



**UNIVERSITY OF LEEDS**

This is a repository copy of *Sounds from the Bunker: Aural Culture and the Remainder of the Cold War*.

White Rose Research Online URL for this paper:  
<https://eprints.whiterose.ac.uk/155371/>

Version: Accepted Version

---

**Article:**

Wilson, LK (2020) *Sounds from the Bunker: Aural Culture and the Remainder of the Cold War*. *Journal of War and Culture Studies*, 13 (1). pp. 33-53. ISSN 1752-6272

<https://doi.org/10.1080/17526272.2019.1705597>

---

© 2019, Informa UK Limited, trading as Taylor & Francis Group. This is an author produced version of a journal article published in the *Journal of War & Culture Studies*. Uploaded in accordance with the publisher's self-archiving policy.

**Reuse**

Items deposited in White Rose Research Online are protected by copyright, with all rights reserved unless indicated otherwise. They may be downloaded and/or printed for private study, or other acts as permitted by national copyright laws. The publisher or other rights holders may allow further reproduction and re-use of the full text version. This is indicated by the licence information on the White Rose Research Online record for the item.

**Takedown**

If you consider content in White Rose Research Online to be in breach of UK law, please notify us by emailing [eprints@whiterose.ac.uk](mailto:eprints@whiterose.ac.uk) including the URL of the record and the reason for the withdrawal request.



[eprints@whiterose.ac.uk](mailto:eprints@whiterose.ac.uk)  
<https://eprints.whiterose.ac.uk/>

# **Sounds from the Bunker: aural culture and the remainder of the Cold War**

Louise K Wilson

*School of Design, University of Leeds, Leeds, UK*

School of Design

University of Leeds

Leeds

LS2 9JT

[l.k.wilson@leeds.ac.uk](mailto:l.k.wilson@leeds.ac.uk)

## Sounds from the Bunker: aural culture and the remainder of the Cold War

This article explores the aural culture of the Cold War bunker. First by considering the insinuation of nuclear war (and attempts to survive it) into early 1980s UK popular music (and its echo in contemporary – ironic or nostalgic pastiche). Secondly by examining the increasing use of decommissioned bunkers as performance venues, some as decontextualized atmospheric backdrops, others with a greater attentiveness to heritage and its interpretation. Lastly, the article considers the experience of my own act of cultural production in making a BBC Radio 4 documentary (*Cold Art*, broadcast in 2018) by exploring the resonant spaces of three Cold War sites, and the complex attraction these structures hold for artists and musicians. Across the article, these three instances of ‘sounds from the bunker’ are critically examined in order to explore the notion of the cultural politics of cultural appropriation and memory/trauma re-working, as a creative practice.

Keywords: aural culture; Cold War; nuclear war; bunkers; popular music; Impulse Response; Teufelsberg

Visual modes of representation are the dominant form of the bunker’s cultural reproduction in contemporary culture. This article will explore the less commonly considered aural culture of the Cold War bunker. The infiltration of the bunker as a motif into early 1980s popular music will be considered firstly in relation to music, with primary reference to Frankie Goes to Hollywood’s *Two Tribes* (1984) and its nostalgic-ironic revival in Luke Haines’ 2015 album, *British Nuclear Bunkers*. Secondly, the more recent phenomenon of using decommissioned bunkers as performance venues will be considered, differentiating between those that have served as atmospheric backdrops or in other instances, provided more contextually relevant locations. Lastly, the experience of my own act of cultural production in making a BBC Radio 4 documentary (broadcast in 2018) exploring the resonant spaces of three Cold War sites will be

examined. The complex attraction these structures hold for artists and musicians primarily motivated the investigation underlining *Cold Art*. These instances of sounds from the bunker will be critically examined in order to explore the notion of the cultural politics of cultural appropriation and memory/trauma re-working, as a creative practice.

## **1 Two Tribes**

The Cold War certainly exerted a tangible effect as “one of the defining phenomena of the late twentieth century” (Slessor, 2004, unnumbered). The fear it engendered was markedly different from that prompted by earlier conflicts. Previously unimaginable elements – driven by techno-scientific development - were present and affective. Uncertainty was omnipresent, often coalescing around questions about the actual Soviet threat, anxiety about the reliability and safety of machinery and control devices and the responsibility of those entrusted with the ‘button’ (Bourke, 2005, p.284-5). Ethical and moral certainties became increasingly fragile during the so-called ‘second Cold War’ (from the end of the 1970s through to the mid 1980s), as tensions between the Superpowers intensified. Lives were touched in profound ways, not least with the prolonged persistence of fear. Historian Joanna Bourke writes that in 1983 “over half of all teenagers in the United Kingdom believed that a nuclear war would occur in their lifetime, and nearly three-quarters believed it was inevitable at some point in the future” (Bourke, 2005, p.259). Paradoxically, the fear of annihilation and the effects of radiation either galvanised (political) action or provoked inertia (p.266). Membership of CND (the Campaign for Nuclear Disarmament) was, for example, at its highest level - claiming 90,000 national members and 250,000 in local branches in the

early 1980s (Hinton, 1997, p.63). Dissent was made audible by cultural means as songwriters sought to represent and respond to the issues raised by the Cold War.

With the arrival of American nuclear missiles at RAF Greenham Common (in Berkshire) in the early 1980s, the Cold War became more tangibly felt on English soil. Britain was viewed as a target and the anger at this Governmental decision triggered active and high profile protest. Greenham became rapidly synonymous as “the most controversial nuclear site in the country and the focus for anti-nuclear protesters” (Cocroft and Thomas, 2003, p.76). A women's peace camp was established in September 1981 after a Welsh group called ‘Women for Life on Earth’ marched from Cardiff to set up benders and tents on the (then) common land at the entrance of the base (<http://www.greenhamwpc.org.uk/>). The following year it was decided that the peace camp should adhere to a ‘women only’ edict - to avoid sexual violence known to have occurred at other mixed gender peace camps and more positively - to mobilise their status as mothers and daughters – in protest against militarism. A distinctive visual and aural culture of activism was born, achieving much media publicity. At symbolic events and blockades - which included protestors forming a human chain that stretched for 14 miles from Greenham to Aldermaston and the ordnance factory at Burghfield (1983) and attempts to encircle and breach the perimeter fence - singing played a major role (see *The Greenham Songbook* for an archive of lyrics<sup>1</sup>).

