photographic record was taken at each site, as well as a location and a review of their condition.

10. All works were carried out using Rathmell Archaeology Ltd standard methods as outlined in the Risk Assessment Method Statement (RAMS) (McKinstry 2019). The works complied with the Chartered Institute for Archaeologists' Standards and Policy Statements and Code of Conduct and Historic Environment Scotland Policy Statements.

Findings

High Ground Wrecks

11. The sites of two high ground wrecks were visited during the surveys: that of the Avro Anson Mk.I (**S3**) and that of the de Havilland Mosquito N.F. Mk.II (**S4**). Full details of each site are given in Table 1.

12. The first, **S3**, was located to the north of the Corserine's summit, on the upper section of the saddle that connects the higher summit of the Corserine to the lower summit known as 'Carlin's Cairn'.

13. The site of the crash at **S3** remained visible as a sub-circular area of exposed bedrock (Figure 2a) measuring 8.8m east to west by 10.8m transversely. The exposed bedrock had been broken into small grey angular stones, which had an average size of 0.1m by 0.15m. The area also contained many fragments of charred aluminium, mostly pipes. A mainly intact battery was located at the northwest corner of the area (Figure 2b).

14. The second site, **S4**, was located just below the ridge to the southwest of the Corserine's summit, at the top of a bowl known as the 'Scar of Folk'.

15. The site at **S4** was identified as a wide scatter of open bedrock 'scars' across the side of the hill. Nine scars containing airplane debris were located, in addition to a number of smaller scars without any remaining material. The largest scar measured 12.9m by 7.6m in extent, while the average size of the rest was 2-3m by 0.8-1m.

16. As with **S3**, the bedrock within each scar had been broken into smaller angular stones (Figure 3a). Several small metal fragments remained including pipes, screws, a possible tank, fuselage fragments and some timber fragments (Figure 3b).

Royal Observer Corps Posts

17. The locations of four known ROC posts were visited during the project: the site of an underground monitoring post at Castle Douglas (**S6**), the site of an underground monitoring post at Carsphairn (**S7**), the site of both an Orlit Type A post and an underground monitoring post at St John's Town of Dalry (**S8**) and the site of both an Orlit Type A post and an underground monitoring post at Parton (**S9**). Full details for each site are given in Table 1.

18. The site of the underground post at **S6** is located at the eastern side of Castle Douglas, within an enclosed field at the northern end of Whitepark Hill. The hill sits between Castle Douglas Primary School to the northeast and Castle Douglas Hospital to the southwest, with housing to the northwest and fields to the southeast. No remains of the post itself are present and it appears to have been completely removed. Some faint traces of disturbance from its removal are, however, still visible as a low earthwork.

19. The underground post at **S7** sits within a small, enclosed field to the rear of housing along the northern side of Carsphairn's main street (the A713). Unlike **S6**, this post remains, although padlocks on the access hatch prevented inspection of the interior. The surface features all appear intact however, including an air vent, an access hatch and a 'fixed survey meter probe', and they all sit within an enclosing fence line. Each of the surface features sits on top of its own discrete concrete plinth, and, except for the metal

Figure 2a: General shot of **S3** from the southwest

Figure 2b: Detail of **S3** showing battery

Figure 3a: Detail of bedrock scars of **S4** from the south

Figure 3b: Detail of wreckage of **S4** from the southeast

meter probe, are themselves made of concrete with metal vents/hatches. Traces of green paint are still visible on all the features.

20. At **S7**, a circular black cover has been fitted to the side of the air vent which sits on its own (Figure 4a). This cover has been left unpainted.

21. The features are in generally good condition with some vegetation growth present, although there is some rust on the metal fixtures and parts of the concrete casing on the access hatch appear to have broken off (Figure 4b).

22. The remains of both an underground post and an Orlit Type A post are present at **S8**, which sit to the east and the northeast of St John's Town of Dalry, respectively.

23. The underground post is located just to the west of the access road into Tower Farm near to its junction with the A702. Padlocks on the access hatch prevented inspection of the interior, but its surface features are still present and intact comprising an access hatch, air vent and fixed survey meter probe. They are of the same construction and character as those identified at **S7**, although there are some slight differences: the air vents are missing their louvres and do not feature the black cover fitting seen at **S7**.

24. The features at **S8** also appear to include a short narrow upright pipe protruding from the surface near to the meter probe, and it is possible that this may be the remains of a Bomb Power Indicator baffle plate. This pipe has also been painted green. A further hatch is also present in close vicinity of the site allowing for ground level access to a phoneline (labelled 'BT').

25. Apart from the missing louvres, the condition of the features appears to be good, although the concrete of the air vent adjoined to the access hatch is of a poorer condition compared with the other features. Moss and lichen are also present.

26. The Orlit Post at **S8** sits in rough grazing land just to the south of the Southern Upland Way as it continues east from Midtown road. It sits at roughly 700m to the north-northwest from the underground post.

27. The post was an Orlit Type A and consists of a small single storey rectangular structure with walls made of reinforced concrete panels and a concrete floor (unpainted). It is divided into two chambers: the larger of the two is unroofed with the remains of two metal struts projecting from the floor, while the smaller is covered by a flat concrete roof. Within the roofed chamber, only one internal feature remains: a wooden bench along its rear wall (Figure 5a). There is only one external entrance into the structure which leads into the roofed chamber, with a single internal access leading between it and the unroofed section. The structure is mostly intact except for the front wall which has been separated from the structure but remains propped against its now open side.

28. It remains in good condition although some cracks are apparent in the concrete, with vegetation and moss present, and a gap is visible at the base of one of the external corners of the unroofed chamber.

29. The site at **S9** comprises the remains of both an underground post and an Orlit Type A post, which both sit in an enclosed rough grazing field to the northwest of Boreland of Parton farm. The field sits on the northeast side of the A713 opposite the site of the Loch Ken Holiday Park.

30. An Orlit post of Type A construction has been recorded at **S9** but all that remains of it is a level rectangular concrete slab. The rest of the structure appears to have been completely cleared and removed from the site.

31. Only around 20m to the southeast of the slab's location, sits the site of the underground post. As with the underground posts at **S7** and **S8**, padlocks on the access hatch prevented inspection of the interior but the surface features are still present. This includes an access hatch, air vent and fixed survey meter probe of the same character and construction as those seen at the other two examples. The features also included the possible pipe of a Bomb Power Indicator baffle plate (Figure 5b) and a small concrete cable route marker which marks the route of an underground phoneline.