The focal point of the women’s protest was the construction of the six hardened shelters built to house the Cruise missiles. The women staged incursions into the high security zone, using song and dancing in human chains upon the part-built concrete

---

<sup>1</sup> Available at <https://www.theguardian.com/yourgreenham/songbook/0,,2071798,00.html>

structures, which were commonly referred to as ‘silos’ by the peace women (The Guardian, 2017; Welch, 2010). The use of song exemplified a particular style of non-violent direct action exemplified well in Beeban Kidron’s 1983 documentary film *Carry Greenham Home* which offers vivid insights into the protesters’ distinctive aural tactics.<sup>2</sup> The positivity of protest singing met the brutal, warlike masculinity of these military structures, summoning a particularly pastoral horror. Stored nuclear weapons, as Matthew Flintham notes, endowed spaces “with an apocalyptic charge: the triple-fenced perimeters and the ‘sterile’ zones around the hardened bunkers all spoke of difference, exclusion and ultimately the absence of life on earth” (Flintham, 2012).

Within this wider political context, popular music compositions around this time explored and condensed the threat of nuclear apocalypse and while some were album tracks, others achieved high chart ratings. “Musically the Cold War was [always] accompanied by a soundtrack of popular music” (Cocroft, 2005, p.88) and these popular 1980s tracks represented the ‘softer’ relations of the more cathartic anarchy/punk band offerings which explored armaments and masculinity. *Nagasaki Nightmare* by Crass, 1981 and *Take the toys from the boys* (which featured on band allies Poison Girls’ *Real Woman* single, 1984) arguably linked more directly to the intense vocality of the anti-nuclear protestors. But even these ‘softer’ relations brought the iconography of nuclear

---

<sup>2</sup> Popular protest songs included *You Can’t Kill the Spirit*, which featured in Sue Townsend’s novel *The Growing Pains of Adrian Mole* (1984) when the teenager’s feminist mother briefly joined the Peace Camp. As Christina Welch argues “(t)he inclusion of the protest camp, and arguably its most notable chant, in this widely read popular novel reflected the notoriety of Greenham Common Peace Camp in contemporary British society” (Welch, 2010, p.234.). Certainly the Greenham songs fused with a strong symbolic culture that was made visible in the use of archetypal images such as the spiders’ webs (Welch, 2010).

war and its shelter-spaces into popular culture, making the bunker present in everyday discourse. Stephen Prince lists some of the better known pop songs (OMD, Ultravox, Nena, Strawberry Switchblade and so on) and makes the critical point that because of the supremacy and visible role of the charts in the UK at that time, records then had more 'reach' and prevalence in the general consciousness (Prince, 2018, p.113). These songs touched on generalized fears of past events (OMD's *Enola Gay*, released in 1980) and anxieties around future fictions (Ultravox's 1984 single *Dancing with tears in my eyes*). *Two Tribes* by Frankie Goes to Hollywood, released in 1984, however is widely remembered for having the most significant and timely impact (lasting for nine weeks at number one in the UK charts). This Liverpool band, who achieved notoriety with their debut single *Relax* when the BBC banned airplay, had originally recorded the song for a BBC Radio 1 John Peel Session (in 1982). As a commentator observed "in terms of the song's ability to capture the paranoia and futility of the last days of the Cold War, it remains peerless" as an "eloquent summary of the political geopolitical landscape at the beginning of the '80s" (Maconie, 2016). The unnerving appropriation of narration from the *Protect and Survive* films, playful use of musical references and a memorably satirical video, touched a widespread nerve.

Writer and journalist Dorian Lynskey has commented on serendipitous first encounters with music on the radio, and specifically the impact of hearing *Two Tribes* as a child. It "made more sense to my ten year old mind than any love song (..) like an adult secret had suddenly been made public in the most irreverent unlicensed way" he observed (Lynskey, 2012). Cold War dread *could* be fun then, amply demonstrated in a track that conflates "war, sex and dancing to the extent that you are unsure which of these activities is right and which wrong" (Lynskey, 2010, p. 464). Musically, the dual

Superpower ideologies are encoded within the song's melodic structure, as songwriter and Frankie lead singer Holly Johnson noted: "There's two elements in the music — an American funk line and a Russian line. It's the most obvious demonstration of two tribes that we have today" (Tennant, 1984). Lavish post-production was by Trevor Horn whose arrangement of the 'Russian' segments as “a dramatic string arrangement to accentuate the musical tension. The driving funk/rock rhythm section was played on synthesisers” (Tennant, 1984). The video (directed by Godley & Creme) depicted US president Ronald Reagan and USSR president Konstantin Chernenko lookalikes engaged in a macho and vicious wrestling match, egged up by an audience of ‘United Nations’, and ending with the Earth exploding.

Just as sober geopolitical themes could be commodified into ironic 1980s culture, so could the practices of nuclear attack preparedness and shelter-making. The track *Two Tribes* featured a snippet of narration from actor Patrick Allen, recreating his commentary from the British ‘Protect and Survive’ public information films outlining how to survive a nuclear war by turning homes into improvised bunkers. He was, apparently, hired for around £1000 by ZTT (Frankie's management company) but initially balked at reciting the lines, purportedly saying “I don't think I can do this. Where have you got this from? You know I had to sign the Official Secrets Act before I did this?”, before electing to participate”.<sup>3</sup>

The UK Government's *Protect and Survive* films (and booklets) were made for broadcast and distribution in the event of imminent nuclear attack with instructions

---

<sup>3</sup> From a UK Sky Arts TV series, *Trailblazers Of* (Prince, 2018, p.116).



detailing advice and instruction to improve the public's chance of survival. These included "the recognition of attack warning, fallout warning, and all-clear signals, the preparation of a home "fallout room" and the stockpiling of food, water, and other emergency supplies (..) In the opinion of some contemporary critics, however, the *Protect and Survive* films were deeply and surprisingly fatalistic in tone" (National Archives, [http://www.nationalarchives.gov.uk/films/1964to1979/filmpage\\_warnings.htm](http://www.nationalarchives.gov.uk/films/1964to1979/filmpage_warnings.htm)). The leaflet took fear right to the core of the home – survival was presented as the responsibility of individual families. Indeed its animated logo shows two adults with two children, encircled by the words 'Protect and Survive' set against a strident electronics musical jingle (composed by Roger Limb, also known for his work on Doctor Who at the BBC Radiophonic Workshop). As the jingle reaches "a harmonic resolution, the words become a solid line protecting the family - the same symbol used earlier in the film to symbolise the inner refuge. The signal is clear - follow our instructions and things might be all right".<sup>4</sup> The video and published material (that is, the booklet series) are now exhibited in multiple museological contexts (including on a loop format at the privately-owned Kelvedon Hatch Secret Nuclear Bunker in Essex and incorporated within displays at the Imperial War Museum, London and Imperial War Museum North, Salford). In *Walking in Ruins* (2013), Geoff Nicolson recounts a visit made to Kelvedon Hatch where videos were shown on old television sets in some of the small, empty rooms including this "notorious" series of "twenty short episodes, basic animation, strangely ahead-of-its-time electronic music, and a voice-over by Patrick Allen, deeply unsympathetic and unreassuring, though you imagine he was supposed to

---

<sup>4</sup> <http://news.bbc.co.uk/1/hi/magazine/4743384.stm>

be both" (Nicolson, 2013, p.69). These films may be "essentially risible" but *are* still "genuinely creepy, genuinely unsettling" (69). Since the underground bunker at Kelvedon (125 feet underground) is entered through an ordinary looking bungalow, the home/family relationship is already suggested. Displayed in real bunkers (at Kelvedon Hatch and also at York Bunker, as part of a longer documentary), this material still has the power to be disturbingly affective.

Following the end of the Cold War and the closure and dismantling of numerous related sites, bunkers have become more 'visible', accessible (in some circumstances) and referenced in wide ranging cultural works. From TV comedies (*You, Me and the Apocalypse*, 2015), to horror films (*10 Cloverfield Lane*, 2016) to experimental music such as 2014's *The Quieted Bunker* (2014), a whole album of contributions from different musicians that included "field recording subterranean ambience, paranoid industrial distortion, Radiophonic inflected electronica and elegiac end of days sequences" (Prince, 2018, p.139) reflecting on "these chimeric bulwarks and the faded but still present memory of associated Cold War dread, of which they are stalwart but mouldering symbols" (p.140). Such cultural production reflects the persistence – in abandonment – of now accessible Cold War architectures in various states of care - from maintained to ruined. This cultural appropriation of another era's anxieties often seems to have a nostalgic edge to it. Thus maverick musician Luke Haines' 2015 album *British Nuclear Bunkers* (Cherry Red Records) appropriates ironic and poppy conjunction that was the 1980s nuclear bunker pop, and is spurred to do so by dormant cultural memories of this as reactivated by encounters with the material culture of now-noticed, abandoned Cold War era bunkers. Thus Haines' album references the presence of one he realized he lived close to, with a concept album of tracks made using

“analogue synthesisers, spare use of vocals and a field recording of Camden Borough Control Bunker being attacked late at night by Luke Haines” (Haines, 2015). The bunker was, at first, an object of confusion:

“[a] monolithic concrete structure, about 15ft long, six ft wide and 8ft tall, 200 yards from my flat is not some disused public toilet - or a hideous rubbish bank for the nearby council estates. It is the entrance to a nuclear bunker called Camden Borough Control, this leads you down beneath a small park - Highgate Enclosures - into a warren of eight rooms. (.....) The bunker, disused since 1968, is now in a state of total disrepair and the metal entrance is heavily padlocked (after a night in a nearby boozier and using 'ale strength' I did attempt to gain entrance to the bunker but to no avail).” (Haines, 2015)

Although Haines wasn't able to procure access (unsurprisingly since the door is both locked and welded shut), numerous pictures are available online to view the damp-damaged interior rooms (taken in 2001) where “(t)here is fallen wire and cables hanging from many of the walls and a slightly oppressive atmosphere throughout the bunker”.<sup>5</sup> In the absence of being able to enter (and assuming he didn't view pictures of the insides), the bunker became a space to fill with imagination and speculation. This was a war that never escalated to 'hot' however, the cultural 'what ifs' have become more complex. The deeply traumatizing imagery of UK cinema (including *Threads*, *War Game*, *When the Wind Blows*) visualising the stark horror of destruction and horrific

---

<sup>5</sup> See <https://tinyurl.com/ya9cu97k> and <https://tinyurl.com/y9ksfkcp>.

effects of the blast and radioactive fallout are potentially being replaced by more compensatory and affirmative possibilities. Haines' thesis is "what if a post-nuclear dystopia became a post-nuclear utopia" (Haines, 2015). Haines typically laconic and dada-esque/surreal imagination imagines a life underground where the new god is British darts champion Eric Bristow's trophy:

"What if a greatly reduced hermetic subterranean population found that it did not need to communicate in the accepted way and that language is replaced by a subconscious telepathy (stay with me - it's art)? What if living underground is the next stage of evolution? We came from the sea or the trees maybe this time we go back into the earth to live and play happily before we are buried forever. What if?"<sup>6</sup>

There are resonances here with Matt Stokes' video installation *In the Absence of the Smoky God* (2014) produced for Site Gallery, Sheffield, where adaptation to the apocalypse has successfully occurred. Two self-contained communities have emerged (living in over ground - and underground bunker spaces) but importantly evolving distinct communicatory vocalisations. Bunker life presumably might offer the space and time for reflection, harmonious socialisation, order and evolutionary progress. Haines' art-inspired video for the title track – with the use of lemons as a distant response to Hollis Frampton's *Lemon* (1969), a one-shot film of a gradually-illuminated fruit - is spare in advancing the fiction: "Well the idea for the video was pretty straightforward really. It seemed to me that what you need is a gorilla and a guy doing yoga" (youtube

---

<sup>6</sup> <https://www.youtube.com/watch?v=6e6tVQugbQs>

interview). This work offers a positive flipside to another British post-Apocalyptic fiction, Richard Lester's film *The Bed Sitting Room* (1969) with its bleak, dark comedic vision of living in ruins.

Musically, the tracks on *British Nuclear Bunkers*, inevitably and ironically, refer back to those synth rock tracks exploring the revived nuclear paranoia of the 'second Cold War'. The album has a (sparse) sound redolent of some 1980s synthesizer pop (early Human League, Kraftwerk come to mind). Haines describes it as "almost like a live synth album... no MIDI, no clever programming, me overdubbing synths on top of each other" ([youtube interview](#)). The title track includes an opening nuclear warning - after the 'pips' a spoken female voice declaims, "this is an emergency, broadcast from the BBC the current threat level is critical, please standby and await further information", a narration that was "cobbled together from various bits of BBC broadcasts". This use of authoritative voiceover - picking up from *Two Tribes* - is also present in Kate Bush's *Breathing* (1980) which offers an extended 'public service' type narration describing the flashes produced by nuclear bombs "far more dazzling than any light on earth brighter, Even than the sun itself and it is by the duration, Of this flash that we are able to determine the size of the weapon".<sup>7</sup>

In addition to these nostalgic references, *Bunkers* also bears comparison with some current 'hauntological' projects. This genre of contemporary music has been seen to be defined by a set of tropes: samples from library music, the BBC Radiophonic Workshops, and the nostalgic crackle and hiss of vinyl alert the listener to the

---

<sup>7</sup> <https://www.katebushencyclopedia.com/breathing>

“radiophonic dreamland occupied by ghosts, by the captivating punctuations of a siteless/ sightless erotics” (Labelle, 2006, p.141). In *Spectres of Marx*, Jacques Derrida first conceived the term essentially proposing that both present and future are always haunted by the past. Time is “out of joint” (Derrida, 2006, p.201-2) since past, present and future are unstable categories. His music “often seems to literally be haunted by the past – his own, society’s, culture’s and bogeymen-like figures or worries of some sort or another from previous decades” (Prince, 2018, p.180). The use of the public service voice, thirty-year-old musical references and allusion to lost/possible futures on *Bunkers* seal this associative labelling.