Figure 4a: Air vent at **S7** showing the circular black cover attached to its side

Figure 4b: Access Hatch at **S7**

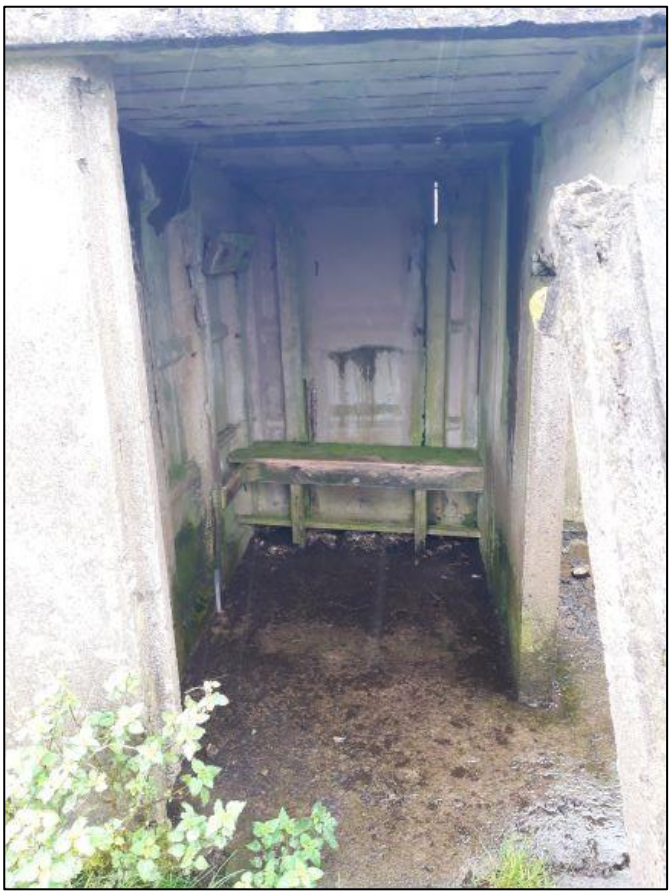


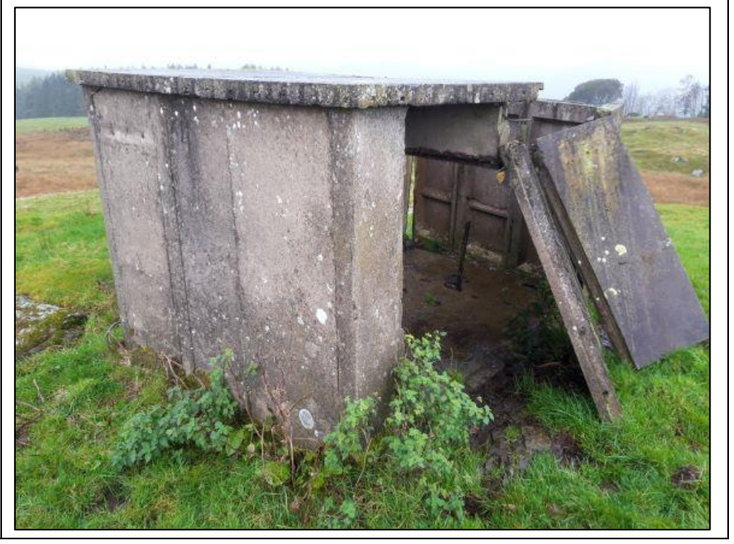
Figure 5a: Interior of roofed chamber in Orlit post at **S8** showing bench along rear wall

Figure 5b: Pipe (in foreground) possibly for a bomb power indicator baffle plate at **S9**

Table 1: Details of sites visited during the on-site works

No	Site	HER Ref:	Description	NGR	Image from Site Inspection
S3	Crash Site: Avro Anson Mk.I	- MDG13043	**Research Design** Documentary sources record that the site was cleared of all large wreckage following the crash. The site was recorded by the Peak District Air Accident Research Group. They reported that the site was visible as a burnt-out scar with small pieces of wreckage. **Walkover Survey** Wreck 3 was located as a sub-circular area of exposed bedrock measuring 8.8m east-west by 10.8m transversely. The exposed bedrock had an average size of 0.1m by 0.15m was grey in colour. It was broken into angular pieces. The area also contained many sections of aluminium, mainly as pipes. A battery was located at the northwest corner.	NX 49695, 87180	
S4	Crash Site: de Havilland Mosquito N.F. Mk.II	- MDG13046	**Research Design** The site was visited by the Peak District Air Accident Research Group. They reported a scar at crash site with small fragments remains. Some larger remains of undercarriage were visible slightly downhill. Mosquito planes had a wooden frame, the bulk of the plane would have been destroyed on impact. **Walkover Survey** The wreck was located as a wide spread of bedrock “scars” over the hillside just under the lip of the hill at the “scar of folk”. Nine scars containing airplane debris were located, in addition to a number of small scars without material. The largest scar measured 7.6m by 11.8m and contained the fuselage and gears as well as metal and timber fragments. The other scars containing metal and timber fragments had an average size of between 2m x 0.5m and 3m x 1m. The scars were all sub-circular in form.	NX 50474, 87032	

S6	Castle Douglas ROC Post 33/C.1; 24/D.2; 22/E.3 WW2 post; Underground Post	- -	**Research Design** Opened August 1940. Equipped with flares to warn aircraft of high ground (Granite) in 1943. Later added an underground nuclear post in December 1961. Post closed in 1991. Underground post was probably demolished in 1991. **Site Visit** Underground post has been completely removed. Some faint traces of the disturbance from its demolition remain as an earthwork.	**Underground post (site of):** NX 76804, 62300	
S7	Carsphairn ROC Post 33/K.2; 25/H.2; 22/A.1 WW2 post, Underground Post	- -	**Research Design** Opened in August 1940. Nuclear bunker added in January 1962. Probably disbanded in 1991. Possible remains of WW2 post visible on low hill. Underground bunker visible within compound. **Site Visit** Surface remains of underground post still present and intact including ventilation shaft, access hatch and sampling/fixed survey meter probe – all made from concrete. Enclosing fence line still present. No access to interior of post as metal access hatch is padlocked. A circular black cover has been fitted to the side of the air vent which sits on its own.	**Underground Post:** NX 56089, 93347	

S8	Dalry ROC Post 33/B.1; 25/C.2; 22/A.2 WW2 post, Orlit A, Underground Post	- -	**<u>Research Design</u>** Opened in September 1940. Underground nuclear post added in January 1964. Probably disbanded in 1991. Orlit A and underground bunker still visible. **<u>Site Visit</u>** Surface remains of underground post still present including ventilation shaft, access hatch and sampling/fixed survey meter probe – all made from concrete. Phoneline running into the post's location also still present. Remains are all still intact apart from missing louvres on the air vents. No access to interior of bunker as metal access hatch is padlocked. Remains of Orlit Type A structure still standing. A small rectangular structure only single storey, it has a concrete floor with all walls made of reinforced concrete. It is divided into two halves – one side is unroofed with the remains of two concrete struts projecting from the floor. The other half is roofed with a flat concrete roof. The only internal feature remaining in this half is a wooden bench along the rear wall. There is only one doorway from the exterior leading into the roofed section, and a single internal doorway leading into the unroofed section. The structure is mostly intact apart from the front wall which has been separated from the structure and left leaning against it.	**Underground Post:** NX 63249, 81400 **Orlit Type A:** NX 63033, 82001	**Underground Post:**  **Orlit Type A:** 

S9	Parton ROC Post 33/B.3; 25/C.4; 22/A.3; WW2 post, Nuclear Bunker	- MDG25531	**Research Design** Opened October 1940. Equipped with “granite” 1943. Augmented “granite” 1944. Nuclear post established April 1960. Post probably disbanded in 1991. Concrete base of Orlit A visible on low hill near bunker. **Site Visit** Concrete base of Orlit Type A still present but nothing else remains. Surface remains of underground post still present and intact including air vent, access hatch and sampling/fixed survey meter probe – all made from concrete. The louvres on the ventilation shaft are still intact. No access to interior of post as metal access hatch is padlocked. A short, narrow upright pipe is visible protruding from the ground near to the meter probe is possibly the remains of a Bomb Power Indicator baffle plate.	**Underground Post:** NX 68854, 70358 **Orlit Type A:** NX 68836, 70365	**Underground Post:**  **Orlit Type A:** 

62. The condition of the surface features appears to be particularly good at **S9** with the concrete appearing mostly intact and a large portion of the green paint still visible.