## **2 Bunker Party**

The fabric (and air) of and within Cold War buildings carries a distinctive charge, conveying a pervasive idea for some that - through the introduction of sound - it can be both reanimated and exorcised. The architectures of what were once “secret and closed worlds” (Cocroft and Thomas, 2003, p.1) have continued to exert gravitational pull, evidenced in their use as novel backdrops for club events and music performance. Berlin, a city keen its escape its divisive past, can paradoxically hold a precarious claim to being both an emergent “new ultra-modern capital” and to steadfastly nurturing its own brand of Techno, in clubs cited in historic, previous industrial buildings (Schofield and Rellensmann, 2015, p.111). Der Bunker, a former WWII and Cold war air-raid shelter (now a contemporary art gallery), for example, was re-used as a techno club. As Schofield and Rellensmann argue, this guise illustrates how techno has “intensified the memory of the building” (p.128). The architect, Jens Casper “describes how, “the

preservation of material traces related to the use of the bunker as a techno club were equally important as those deriving from [its] World War II [phase]” (personal communication 2015)” “(Schofield and Rellensmann, 2015, p.128).

The UK similarly yields many potent and unsettling buildings ‘with history’ for use. On June 8th 2002, contemporary classical music composer Yannis Kyriakides’ *A conSPIracy canata* (for two voices, piano and electronics) was performed in the Debrief Centre (known generally as the ‘Star Wars’ building) at what was RAF Bentwaters, Suffolk. *SPI* was staged as part of Aldeburgh Festival, though had previously been performed in Holland and elsewhere in Europe in 1999 and 2000, having premiered in May 1999 in the Korzo theatre, Den Haag (Kriakides website).

Kyriakides had originally hoped to perform this work in the Cobra Mist facility on Orford Ness, however the logistics of transporting an audience across the river and the site itself, were untenable (see Wilson 2017 for a discussion of the multiple artistic engagements with the former military structures now abandoned at this site). The experimental Anglo-US surveillance radar station (using long range over-the-horizon radar) would arguably have provided a resonant contextual ‘match’ for this electronic cantata. This work “juxtaposes two forms of cryptic message communication: the clandestine world of spy number transmissions on the shortwave radio, and the enigmatic uttering of the ancient oracle of Delphi” (Kyriakides, 2001). In his essay ‘Voices in Limbo: a conspiracy cantata and The Buffer Zone’, Kyriakides notes that it was actually festival director Jonathan Reekie who had the idea to put it on at “this bizarre location” (Kyriakides 2007, p.221). In the text, he gives some further context to Bentwaters and accounts for the distinctive architecture in which nuclear weapons were housed in an underground bunker, which “accounted for the fact that some of the

buildings had vast concrete walls as protection” (p.221). He cites the role of Bentwaters in the so-called ‘British Roswell’ incident (in which lights, a spacecraft and alien life forms were variously seen by some of the American guards at Bentwaters). He then quotes from a description of this bizarre performance venue by Guardian writer Andy Beckett: “(...) low and grey and windowless (...) it is clammy and cold, even on a mild afternoon, the claustrophobic low ceilings and crude breezeblock walls are left as they are. The building was completely stripped when the Americans moved out in the early 1990s; your imagination is free to roam the corridors, with their silvery metal doors straight out of *Dr Strangelove*” (222). As will be discussed with regard to Kathrine Sandys’ work later, cinema frequently becomes a lens for negotiating the visuality of actual bunker/ test site locations.

From 2006 (until 2009) Aldeburgh Music’s more experimental strand ‘Faster than Sound’ Festival regularly staged concerts in buildings at what is know called Bentwaters Parks. This organisation markets the site - from the Hush House, with “one of the most atmospheric interiors in the country”, to hangars, bomb stores, Nissen huts, runway to dog kennels – in part – as a location for TV and film (<http://www.bentwatersparks.com/tv-film-locations/>). At the 2007 iteration, audiences could wander between various buildings to listen to the diverse performers from more traditional musicians (“choirs and cellists”) to “men hunched behind their laptops”. This location is “uniquely suited to this kind of sprawling creativity, arched metal hulks of hangers and low brick buildings strangely reminiscent of small town primary schools in the 70s, dotted around among inexplicable heaps of gravel and sand, crisscrossed by vaguely marked roads and runways” (Jerome, 2007).



Reviewer David Smyth situates his review in the terms “I am in a nuclear bunker watching four men in suits and ties coax warped electronic sounds from children's toys” and elaborates on this distinctive location: “Once home to the US Air Force and reportedly a terrifying quantity of nuclear weaponry, Bentwaters these days is, rather less impressively, the location for the filming of BBC Three’s Dog Borstal pet obedience show Dog Borstal. “Nevertheless, the looming warehouses, glowing watchtowers and reports of UFO sightings in 1980 make the location terrifically spooky, even without all the distorted electronic pulses now floating through the air” (Smyth, 2007, p.45). In 2008 the immersive theatre company Punchdrunk used it for ‘The Bunker’ in which audiences were driven by a balaclava-clad guide to a “decommissioned nuclear bunker containing an unexpected sound-based experience” (Punchdrunk website). In a music video, Bentwaters was paired with a ‘sister’ site sharing superficial visual similarities. Exteriors of various buildings were used with locations on nearby Orford Ness for the video for *Wires* by Athlete (2005), in which lead singer Joel Potts walks among the empty, despoiled ruins at both military test sites (interspersed with shots of the band performing the sombre track in the Hush House). The two locations, overlaid with a computer-generated light trail, are effectively blurred into one site through editing, they have become ‘Cold War generic’.