Discussion

63. The works comprised of two different elements: the survey of two high ground wrecks (**S3** and **S4**) and site visits to four ROC posts (**S6**, **S7**, **S8** and **S9**).

High Ground Wrecks

64. The sites of two high ground wrecks, **S3** and **S4**, were visited and surveyed by volunteers across two days. The two crashes had occurred during training exercises undertaken at night-time when navigational errors could often result in a high number of casualties.

65. Smith had visited both locations in the 1970s and provided basic details of the sites as well as photographs (1989, 28-31). In addition, members of the Peak District Air Accident Research Group visited them in 2011 (Clark 2016b and 2016c). Combined with the data from our current survey, these resources allow us to build a picture of the changing condition of the sites over the years.

66. **S3** was cleared of all large pieces of wreckage immediately following the crash. As a result, it broadly looked much the same during this survey as it had on the previous recorded visits. However, the photographs from the 1970s seem to show larger fragments of wreckage and bedrock compared to what is visible today. The recent survey of the site, alongside the photographs from the 2011 survey, show that these fragments have been broken down into significantly smaller pieces. This is likely to have been caused by the weather on the exposed summit. The difference between the 2011 visit by the Peak District Air Accident Research Group and the current survey are negligible. However, the battery appears to have moved position slightly between the two surveys, which further suggests that there is ongoing disturbance at the site.

67. **S4** had larger sections of wreckage, including some wooden fragments that are even more susceptible to degradation. Smith has only provided a photograph of one section of the site: a portion of a tailwheel (Smith 1989, 31). This was not located in later surveys, indicating that it has either degraded or perhaps been blown further downhill in the intervening years. Most of the material identified at the site was highly fragmentary in nature, which may be attributed to later disturbance as well as the initial crash. This disturbance could be a result of the site's positioning at the lip of the corrie, which may have exposed it to higher winds than if it had been further onto the ridge.

68. There is also the possibility that some of the wreckage material has been removed by passers-by for souvenirs. The Protection of Military Remains Act was introduced in 1986 and provides protection for the wreckage of all aircraft which have crashed while in military service, and for designated vessels which have sunk or been stranded, again, while in military service. Under this act, it is an offence to tamper with, damage, move or unearth any remains without a licence from the Ministry of Defence. The primary reason for the act is to protect a 'war grave': the last resting place of UK servicemen (or other nationals), although the loss does not need to have occurred during wartime. The remote location of the wrecks at the Corserine suggests that this may not have been a common occurrence and it is unlikely that large fragments would have been carried off the hill. However, the possibility remains that some of the more portable fragments visible in the earlier photographs (for example, Smith 1989, 29) may have been removed prior to their legal protection in 1986.

69. Both crash sites are still visible as bedrock scars even 80 years after the crash. The impact and resulting fire destroyed the thin mountain topsoil. While soil recovery in this environment is slow, it would be expected that under normal circumstances some level of recovery would be visible after 80 years. As it was stripped down to bedrock, the revegetation process would include a layer of moss with the grass following afterwards. This has not occurred, suggesting that the area may have been contaminated with high octane aviation petrol and other chemicals during the collision. It is, however, not possible to fully determine this without testing the area.

70. All wreck sites are of historical and archaeological interest as they provide information about the nature of the wreck and the circumstances of their loss. This is particularly true for those crash sites where loss of life occurred. Regarding the high ground wrecks, such as the ones included in this study, their isolated location also means that they are less likely to have been disturbed by later development.

71. Crash sites are covered in the research framework proposed in *Modern military matters, Studying and managing the twentieth-century defence heritage in Britain* (Schofield 2004). The focus is on the recording of sites and the education of aviation archaeology groups on best practice. This is because most of the work on air crash sites has consisted of uncontrolled excavation with no publication of records. The works carried out as part of the Galloway Glens project fulfil these objectives. As the baseline survey was carried out with assistance from members of the local community, it was able to provide both detailed information about the current condition of the sites, while at the same time giving an opportunity to train local volunteers and make them aware of the issues concerning these fragile remains.

Royal Observer Corps Posts

72. The Royal Observer Corps was operative throughout most of the 20th century, adapting its function and objectives to match the changing threats faced by the country during this time. For around 65 years, the Corps relied on the work of volunteers to front an organisation that's sole purpose was to protect the safety of the British people. To achieve this, a network of posts numbering some 1,500 was established across the country during its lifetime, and in several places their physical remains still survive to this day.

73. Within the Galloway Glens, four such posts have been identified: **S6** (Castle Douglas), **S7** (Carsphairn), **S8** (St John's Town of Dalry) and **S9** (Parton). This project visited each one, recording both its location and present condition, and aimed to bring their presence back into the public awareness.

74. All four posts were originally established in 1940 as part of the ROC's increasing network aimed at tracking aircraft during World War II. However, the earliest recognisable remains to still survive on these sites are actually related to the ROC's 'second phase': the introduction of Orlit observation posts in the early 1950s for the purpose of tracking soviet jets. This is not surprising, as the World War II posts are known to have varied greatly with many being constructed locally. As noted by Brown *et al.*, they 'were frequently simply sand-bagged emplacements, and even the most substantial were only of domestic brick construction' (1996, 32).

75. Approximately 400 Orlit observation posts were installed across Britain (Dalton 2017, 5). The remains of these posts were only present at **S8** and **S9**, with none ever recorded at the other two sites. The Orlit posts were all built to a set design, and of the two types (A and B), the two within the Galloway Glens area appear to have been of the Type A variety. The Type B post would have been raised off the ground on concrete stilts, so the concrete slab surviving at **S8** indicates that this is likely to have been a Type A post.

76. The remains of the Orlit post at **S9** are still upstanding and clearly match the construction design for the Type A post, with the roofed chamber acting as a shelter and store, and the unroofed chamber used as an open observation area. The structure is formed of pre-cast concrete panels, reinforced by metal bars embedded in the concrete mass, which would have been assembled on site. Adopted in the early 20th century, reinforced concrete offered greater strength from relatively thin components and gave the material an enhanced blast resistance (Brown *et al.* 1996, 19). It also lent itself to prefabrication which became increasingly popular throughout both World Wars with the creation of standardised 'kit' buildings taking precedence (*ibid.*).

77. While the main structure of the Orlit post at **S9** remains intact (for the most part), the structure has been cleared of all equipment. It is likely that the separation of one of its concrete walls was to allow for the removal of the 'plotting table' which would have sat at the centre of the observation area, presumably fixed in place by the metal struts still

visible. Except for these metal struts and a wooden bench, the structure has also been stripped of any additional fittings. For example, no door remains on the external entrance and the internal sliding door has also been removed. Presumably, all removable features which were seen to have reuse value were not to be left behind.

78. With the shift in the ROC's focus towards the monitoring of nuclear blasts and fallout during the 1960s, the structure of the posts changed. Some 1,560 underground monitoring posts were built, replacing the above-ground Orlit posts: a shift that was viewed as enhancing the survivability of the post's crew (Dalton 2017, 15). The majority of such posts were built between 1958 and 1964, although the construction programme continued until the early 1970s (Brown *et al.* 1996, 130).