Image caption: Orford Ness featured in *Wires* by Athlete (2005)

More recently, John Foxx & The Tapes performed at the York Cold War Bunker on May 9th 2016. This Bunker, built in 1961 (and abandoned in 1991), originally the Royal Observer Corps 20 Group Headquarters “was the regional reporting centre for a cluster of sub-bunkers which, in the event of war, would have gathered data on nuclear explosions and radioactivity levels”

(<https://www.yorkshire.com/view/culture/york/york-cold-war-bunker-537941>). The site is now maintained and curated by English Heritage as a Cold War Museum.

This evening was not however staged or captioned as a gig as such, but more as theatrical event. The contextualizing introduction proposes that the audience:

Imagine a world where humans are forced to live underground, the surface uninhabitable. Technology has become the only way to reach out and connect. Pilot Theatre and York Theatre Royal take you underground and into the world of E.M Forster's 'The Machine Stops'. Featuring an exclusive live performance of the newly composed soundtrack for the play, composed by John Foxx and analogue synth specialist Bengie. Set against the backdrop of York's own Cold War Bunker, visuals and music combine to explore our complex relationship with technology and what this might mean for human connection now and in the future.

Documentation available online<sup>8</sup> shows the two musicians, performing seated in front of the giant perspex maps intended for plotting fallout predictions and nuclear explosions. This imagery clearly displays how artists' sonic experimentation (and act of temporary dwelling) both implicitly mimics and stands in opposition to the work that was once done there. But while the venue certainly offered a unique visual character, it did not apparently offer a distinctive acoustic. Judging by the recording, the recording is quite 'dry' (lacking reverberant properties for example), though it is difficult to know if that was the case or the use of the PA that made it so.

The oppressive visual surroundings at Kelvedon Hatch were used for *The Delaware Road* event the next year for one-night (Summer 2017). This setting provided an odd yet curiously apt context, since (some) musicians performed using dated reel-to-reel

---

<sup>8</sup> See <https://vimeo.com/168976449>

technology rather than importing the latest digital music making tools. The venue carried more potency perhaps (than York) because of the less ‘administrative’ aura and the possibilities for freer exploration for an audience. As reported “The star of the evening is undoubtedly the setting; the dusty, eerie tunnels that lead to rooms filled with (thankfully) unused armageddon paraphernalia and the odd mannequin here and there. A fully equipped BBC studio is one of the many oddities that you'll discover wandering around this tomb of false hope and desperation” (the Simonsound). A curious stew of emotional that muddles expectations as Stephen Prince succinctly puts it “this is a repurposing of such structures for entertainment or cultural purposes, albeit in this case a form of cultural exploration which explicitly refers to and explores the history (...) rather than being more strictly hedonistic and abandonment” (Prince, 2018, p.144). It remains to be seen whether the ‘aura’ of such an environment becomes blunted if it is used repeatedly (see Wilson, 2017 regarding ‘processional’ activity on a site).

### ***3 Cold Art***

*Cold Art* was first broadcast on BBC Radio 4 on April 12<sup>th</sup> 2018, conceived and presented by myself and produced by Freya Hellier for Loftus Media. The programme interweaves interviews, extracts from artists' responses to bunker acoustics, film soundtracks and field recordings to explore the strange allure of Cold War buildings: “Whether it's childhood memories, the background hum of the threat of nuclear armageddon, or the futuristic architecture, many artists are creatively stimulated by the imagined possibilities of a war which never turned hot” (*Cold Art*, 2018).

From the outset, we sought to examine how extent Cold War structures exert an undeniably compelling fascination. There is an affective power to such enigmatic architectures that are familiar in material but otherwise utterly alien in form. Gaining admittance to abandoned defence sites can be difficult even if they are not on active sites. As previously discussed, access to detailed information about the work undertaken is impossible since papers, photographs, films and other data may never be in the public realm. The places are generally left to 'speak' for themselves (Wilson, 2017). Repeat visits are necessary, to collect layers of visual and auditory material and allow time for reflection. For this reason, *Cold Art* was 'bookended' by a brief personal reflection on the quay at Orford, looking across to the silhouetted AWRE (Atomic Weapon Research Establishment) 'pagoda' buildings at dusk as they are increasingly shrouded in darkness.

Three sites emerged in the planning of *Cold Art* connected by their playing distinctly different defensive roles in the Cold War and for attracting artists of different kinds, for very diverse reasons. The format would be the following of these artists as they gained admittance, an implicit aspect being the sites current state of care (or not). *Cold Art* was structured to hear the 'story' of each 'bunker' in turn, the story of the artist(s) and find out how the two came together. The constraint of the allocated duration (27'44 at the final edit) meant that a considerable amount of recorded material as well as more wide ranging accumulated research could not be included, but can be expanded on here.

The first story concerns artist Stephen Felmingham and his (currently) seven year personal research into the network of Royal Observer Corps (ROC) observation posts. Briefly, this network of 1,500 nearly identical posts throughout the UK were

responsible for detecting and reporting nuclear explosions and associated fall-out in the event of a nuclear strike. These were manned by a force of (female and male) volunteers, three or four of them could be accommodated at any one time in these underground posts, “built to a standard layout, comprising a small monitoring room and latrine 15 feet below the surface” (Felmingham, 2017, p.41). They were not designed to sustain life for more than two weeks. Felmingham’s (unaccompanied) visits inside these subterranean spaces are made with the purpose of creating evocative drawings of the forgotten interiors. As he makes work from the detritus found there, he has previously reflected on the palpable sense of being buried alive - a hypothetical grave in a future apocalypse. In *Cold Art*, we meet him first at South Creake ROC post, near Bloodgate Hill in Norfolk. This post, constructed in 1961 and operational until 1991, was the first one the artist had ventured into and it still carries much resonance for him. It overlooks his primary school – and he has spoken of the (retrospective) knowledge that underground volunteers would have been ‘looking over him’ while he was playing in the playground. In light of this growing realization, he has “come to find his own part in this ruined place” (*Cold Art*, 2018), a witness to the passing of time evidenced in both material remains and in attitudes.

Felmingham was smartly dressed (out of respect for the memory of the committed ROC volunteers) and the sense of ritual is prevalent. Abrasive metallic sounds of the hatch being opened are heard and then footsteps as we descend the ladder into darkness, hit by the dank smell of rotting contract carpeting. On this bitterly cold winters day, it is slightly warmer underground. In a recce, we had already assessed the condition of the two posts to be visited, noting also the graffiti and (thankfully) the absence of rats. While little of the original fittings remain, Felmingham has previously encountered

cleaning materials (*Glitto*), finding bathos in the need for cleanliness in a time of MAD (Mutually Assured Destruction). Felmingham's time-based dwelling echoes the presence of the (anonymous) civilian volunteers who would have spent long periods of time on duty, waiting.