79. An underground post was constructed at each of the four ROC sites within the Galloway Glens area between 1960 and 1964, reflecting the higher number of these structures installed compared to the Orlit posts. Brown *et al.* note that the underground posts were often sited in clusters within a small geographical area which were 'sufficient to permit the triangulation of plots' (1996, 130). This is further explained by Dalton who states that the clusters comprised between two and five posts sat approximately 8 miles apart, and he also provides a map showing the sectors, groups and clusters of the posts across Britain (2017, 14). From this map, it is possible to discern that the four posts would have been in the 'Ayr' group within the 'Caledonian' or Scottish sector.

80. No traces of the underground post which sat at **S6** have survived. It appears to have been completely removed with only slight earthworks remaining from the demolition process. At the other three sites – **S7**, **S8** and **S9** – however, the underground posts remain intact.

81. At **S9**, the location of the underground post sits near to the site of the earlier Orlit post, while in contrast, the underground post at **S8** sits at some distance away. This is likely a result of the strict requirements needed for the siting of the new underground posts (see *Historical and Archaeological Background* section – *Royal Observer Corps Posts*). While it was preferable to use existing sites, which had often been chosen for good visibility and were already owned by the Crown, there were many places where the land was unsuitable, such as was the case at **S8** (Dalton 2017, 21). The siting of the underground post at **S8** closer to the road may also reflect efforts made to reduce the impact of access issues on the landowner (*ibid.*).

82. As mentioned, the underground posts at **S7**, **S8** and **S9** survive intact. The design of the underground posts underwent various modifications since their original construction in the 1950s. The three posts surveyed however, all appeared to be of a similar design, likely due to their construction within a few years of each other. For example, all three featured an access hatch of a one-piece design which was a later change from the original 'split-hatch' design (Dalton 2017, 28-29).

83. All the surface features appear to have been painted a dark green. This fits with most of the underground posts which were 'toned down to colour shade most like drab', although Dalton describes some instances were different colour schemes were followed (2017, 23).

84. The most notable difference between the posts was the presence of the circular black cover on the air vent at **S7**. The main means of communication between the posts and the group headquarters was through the telephone network, with lines usually carried into the sites on telegraph poles. This was long seen as a weak point within the posts' setup; if the lines were damaged during a nuclear attack, then the ability of the posts to relay information to headquarters would be disabled (Dalton 2017, 50). In response to this, a Very High Frequency (VHF) radio system was installed at one post in each cluster as a back-up to the telephone line. The radio system was rolled out throughout the 1960s until the mid-1970s, although some posts did not receive it until the 1980s (Dalton 2017, 51). The plan was to install radios at each of the existing master posts within the clusters, although this depended on whether they were suitably positioned to receive radio transmissions. Where this was not the case, a reshuffling of the posts and cluster groups was required to make sure that each cluster had a master post with radio

capacity; this was one of the key reasons why the rollout took so long (*ibid.*).

85. Where radio functionality was installed at a post, this also included the use of an external aerial mast which could be fitted onto the side of the air vent when required. The mast needed two connections which were taken down into the post via the ventilator shaft (Paine 1971, 18-19). The sockets for these connections were contained within a case fitted to the rear side of the air vent: the circular black cover at **S7** (Figure 4a and Paine 1971, 20 – images on the right). The presence of the black cover at **S7** therefore highlights that this underground post would have acted as a master post within a cluster.

86. Due to budget cutbacks in 1968, the ROC had to close over 600 underground posts (Dalton 2017, 15). This does not seem to have included the four posts that sat within the Galloway Glens area however, which were all still recorded as being 'in use' in 1968 (Wood 1976, 329). Instead, the four posts were likely still operating until the ROC was officially stood down in 1991.

87. The nature of the stand-down meant that the abandonment of the underground posts appears to have been just that: a swift locking up and walking away by the crews that occupied them. The decision was poorly communicated, and it left many observers feeling let down by the government of the time, so much so, that when it came to closing the posts down, they were reluctant to clear them out (Dalton 2017, 97-99). This meant that everything apart from the key items of equipment were left behind and, in some cases, not even these were taken (*ibid.*, 99).

88. The communications equipment was the property of British Telecom (BT) so even when the posts were cleared out, this equipment remained (Dalton 2017, 99). BT removed equipment from some of the posts themselves, but it was generally seen as not cost-effective as the kit had no reuse value, meaning that some of the lines even remained 'live' for many years after (*ibid.*, 99). This is evident at the sites within the Galloway Glens area, with a telegraph pole still present even at **S6** despite the underground post having long been demolished.

89. While it was not possible to enter any of the surviving underground posts during these site visits, an earlier visit to the post at **S9** in 2002, recorded on the *Subterranea Britannica* website (https://www.subbrit.org.uk/sites/parton-roc-post/ [accessed 3rd December 2020]), was able to gain access. This record shows that most of the items had been left behind, including paperwork, maps, mattresses and even down to the teapot. This corresponds with the swift abandonment of these structures.

90. After the posts were closed, many reverted to the original landowners, with the Ministry of Defence (MoD) responsible for demolishing each post and returning the land to its former condition (Dalton 2017, 163). When the time came however, the MoD instead paid the local farmers to allow the post to remain on their land: a cheaper option than the more expensive demolition process (*ibid.*). This is likely the reason why three out of the four underground posts have survived and suggests that the removal of the post at **S6** was perhaps not a common occurrence. In this case, its removal appears to have been the choice of the landowner themselves.

91. The posts that remain have all been secured with padlocks which has protected them from vandalism since their closure. The presence of these structures often goes unnoticed by those around them, particularly the underground posts whose very nature makes them hard-to-spot. The role of the ROC and the significance of these features cannot be emphasised enough, however.

92. In 1976, it was estimated that over 150,000 men and women had served in the Corps since it began in 1925 (Wood 1976, ix) and this number will have increased over its continuation until 1991. Only a small number of its members were paid professionals, with thousands of volunteers taking on the responsibility of what could be a very risky and dangerous operation. Not to mention the uncomfortable situation of being holed up in small structures or bunkers for hours or days at a time, in all weather.

93. The physical remains at these sites survive as memorials of their hard work and attest to the changing political climate throughout the 20th century. That distinct structures from

multiple historical periods survive in the same location further demonstrates their significance. On top of this, the way in which the underground posts were abandoned often mean that many of them remain as a sort of 'time capsule' containing direct evidence from their occupation: a rare occurrence within archaeology.

94. A few of the posts have been restored and there are many who continue to try and maintain the knowledge of their existence for future generations. But many of these structures sit forgotten in the fields across Britain and it is hoped that this record can help towards highlighting their importance once more.

Conclusion

95. The field survey of the high ground wrecks on the Corserine provided data that contributed to our understanding of these sites and allowed us to establish their precise GPS location. It was possible to compile a more complete record for the sites including the dimensions of the remaining scars and the size and location of wreckage fragments. This record can act as a baseline which allows the condition of the sites to be monitored in future.

96. Comparison with earlier photographs of both sites indicates that there has been a noticeable amount of disturbance and degradation of the wreckage material in the 80 years since the aircraft crashed. However, in the absence of a previous detailed survey, it is impossible to say for sure what the scale of the degradation has been.

97. The visits to the four ROC posts were also able to establish a precise GPS location for the structures and a thorough photographic record of what remains at each site. While the Orlit post at **S9** has been demolished down to its base slab, the main structure of the Orlit post at **S8** is still extant, although it has been stripped of all features. In contrast, the underground posts at **S7**, **S8** and **S9** all appear to survive intact. With only the underground post at **S6** having been demolished, this appears to reflect the swift abandonment of these structures at the closure of the ROC; evidence which matches the description of the closure gleaned from the written resources. While it was not possible to enter the underground posts during the visits, an earlier record of the post's interior at **S9** found that many of its items, down to the paperwork, remained inside. There is a strong possibility that this is also the case in the posts at both **S7** and **S8**.

98. The significance of both the high ground wreck sites and the ROC posts cannot be overstated. They are the surviving traces of some of the most important aspects of recent military history. The wreck sites highlight the loss of life that occurred in WWII. The ROC posts signify the strength of volunteer work in supporting the British military to navigate the threats (real or perceived) that the country faced in the 20th century. Both survive as a testament to the risks that many were willing to take in defence of their country.

99. The involvement of local volunteers in the survey of these sites allowed them to gain training in archaeological survey and, importantly, managed to bring these sites back into local awareness and knowledge; a factor which these sites need for their continued survival.

Acknowledgements

100. This project is part of a wider Community Archaeology project, 'Can You Dig It', run by the Galloway Glens Landscape Partnership Scheme from February 2019 to March 2020. See www.gallowayglens.org.uk/Resources and follow 'Can You Dig It' for their published outputs. The Community Archaeology project was offered free to volunteers thanks to funding from the National Lottery Heritage Fund and Historic Environment Scotland. The land is owned by the Forrest Estate who were happy to allow us access and were incredibly supportive about the project. Guidance was given by Dumfries and Galloway Council Archaeology Service and members of local heritage societies.

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References

Documentary

Air Ministry Information Bureau 1951 *Join your neighbours in an ROC post*, No. Inf 119

Brown, I., Burridge, D., Clarke, D., Guy, J., Hellis, J., Lowry, B., Ruckley, N. & Thomas, R. 1996 *20th Century Defences in Britain: An introductory guide*, Council for British Archaeology, Practical Handbooks in Archaeology Volume 12 (Revised edition)

Clark, A. 2016a 'Avro Anson Mk.I L9153 of No.12 Elementary and Reserve Flying Training School, Prestwick crashed on Corserine on the 9th January 1939' [online] available at: https://www.peakdistrictaircrashes.co.uk/crash_sites/scotland/avro-anson-l9153-corserine/ [accessed 7th February 2019]

Clark, A. 2016b 'Avro Anson Mk.I DG787 of the Air Navigation & Bombing School crashed on Corserine in the Rhinns of Kells on the 23rd October 1942' [online] available at: https://www.peakdistrictaircrashes.co.uk/crash_sites/scotland/avro-anson-dg787-corserine/ [accessed 25th March 2020]

Clark, A. 2016c 'de Havilland Mosquito N.F. Mk.II DD795 of No.60 OTU crashed on Corserine during the night of the 20th / 21st January 1944' [online] available at: https://www.peakdistrictaircrashes.co.uk/crash_sites/scotland/de-havilland-mosquito-dd795-corserine/ [accessed 25th March 2020]

Dalton, M. 2017 *The Royal Observer Corps Underground Monitoring Posts*, Folly Books Ltd

Decock, J.-P. 2009 *A la mémoire de l'équipage du K-14* [online] available at: https://www.hangarflying.eu/2009/08/a-la-memoire-de-lequipage-du-k-14/ (translated by Google Translate) [accessed 7th February 2019]

Gillon, G. 2011 *Vaclav Jelinek* [online] available at: https://www.findagrave.com/memorial/64821094/vaclav-jelinek [accessed 7th February 2019]

Hastings, M. 1979 *Bomber Command*, Pan Macmillan

HQ ROC 1970 *The Origin and History of the Royal Observer Corps* [online] available at: http://www.roc-heritage.co.uk/uploads/7/6/8/9/7689271/roc_history1970.pdf [accessed 2nd November 2020]

Krischer, S. & Rees, T. 2019 *Galloway Glens Landscape Partnership, Can You Dig It? Community Archaeology Project, Research Design, 1.2.g High Ground Wrecks and the Royal Observer Corps,* unpublished grey literature report by Rathmell Archaeology Ltd

McKinstry, L. 2019 *Galloway Glens Landscape Partnership, Can You Dig It? Community Archaeology Project, Risk Assessment Method Statement, 1.2.g Wrecks – Corserine Hill* unpublished grey literature report by Rathmell Archaeology Ltd

Paine, G. H. 1971 'Setting up and operating the Post Radio Installation', *The Royal Observer Corps Journal*, Vol.13 No. 2, 18-21 [online] available at: http://www.roc-heritage.co.uk/uploads/7/6/8/9/7689271/roc_journal_vol13_no2_feb71_144dpi.pdf [accessed 10th December 2020]

Smith, D. J. 1989 *High Ground Wrecks: A Survey of Aircraft Crash Remains on the Hills and Mountains of the UK and Ireland,* 3rd edition, Midland Counties Publications

Schofield, J. 2004 *Modern military matters, Studying and managing the twentieth-century defence heritage in Britain: a discussion document*, Council for British Archaeology

Winslow, T. E. 1948 *Forwarded is Forearmed: The Authorized History of the Royal Observer Corps,* W Hodge and Co

Wood, D. 1976 *Attack Warning Red: The Royal Observer Corps and the Defence of Britain 1925-1975*, Macdonald and Janes Ltd

Websites

Peak District Air Crashes Research Group:
https://www.peakdistrictaircrashes.co.uk/category/crash_sites/scotland/

Subterranea Britannica, *UKNWMO and ROC posts*:
http://www.subbrit.org.uk/category/nuclear-monitoring-posts

Subterranea Britannica, *Parton ROC post*:
http://www.subbrit.org.uk/rsg/roc/db/989427148.html

Appendix 1: Discovery & Excavation in Scotland

LOCAL AUTHORITY:	Dumfries & Galloway
PROJECT TITLE/SITE NAME:	Galloway Glens – High Ground Wrecks and Royal Observer Corps Posts
PROJECT CODE:	RA18107
PARISH:	Carsphairn; Kells; Dalry; Parton; Kelton
NAME OF CONTRIBUTOR:	Sarah Krischer, Thomas Rees and Claire Williamson
NAME OF ORGANISATION:	Rathmell Archaeology Limited
TYPE(S) OF PROJECT:	Field Survey
NMRS NO(S):	-
SITE/MONUMENT TYPE(S):	-
SIGNIFICANT FINDS:	None
NGR (2 letters, 8 or 10 figures)	NX 76804 62300 - NX 56089 93347 - NX 49695 87180
START DATE (this season)	20th June 2019
END DATE (this season)	10th October 2019
PREVIOUS WORK (incl. *DES* ref.)	None
MAIN (NARRATIVE) DESCRIPTION: (may include information from other fields)	The field survey of the high ground wrecks on the Corserine provided data that contributed to our understanding of these sites and allowed us to establish their precise GPS location. It was possible to compile a more complete record for the sites including the dimensions of the remaining scars and the size and location of wreckage fragments. This record can act as a baseline which allows the condition of the sites to be monitored in future. Comparison with earlier photographs of both sites indicates that there has been a noticeable amount of disturbance and degradation of the wreckage material in the 80 years since the aircraft crashed. However, in the absence of a previous detailed survey, it is impossible to say for sure what the scale of the degradation has been. The visits to the four ROC posts were also able to establish a precise GPS location for the structures and a thorough photographic record of what remains at each site. While the Orlit post at **S9** has been demolished down to its base slab, the main structure of the Orlit post at **S8** is still extant, although it has been stripped of all features. In contrast, the underground posts at **S7**, **S8** and **S9** all appear to survive intact. With only the underground post at **S6** having been demolished, this appears to reflect the swift abandonment of these structures at the closure of the ROC; evidence which matches the description of the closure gleaned from the written resources. While it was not possible to enter the underground posts during the visits, an earlier record of the post's interior at **S9** found that many of its items, down to the paperwork, remained inside. There is a strong possibility that this is also the case in the posts at both **S7** and **S8**. The significance of both the high ground wreck sites and the ROC posts cannot be overstated. They are the surviving traces of some of the most important aspects of recent military history. The wreck sites highlight the loss of life that occurred in WWII. The ROC posts signify the strength of volunteer work in supporting the British military to navigate the threats (real or perceived) that the country faced in the