He explains his process of sitting and thinking, absorbing the atmosphere, allowing himself to feel alone and lonely, then starting to “feel the human presence soaked into the wall”. At this point, he begins to draw, wearing visor or goggles so that only peripheral vision can be used. These places are a conduit he explains (in a place “where people still *are*”), and this practice explores what can only be partially sensed by “drawing what’s around the edges of vision”. In an underground place of no vision, with a rationale based on (radioactive) detection, drawing brings “a human detection device”. This practice in “drawing what you can’t see”, acknowledges that “the veil is thin between the past and now”. In *Cold Art*, the Felmingham material is intercut with extracts from an interview with Huby Fairhead, an ex-ROC volunteer for thirty-two years, who modestly gives insights into both the camaraderie and enduring sense of commitment this entailed (the artist was present at this recording made in the Norfolk and Suffolk Aviation Trust). This is an important juxtaposition (and was an affecting first encounter) between volunteer and artist. There is palpable gratitude demonstrated in Felmingham's practice: “In 1992 we forgot all about it, it went away”. This story concludes with a wider discussion of the work's purpose. The artist is aware of “an epidemic of anxiety in young people (..) a circling sense of trauma [and how he is, through artistic research] paying forward to the next generation”.

While a drawing practice would be difficult to thoughtfully communicate through

audio broadcast, a decision has been made to include a relevant part of his process that of the borrowing of artefacts from ROC posts, for more studied observational drawing later in the studio. These objects are always replaced. Before leaving the recording session at the second post (Melton Constable), Felmingham carefully returned the dustpan he'd removed from exactly the same spot on the floor of the latrine, many months, possibly years previously. It is a discrete and recuperative act, quietly witnessed by the three of us. It is not included in the edit.

The second site necessitated a move southwards to Suffolk. Scenographer and sound artist Kathrine Sandys has explored the atmospheres, properties and possibilities of numerous Cold War bunkers, *Cold Art* focused on her 2010 project *Hush House*. This had been produced about and for the Hush House aircraft hangar at the decommissioned Cold War airbase, RAF Bentwaters. The building is a large hanger with a protruding concrete 'exhaust' tunnel, originally used to test jet engines and acoustically treated to absorb the massive amount of noise created by this process. Despite the RAF title, it was an American airbase that hosted a good deal of covert activity. Sandys has spoken of childhood holidays spent camping nearby and the strong memories of the activity she and her brother imagined took place there. Whereas Felmingham's interest is less in material remains per se, the focus for *Hush House* clearly derives from the building and the sonic memories that have accumulated within. Sandys re-animated the building through the introduction of low frequency sounds akin to those produced when the testing was carried out. These give a sense of presence, turning the old testing complex into a bass drum - its low frequencies calling out to the test pilots who once worked here with "a creeping, low modulation of sound pulses that wrap their way



around the head of the subject and steadily through the body cavities too” (Sandys, 2012). The audience ‘makes’ the work in their physical engagement with these infrasound frequencies, reminding us that sound is profoundly relational: “it emanates, propagates, communicates, vibrates and agitates; it leaves a body and enters others” (Labelle, ix). Sandy describes how she considers the experience of journey to and through the site and landscape, as part of a work for the viewer/ listener. For *Hush House*, the audience must climb a gantry (affording a good view over the site) then enter through the vast exhaust tunnel. This creates expectation (and awareness of how these sites are currently shaped). Sandys finds in these remains, a blankness which calls for meaning making to be undertaken. In one part of the interview (not included in the final edit) she cites the inspiration of certain popular culture films such as *Fail-Safe* and *Shelf Life* where the bunker is portrayed. She has written elsewhere of her work accessing “my audience’s pre-existing cinematic assumptions and orientation towards bunkers (...) my installations have re-created the stories we want to believe of the bunker as a working machine” (Sandys, 2017, p.63).



Image caption: Louise K Wilson with Kathrine Sandys (right) in the Hush House, 2017.

Image credit: Freya Hellier.

Sandys needed to capture, record and edit an extract of the material for *Cold Art*, since the original sound only existed in the tone generator testing equipment. The difficulty here in including this extract was that some of this original sound material needed transposing up a few octaves in order to be audible for broadcast (being frequencies that would have been felt, instead of heard). In tests, sections sounded distorted as a product of the transposition process. There was an option to ‘smooth **those** out’ or retain that property so that they might add to the effect of discomfort. Various versions were tried, at different levels of transposition. If taken up too high, this could give a misleading account of *Hush House* since “the sound becomes too present and stops representing a sound that was peripheral and acousmatic” (personal communication, 2 March 2018).

There are complex technicalities to consider in communicating subtle site-specific installation works for radio.

*Cold Art* was structured so that the focus would extend incrementally in scale of activity and engagement with context: from Felmingham's reverential, private drawing performances made in sites of "local particularity" (Felmingham) and inside "granaries of silence" (Toop, 2010, p. 211), to Katherine Sandys' conjuring of sonic echoes that vibrated through the air (and through bodies of the ambulant visitors) to the populated, intensely visual and aural spectacle of Berlin's Teufelsberg (or T-Berg).

This decaying and ruinous former NSA Listening Station<sup>9</sup> regularly attracts sound artists and musicians drawn to its iconic aesthetic charge and rich acoustical possibilities. Teufelsberg (or 'Devils Mountain') is itself an artificial hill created from the debris and rubble of the bombed and despoiled wartime city. Hitler's architect Albert Speer had designed a flagship Nazi military college that was never completed and proved (partially) indestructible to demolition after the War ended. Millions of cubic metres of rubble from artillery bombardments and bombing raids were then placed laboriously on top, a process of entombment that took twenty-two years. The US National Security Agency then constructed the Field Station, which was once one of the West's most important listening stations (Cocroft and Scofield, 2019, p.140), the very air was "full of signals" (Parikka, 2016, p.170). Here, both American and British personnel worked to intercept, transcribe and translate these signals. Paper documents

---

<sup>9</sup> See Cocroft, W.D. and Schofield, J., 2019. *Archaeology of The Teufelsberg Exploring Western Electronic Intelligence Gathering in Cold War Berlin*, 1st Edition London: Routledge for a fuller account of the history of this site.

would then be meticulously destroyed in an industrial process of shredding, burning and chemical assault.<sup>10</sup>