	20th century. Both survive as a testament to the risks that many were willing to take in defence of their country. The involvement of local volunteers in the survey of these sites allowed them to gain training in archaeological survey and, importantly, managed to bring these sites back into local awareness and knowledge; a factor which these sites need for their continued survival.
PROPOSED FUTURE WORK:	None
CAPTION(S) FOR ILLUSTRS:	None
SPONSOR OR FUNDING BODY:	The Galloway Glens Landscape Partnership Scheme (part of Dumfries & Galloway Council), externally funded by Historic Environment Scotland and the Heritage Fund
ADDRESS OF MAIN CONTRIBUTOR:	Unit 8 Ashgrove Workshops, Kilwinning, Ayrshire KA13 6PU
EMAIL:	contact@rathmell-arch.co.uk
ARCHIVE LOCATION (intended/deposited)	Report to Dumfries & Galloway Archaeology Service and archive to National Record of the Historic Environment.

Appendix 2: Registers

103. Appendix 1, which contains all registers pertaining to the works on site during the survey

Photographic Register

Image	Digital	Description	From	Date
1	8704	General shot – group at summit cairn	-	20/06/19
2	8705	General shot – group at summit cairn	-	20/06/19
3	8706	General shot- group surveying site **S3**	SE	20/06/19
4	8707	General shot- group surveying site **S3**	SE	20/06/19
5	8708	General shot- group surveying site **S3**	SE	20/06/19
6	8709	General shot- group surveying site **S3**	SE	20/06/19
7	8710	General shot- group surveying site **S3**	SSE	20/06/19
8	8711	**S3** - Detail shot	E	20/06/19
9	8712	**S3** - Detail shot	E	20/06/19
10	8713	**S3** - Detail shot	N	20/06/19
11	8714	Detail shot of wreckage – **S3**	-	20/06/19
12	8715	Detail shot of wreckage – **S3**	-	20/06/19
13	8716	Detail shot of wreckage – **S3**	-	20/06/19
14	8717	Detail shot of wreckage – **S3**	-	20/06/19
15	8718	Detail shot of wreckage – **S3**	-	20/06/19
16	8719	Detail shot of wreckage – **S3**	-	20/06/19
17	8720	General shot of group at **S3**	-	20/06/19
18	8721	General shot of **S3**	ESE	20/06/19
19	8722	General shot of **S3**	ESE	20/06/19
20	8723	General shot of **S3**	SSE	20/06/19
21	8724	General shot of **S3**	SSE	20/06/19
22	8725	General shot of **S3**	SSE	20/06/19

Image	Digital	Description	From	Date
23	8726	General shot of **S3**	S	20/06/19
24	8727	General shot of **S3**	SW	20/06/19
25	8728	General shot of **S3**	SW	20/06/19
26	8729	General shot of **S3**	SE	20/06/19
27	8730	General shot of **S3**	SSE	20/06/19
28	8731	General shot of **S3**	SSE	20/06/19
29	8732	General shot of **S3**	SSE	20/06/19
30	8733	Tom at the top	-	20/06/19
31	8734	Wreckage – **S4** detail shot	-	20/06/19
32	8735	Working shot – surveying	-	20/06/19
33	8736	Detail of wreckage **S4**	-	20/06/19
34	8737	Detail shot of **S4**	-	20/06/19
35	8738	Detail shot of **S4**	-	20/06/19
36	8739	Detail shot of **S4**	-	20/06/19
37	8740	Working shot of **S4**	-	20/06/19
38	8741	Detail shot of **S4**	-	20/06/19
39	8742	Detail shot of **S4**	-	20/06/19
40	8743	Detail shot of **S4**	-	20/06/19
41	8744	Detail shot of **S4**	-	20/06/19
42	8745	Detail shot of **S4**	SW	20/06/19
43	8746	Detail shot of **S4**	-	20/06/19
44	8747	Detail shot of **S4**	-	20/06/19
45	8748	Working shot of **S4**	-	20/06/19
46	8749	Working shot of **S4**	-	20/06/19
47	8750	Working shot of **S4**	-	20/06/19

Image	Digital	Description	From	Date
48	8751	Working shot of **S4**	SW	20/06/19
49	8752	Group shot at **S4**	SW	20/06/19
50	8753	Group shot at **S4**	-	20/06/19
51	8754	Group shot at **S4**	-	20/06/19
52	8755	General shot of **S4**	S	20/06/19
53	8756	General shot of **S4**	S	20/06/19
54	8757	General shot of **S4**	SW	20/06/19
55	8558	General shot of **S4**	SW	20/06/19
56	8559	General shot of **S4**	WSW	20/06/19
57	8560	General shot of **S4**	WSW	20/06/19
58	8561	General shot of **S4**	WSW	20/06/19
59	8562	General shot of **S4**	NW	20/06/19
60	8663	General view from top	W	20/06/19
61	8764	General view from top	W	20/06/19
62	8765	Group shot	-	20/06/19
63	8766	Group shot with view	-	20/06/19
64	8767	Group shot with view	-	20/06/19
65	1144	General shot	-	26/07/19
66	1145	General shot	-	26/07/19
67	1146	General shot	-	26/07/19
68	1147	Detail shot of **S3**	-	26/07/19
69	1148	Detail shot of **S3**	-	26/07/19
70	1149	Detail shot of **S3**	-	26/07/19
71	1150	Detail shot of **S3**	-	26/07/19
72	1151	Detail shot of **S3**	-	26/07/19

Image	Digital	Description	From	Date
73	1152	Detail shot of **S3**	-	26/07/19
74	1153	General shot of **S3**	E	26/07/19
75	1154	Detail shot of **S3**	SE	26/07/19
76	1155	Detail shot of **S3**	SE	26/07/19
77	1156	Trig point	-	26/07/19
78	1157	General shot	-	26/07/19
79	1158	General shot	-	26/07/19
80	1159	General shot	SW	26/07/19
81	1160	General shot (with dogs)	SW	26/07/19
82	1161	General shot	NE	26/07/19
83	1162	Detail shot of **S4**	-	26/07/19
84	1163	Detail shot of **S4**	-	26/07/19
85	1164	Detail shot of **S4**	-	26/07/19
86	1165	Detail shot of **S4**	-	26/07/19
87	1166	General shot of **S4**	SE	26/07/19
88	1167	General shot of **S4**	SW	26/07/19
89	1168	Detail shot of **S4**	-	26/07/19
90	1169	Detail shot of **S4**	NW	26/07/19
91	1170	General shot of **S4**	SW	26/07/19
92	1171	Detail shot of **S4**	SW	26/07/19
93	001	**S9**, Orlit Type A post with underground post in the background	-	10/10/19
94	002	**S9**, Underground post – General view	-	10/10/19
95	003	**S9**, Underground post – General view	-	10/10/19
96	004	**S9**, Underground post – General view	-	10/10/19
97	005	**S9**, Underground post – General view	-	10/10/19

Image	Digital	Description	From	Date
98	006	**S9**, Underground post – General view	-	10/10/19
99	007	**S9**, Underground post – General view	-	10/10/19
100	008	**S9**, Underground post – General view	-	10/10/19
101	009	**S9**, Underground post – General view	-	10/10/19
102	010	**S9**, Underground post – General view	-	10/10/19
103	011	**S9**, base slab remaining of Orlit post with underground post in the background	-	10/10/19
104	012	**S9**, base slab remaining of Orlit post	-	10/10/19
105	013	**S6**, Site of underground post – General view	-	10/10/19
106	014	**S6**, Site of underground post – General view	-	10/10/19
107	015	**S6**, Site of underground post – General view	-	10/10/19
108	016	**S6**, Site of underground post – General view	-	10/10/19
109	017	**S6**, Site of underground post – General view	-	10/10/19
110	018	**S6**, Site of underground post – General view	-	10/10/19
111	019	**S6**, Site of underground post – General view	-	10/10/19
112	020	**S6**, Site of underground post – General view	-	10/10/19
113	021	**S6**, Site of underground post – General view	-	10/10/19
114	022	**S6**, Site of underground post – General view	-	10/10/19
115	023	**S6**, Site of underground post – General view	-	10/10/19
116	024	Voided	-	-
117	025	Voided	-	-
118	026	**S8**, Underground post – General view	-	10/10/19
119	027	**S8**, Underground post – General view	-	10/10/19
120	028	**S8**, Underground post – General view	-	10/10/19
121	029	**S8**, Underground post – General view	-	10/10/19
122	030	**S8**, Underground post – General view	-	10/10/19

Image	Digital	Description	From	Date
123	031	**S8**, Underground post – Detail of access hatch	-	10/10/19
124	032	**S8**, Underground post – Detail of air vent	-	10/10/19
125	033	**S8**, Underground post – General view	-	10/10/19
126	034	**S8**, Underground post – General view	-	10/10/19
127	035	**S8**, Underground post – Detail of access hatch	-	10/10/19
128	036	**S8**, Underground post – Detail of access hatch	-	10/10/19
129	037	**S8**, Underground post – General view of access hatch and air vent	-	10/10/19
130	038	**S8**, Underground post – General view of access hatch and air vent	-	10/10/19
131	039	**S8**, Underground post – General view of access hatch and air vent	-	10/10/19
132	040	**S8**, Underground post – General view of access hatch and air vent	-	10/10/19
133	041	**S8**, Underground post – General view of access hatch and air vent	-	10/10/19
134	042	**S8**, Underground post – General view of access hatch and air vent	-	10/10/19
135	043	**S8**, Underground post – General view of access hatch and air vent	-	10/10/19
136	044	**S8**, Underground post – General view of access hatch and air vent	-	10/10/19
137	045	**S8**, Underground post – General view of access hatch and air vent	-	10/10/19
138	046	**S8**, Underground post – General view of access hatch and air vent	-	10/10/19
139	047	**S8**, Underground post – General view of access hatch and air vent	-	10/10/19
140	048	**S8**, Underground post – General view of access hatch and air vent	-	10/10/19
141	049	**S8**, Underground post – General view of access hatch and air vent	-	10/10/19
142	050	**S8**, Underground post – General view of access hatch and air vent	-	10/10/19
143	051	**S8**, Underground post – General view of access hatch and air vent	-	10/10/19
144	052	**S8**, Underground post – General view of access hatch and air vent	-	10/10/19
145	053	**S8**, Underground post – General view of access hatch and air vent	-	10/10/19
146	054	**S8**, Underground post – General view of access hatch and air vent	-	10/10/19
147	055	**S8**, Underground post – General view of access hatch and air vent	-	10/10/19

Image	Digital	Description	From	Date
148	056	**S8**, Underground post – General view of access hatch and air vent	-	10/10/19
149	057	**S8**, Underground post – Detail of access hatch and air vent	-	10/10/19
150	058	**S8**, Underground post – Detail of access hatch and air vent	-	10/10/19
151	059	**S8**, Underground post – Detail of access hatch and air vent	-	10/10/19
152	060	**S8**, Underground post – Detail of access hatch and air vent	-	10/10/19
153	061	**S8**, Underground post – Detail of access hatch and air vent	-	10/10/19
154	062	**S8**, Underground post – Detail of access hatch and air vent	-	10/10/19
155	063	**S8**, Underground post – Detail of access hatch and air vent	-	10/10/19
156	064	**S8**, Underground post – Detail of access hatch and air vent	-	10/10/19
157	065	**S8**, Underground post – Detail of access hatch and air vent	-	10/10/19
158	066	**S8**, Underground post – Detail of access hatch and air vent	-	10/10/19
159	067	**S8**, Underground post – Detail of access hatch and air vent	-	10/10/19
160	068	**S8**, Underground post – Detail of access hatch and air vent	-	10/10/19
161	069	**S8**, Underground post – Detail of access hatch and air vent	-	10/10/19
162	070	**S8**, Underground post – Detail of access hatch and air vent	-	10/10/19
163	071	**S8**, Underground post – Detail of access hatch and air vent	-	10/10/19
164	072	**S8**, Underground post – Detail of access hatch and air vent	-	10/10/19
165	073	**S8**, Underground post – Detail of access hatch and air vent	-	10/10/19
166	074	**S8**, Underground post – Detail of access hatch and air vent	-	10/10/19
167	075	**S8**, Underground post – Detail of access hatch and air vent	-	10/10/19
168	076	**S8**, Underground post – Detail of access hatch and air vent	-	10/10/19
169	077	**S8**, Underground post – Fixed survey meter probe and air vent	-	10/10/19
170	078	**S8**, Underground post – Fixed survey meter probe and air vent	-	10/10/19
171	079	**S8**, Underground post – Air vent	-	10/10/19
172	080	**S8**, Underground post – Air vent	-	10/10/19

Image	Digital	Description	From	Date
173	081	**S8**, Underground post – Air vent	-	10/10/19
174	082	**S8**, Underground post – Air vent	-	10/10/19
175	083	**S8**, Underground post – Air vent	-	10/10/19
176	084	**S8**, Underground post – Air vent	-	10/10/19
177	085	**S8**, Underground post – Air vent	-	10/10/19
178	086	**S8**, Underground post – Air vent	-	10/10/19
179	087	**S8**, Underground post – Air vent	-	10/10/19
180	088	**S8**, Underground post – Air vent	-	10/10/19
181	089	**S8**, Underground post – Air vent	-	10/10/19
182	090	**S8**, Underground post – Air vent	-	10/10/19
183	091	**S8**, Underground post – Air vent	-	10/10/19
184	092	**S8**, Underground post – Air vent	-	10/10/19
185	093	**S8**, Underground post – Air vent	-	10/10/19
186	094	**S8**, Underground post – Air vent	-	10/10/19
187	095	**S8**, Underground post – Air vent	-	10/10/19
188	096	**S8**, Underground post – Fixed survey meter probe and possible site of Bomb Power Indicator baffle plate	-	10/10/19
189	097	**S8**, Underground post – Possible site of Bomb Power Indicator baffle plate	-	10/10/19
190	098	**S8**, Underground post – Possible site of Bomb Power Indicator baffle plate	-	10/10/19
191	099	**S8**, Underground post – Fixed survey meter probe	-	10/10/19
192	100	**S8**, Underground post – Fixed survey meter probe	-	10/10/19
193	101	**S8**, Underground post – Fixed survey meter probe	-	10/10/19
194	102	**S8**, Underground post – Fixed survey meter probe	-	10/10/19
195	103	**S8**, Underground post – Fixed survey meter probe	-	10/10/19
196	104	**S8**, Underground post – Fixed survey meter probe	-	10/10/19
197	105	**S8**, Underground post – Fixed survey meter probe	-	10/10/19