The field station is located incongruously in the leafy environs of Grunewald Forest, a convivial space for joggers and dog walkers not far by S-Bahn from the city's hub. It has resisted many attempts at (leisure) gentrification and redevelopment – Hollywood film director David Lynch apparently attempted to refashion the site as a centre for yoga and plans for a luxury hotel were thwarted. After decades of trespass, a stable period of usage (and designated monument status<sup>11</sup>) has been resolved. It currently has the feel of a “dystopian, industrial, arty squat” as Freya Hellier observed (personal communication, 12 February 2018) as it is home now – studio, gallery and even basic dwelling space – to a loosely marshalled collection of (mainly graffiti) artists. Brightly coloured graffiti covers every surface: images of political and cartoon characters vie with imagery of tangled forests. Troupes of young hip-hop dancers practice routines in what were office spaces. It is a place of layers - fresh spray paint covers older images (though some are resolutely preserved). While the T-Berg buildings are ominous, unmistakable Cold War relics, its lure as a base for artists is mainly due to the space, lack of regulation and very low cost. It seems to be a magnet for people wishing to exist outside of 'normal' society who are not necessarily too concerned with the extremely rich (layered) history they are literally standing on. “ The site has very quickly become a shell, devoid of many of the traces of its former occupants” (Cocroft and Schofield, 2019, p145).

---

<sup>10</sup> See Cocroft and Schofield, 2019 p83 for a fuller description of this process and image of one of the machines involved in this process.

<sup>11</sup> It has been placed under ‘Denkmalschutz’ “or monument protection by the Landesdenkmalamt or State Monuments Office (eg [www.berliner-zeitung.de/berlin/teufelsberg-ex-abhoeranlage-steht-nun--unter-denkmalschutz-31540932](http://www.berliner-zeitung.de/berlin/teufelsberg-ex-abhoeranlage-steht-nun--unter-denkmalschutz-31540932), retrieved 9 November 2019)” (Cocroft and Schofield, 2019, p 149-150)

In a city where the past has been so heavily commodified, this oddly reverberant architecture in Berlin serves multiple purposes that are less about commerce. In addition to visitors seeking a visual or historic encounter, the extraordinary acoustics at Teufelsberg prompt ‘sonic pilgrimages’. The whole site at Teufelsberg is rich in sound: from the wind animating the trees of Grunewald Forest, rumbling over the radomes and carrying voices far. However the iconic top radome (one of the few intact spherical spaces in the world) exerts a singular and otherworldly experience upon entering. Here the Cathedral-like acoustic effects are startling, the spatial information for the listener is confusing. By clapping hands, bursting balloons, singing and other utterances, you can hear the scale of the fibreglass interior - the reverberation is astounding and takes around eight seconds to die away. Standing on the rectangular concrete antenna plinth that dominates the room (where absent instrumentation exerted its probing reach), more discrete sound experiments can be conducted. When you whisper, your voice is clearly and intimately audible inside your head. In *Sonic Wonderland*, acoustician Trevor Cox describes bursting balloons and describes ‘hearing’ the scale of the radome, even the “slightest sound” – such as a footstep - creates a “ricocheting effect” (Cox, 2015, p 160).

Unsurprisingly, numerous musicians and sound artists have either performed or used recorded material gathered from Teufelsberg. In 2008 KGB (Kim Cascone, Guido Henneböhl and Brendan Dougherty) for example, released *Smoke on Devil’s Mountain* (2008) described as a “disjointed temporal documentation of the morphogenic field recordings of a Cold War spy station” (Scrapple, 2008) in which studio-based improvisations were made in response to field recordings of the wind and rain lashing against the tattered skins of the radomes, and the playing of hand held cranked

electronics, coloured by the T-Berg acoustics. Sound artist John Grzinich has archived a forty-minute improvisation involving five people and uploaded a field recording of “Continuous wind decays the structure of the geodesic dome” (Grzinich, 2010).

This aural architecture has a heritage dimension too, prompting Cox to inquire whether sonic preservation should be undertaken. Mindful of the neglect that has already taken hold on some of the radomes, he asks “will someone capture the acoustic signature of the last radome before it, too, becomes damaged and the sound is lost forever?” (Cox, 2015, p.275). A London mastering studio (Balance Mastering) has, however, made an online library of Teufelsberg impulse responses (IRs) freely available. These are offered up for any musician to enjoy incorporating “the sound of Cold War surveillance into your music”.<sup>12</sup>

---

<sup>12</sup> <http://www.balancemastering.com/blog/balance-audio-tools-free-teufelsberg-reverb-plugin/>



Image caption: Teufelsberg IRs plug-in page, Balance Mastering Studio, London.

*“The Teufelsberg reverb is a bit of sonic surveillance history: a plugin allowing you to use the acoustics of the main listening tower at the former NSA compound, [Teufelsberg](#), in your own productions. The reverb is based on our original impulse responses which we recorded with great care and mastered them to be useful in a wide variety of situations. There are six (quite different) variations to experiment with and apply to your source audio. Finding an opportunity to approach the towers and record the impulses was tough, not to mention having to climb and squeeze through a tiny gap to reach the uppermost tower (...)”* <http://www.balancemastering.com/blog/free-teufelsberg-nsa-listening-tower-impulse-responses-ir-irs-convolution/>

Impulse responses (IRs), generally, satisfy a desire to feel or augment ‘space’ where it doesn’t exist or is lacking. In effect, a sense of (an enclosed) space or (a geographically-located) place where spatiality is critical to recordings’ musical effects can be contrived. These IRs are produced either by making a loud rapid burst of sound - such as a starter pistol - or by generating a swept sine wave in the space for more accuracy. The echoing sounds created by the pistol indicate what the impulse response sounds like and data is produced. This includes significant temporal measurement of reverberation time, measured in seconds, “The time it takes for the handclap to die away (...) is one of the fundamental quantities that an acoustician can use to characterise the acoustic qualities of a particular space” (Murphy 2011, p.43). Through the use of software programs, the recorded ‘bang’ of the gun is then extracted so just the ‘after effect’ of reverberation is stored and can be added to any sound or signal (usually the signal will be comparatively reverb-free itself): “The result of this effect being that the recorded sound is heard as if it were being played back in the measured or modelled space, at the position of the source from the perspective of the listener” (43).