Image	Digital	Description	From	Date
198	106	**S8**, Underground post – Fixed survey meter probe	-	10/10/19
199	107	**S8**, Underground post – Fixed survey meter probe	-	10/10/19
200	108	**S8**, Underground post – General view	-	10/10/19
201	109	**S8**, Underground post – General view	-	10/10/19
202	110	**S8**, Underground post – General view	-	10/10/19
203	111	**S8**, Underground post – General view	-	10/10/19
204	112	**S8**, Underground post – General view	-	10/10/19
205	113	**S8**, Underground post – General view	-	10/10/19
206	114	**S8**, Underground post – General view	-	10/10/19
207	115	**S8**, Underground post – General view	-	10/10/19
208	116	**S8**, Underground post – General view	-	10/10/19
209	117	**S8**, Underground post – General view	-	10/10/19
210	118	**S8**, Underground post – General view	-	10/10/19
211	119	**S8**, Underground post – General view	-	10/10/19
212	120	**S8**, Underground post – General view	-	10/10/19
213	121	**S8**, Underground post – General view	-	10/10/19
214	122	**S8**, Underground post – General view	-	10/10/19
215	123	**S8**, Underground post – General view	-	10/10/19
216	124	**S8**, Underground post – General view	-	10/10/19
217	125	**S8**, Underground post – General view	-	10/10/19
218	126	**S8**, Underground post – General view	-	10/10/19
219	127	**S8**, Underground post – General view	-	10/10/19
220	128	**S8**, Underground post – General view	-	10/10/19
221	129	**S8**, Underground post – General view	-	10/10/19
222	130	**S8**, Underground post – General view	-	10/10/19

Image	Digital	Description	From	Date
223	131	**S8**, Underground post – General view	-	10/10/19
224	132	**S8**, Underground post – General view	-	10/10/19
225	133	**S8**, Underground post – General view	-	10/10/19
226	134	**S8**, Underground post – General view	-	10/10/19
227	135	**S8**, Underground post – General view	-	10/10/19
228	136	**S8**, Underground post – General view	-	10/10/19
229	137	**S8**, Underground post – General view	-	10/10/19
230	138	**S8**, Underground post – General view	-	10/10/19
231	139	**S8**, Underground post – 'BT' phoneline access	-	10/10/19
232	140	Voided	-	-
233	141	Voided	-	-
234	142	**S8**, Underground post – 'BT' phoneline access	-	10/10/19
235	143	Voided	-	-
236	144	**S8**, Underground post – 'BT' phoneline access	-	10/10/19
237	145	**S8**, Underground post – General view	-	10/10/19
238	146	**S8**, Underground post – General view	-	10/10/19
239	147	**S8**, Underground post – General view	-	10/10/19
240	148	**S8**, Underground post – General view	-	10/10/19
241	149	**S8**, Underground post – General view	-	10/10/19
242	150	**S8**, Underground post – General view	-	10/10/19
243	151	**S8**, Underground post – General view	-	10/10/19
244	152	**S8**, Underground post – General view	-	10/10/19
245	153	**S8**, Underground post – General view	-	10/10/19
246	154	**S8**, Underground post – General view	-	10/10/19
247	155	**S8**, Underground post – General view	-	10/10/19

Image	Digital	Description	From	Date
248	156	**S8**, Underground post – General view	-	10/10/19
249	157	**S8**, Underground post – General view	-	10/10/19
250	158	**S8**, Orlit post – General view	-	10/10/19
251	159	**S8**, Orlit post – General view	-	10/10/19
252	160	**S8**, Orlit post – General view	-	10/10/19
253	161	**S8**, Orlit post – General view	-	10/10/19
254	162	**S8**, Orlit post – Interior	-	10/10/19
255	163	**S8**, Orlit post – Interior	-	10/10/19
256	164	**S8**, Orlit post – Interior	-	10/10/19
257	165	**S8**, Orlit post – Interior	-	10/10/19
258	166	**S8**, Orlit post – General view	-	10/10/19
259	167	**S8**, Orlit post – General view	-	10/10/19
260	168	**S8**, Orlit post – General view	-	10/10/19
261	169	**S8**, Orlit post – General view	-	10/10/19
262	170	**S8**, Orlit post – General view	-	10/10/19
263	171	**S8**, Orlit post – General view	-	10/10/19
264	172	**S8**, Orlit post – Interior	-	10/10/19
265	173	**S8**, Orlit post – Detail shot	-	10/10/19
266	174	**S8**, Orlit post – Detail shot	-	10/10/19
267	175	**S8**, Orlit post – Detail shot	-	10/10/19
268	176	**S8**, Orlit post – Detail shot	-	10/10/19
269	177	**S8**, Orlit post – Detail shot	-	10/10/19
270	178	**S8**, Orlit post – Detail shot	-	10/10/19
271	179	**S8**, Orlit post – Detail shot	-	10/10/19
272	180	**S8**, Orlit post – Detail shot	-	10/10/19

Image	Digital	Description	From	Date
273	181	**S8**, Orlit post – Detail shot	-	10/10/19
274	182	**S8**, Orlit post – Detail shot	-	10/10/19
275	183	**S8**, Orlit post – Detail shot	-	10/10/19
276	184	**S8**, Orlit post – Detail shot	-	10/10/19
277	185	**S8**, Orlit post – Detail shot	-	10/10/19
278	186	**S8**, Orlit post – Detail shot	-	10/10/19
279	187	**S8**, Orlit post – Detail shot	-	10/10/19
280	188	**S8**, Orlit post – General view	-	10/10/19
281	189	**S8**, Orlit post – General view	-	10/10/19
282	190	**S8**, Orlit post – General view	-	10/10/19
283	191	**S8**, Orlit post – General view	-	10/10/19
284	192	**S8**, Orlit post – General view	-	10/10/19
285	193	**S8**, Orlit post – General view	-	10/10/19
286	194	**S8**, Orlit post – General view	-	10/10/19
287	195	**S8**, Orlit post – General view	-	10/10/19
288	196	**S8**, Orlit post – General view	-	10/10/19
289	197	**S7** – Fallen flag post	-	10/10/19
290	198	**S7** – Fallen flag post	-	10/10/19
291	199	**S7**, Underground post – General view	-	10/10/19
292	200	**S7**, Underground post – General view	-	10/10/19
293	201	**S7**, Underground post – General view	-	10/10/19
294	202	**S7**, Underground post – Access hatch	-	10/10/19
295	203	**S7**, Underground post – Air vent	-	10/10/19
296	204	**S7**, Underground post – General view	-	10/10/19
297	205	**S7**, Underground post – General view	-	10/10/19

Image	Digital	Description	From	Date
298	206	**S7**, Underground post – General view	-	10/10/19
299	207	**S7**, Underground post – General view	-	10/10/19
300	208	**S7**, Underground post – General view	-	10/10/19
301	209	**S7**, Underground post – General view	-	10/10/19
302	210	**S7**, Underground post – General view	-	10/10/19
303	211	**S7**, Underground post – General view	-	10/10/19

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