Sterne notes “The surfeit of spatial signatures we hear today (whether achieved through architectural acoustics or through recording studio practice) is no longer conditioned simply by the variety of built space; rather it is conditioned by the plasticity of echoes” (Sterne, 2007, p.6). The sounds of a space can no longer be considered tied to specific buildings or structures then: since artificial reverberation technologies have dislodged this coupling; ‘echoes’ are malleable, synthetic and transportable, no longer ‘faithful’ to one site. Thus Composer and sound designer Rob Knight has used



‘Teufelsberg Reverb’ on his location recording of waves, entitled *The Siren Call*. He explains that though reverb was not needed, it provides “added dimension and feel”, and more persuasively states “if you want massive, deep reverbs with a real sense of depth then do check out Teufelsberg” (cities and memory website). For Deleuze and Guattari, “(t)erritories make, alter and unmake subjects, while subjects in turn make, alter and unmake territories” (Doyle, 2005, p. 17).

In essence then, a new sound can be convolved (that is, combined) with the original recording of the space and have the properties of that original imposed upon it. This offers up the possibility of a cultural production that involves creating sound that is both old (having the heritage value of the Cold War chamber from which the IR has been determined) and new in that the choice of what to apply the IR to is a free choice for the audio artist. Thus, by this mode of reuse, bunkers are repurposed purely for their trace-like, acoustic character, a quality that can be preserved in digital form long beyond their material destruction.

### ***Conclusion***

As the IR-base engagement show, not all cultural appropriations are concerned with finding ways to examine the uncomfortable legacy of Cold War history, at its surviving sites of ruination. For others (like those now living and working at Teufelsberg, or sampling its acoustic characteristics) these sites simply present a sanctuary, a blank slate<sup>13</sup> or an abstract possibility of future use. There is something

---

<sup>13</sup> or “a (not so) blank canvas” (Cocroft and Schofield, 2019, p145).

potentially recuperative in this approach.

As has been suggested, the aural – as a ground and focus – offers literal and metaphoric resonances. This wider cultural resonance of the ‘distinctive charge’ of the 1980s bunker songs; of contemporary pop music in/about bunkers and of bunker-acoustics / aural archaeology, are all matters of reverberation arising from the bunkers’ distinctive cultural charge. The 80s bunker songs, formed in the anxiety of the Second Cold War, reverberate down to us in a weird trauma/nostalgia mix found today in the work of Haines (and others) who also want to play with and valorise the distinctive acoustics that bunkers’ physicality embodies. Thus the reverberation is both literal (bunker-acoustics) and metaphorical (ongoing cultural resonance and repetition).

The psychological effects of living in fear have been long lasting and complicated by the Cold War being an imagined rather than realized conflict, which even if it “did not go off as one big spark”, was damaging “as a constant low-level hum” (Parikka, 2016, p.174). These sites combine multiple associations - as ruins, as tourist destinations and importantly a vessel for our pre-existing imaginaries or memories. Meanwhile, the category-blurring cultural appropriations undertaken by protestors and pop musicians at the heart of the early 1980s Cold War symbolic battlefield, find resonance with nostalgic-ironicists of the likes of Luke Haines, riffing on musical and cultural motifs that in both eras were trying to make sense of the presence and lure of the bunker.

## Notes:

*Cold Art* is available <https://www.bbc.co.uk/programmes/b09yfplt>

### Notes on contributor

Louise K Wilson is a visual artist and a lecturer in Art and Design at the University of Leeds. Recent exhibitions include *Air Matters* (Watermans Arts Centre, London, 2019); *Meetings* (Denmark, 2019); *Submerged: Silent Service* (Ohrenoch, Berlin, 2015). In 2006 she was awarded a NESTA Fellowship. Her published writing includes an interview with Paul Virilio (CTHEORY, 1994); book chapters for 'In the Ruins of the Cold War Bunker: Affect, Materiality and Meaning Making' (Rowman & Littlefield International, 2017); 'Contemporary Archaeologies: Excavating Now' (Peter Lang, 2009) and 'A Fearsome Heritage: Diverse Legacies of the Cold War' (Left Coast Press, 2007). URL: [lkwilson.org](http://lkwilson.org)  
Correspondence to: Dr Louise K Wilson, University of Leeds, UK.  
Email: [l.k.wilson@leeds.ac.uk](mailto:l.k.wilson@leeds.ac.uk)

## References

Bourke, J., 2005. *Fear: A Cultural History*. London: Virago.

Cocroft, W.D. and Thomas, R.J.C., 2003. *Cold War: Building for Nuclear Confrontation 1946-1989*. Swindon: English Heritage.

Cocroft, W.D. and Schofield, J., 2019. *Archaeology of The Teufelsberg Exploring Western Electronic Intelligence Gathering in Cold War Berlin*, 1st Edition  
London: Routledge.

Cold Art, 2018. <https://www.bbc.co.uk/programmes/b09yfplt>. Loftus Media for BBC Radio 4.

Cox, T., 2015. *Sonic Wonderland: A Scientific Odyssey of Sound*. London: Vintage Books.

Derrida, J., 2006. *Spectres of Marx* New York and London: Routledge.

Doyle, P., 2005. *Echo and Reverb: Fabricating space in popular music recording 1900 – 1960*. Middletown, Connecticut: Wesleyan University Press.

Felmingham, S., 2017. Peripheral Artefacts: Drawing [Out] the Cold War. In: Bennett, L. ed. *In the Ruins of the Cold War Bunker*. London: Rowman & Littlefield, 41-56.

Flintham, M. 2012. The Military-Pastoral Complex: Contemporary Representations of Militarism in the Landscape. In. Tate Papers no.17 Spring 2012. Accessed 14/03/2013

Grzinich, J., 2010. [https://archive.org/details/aporee\\_6124\\_7650](https://archive.org/details/aporee_6124_7650). Accessed 16/09/2017

The Guardian, 2017. <https://www.theguardian.com/uk-news/2017/mar/20/greenham-common-nuclear-silos-women-protest-peace-camp> Accessed 27/10/2019

Haines, L., 2015. <https://lukehaines.bandcamp.com> Accessed 16/12/2018

Hinton, J., 1997. Campaign for Nuclear Disarmament, in R. S. Powers, *Protest, Power and Change*, Taylor and Francis, 1997, p. 63.

Jerome, F., 2007. *Faster than Sound @ Bentwaters Airbase*, Suffolk.

[www.musicomh.com/reviews/live/faster-than-sound-2007-bentwaters-airbase-suffolk](http://www.musicomh.com/reviews/live/faster-than-sound-2007-bentwaters-airbase-suffolk)

Accessed 18/12/2018

<https://citiesandmemory.com/2018/12/best-sound-design-tools-2018/> Accessed 15/12

2018

Kidron, B., 1983. *Carry Greenham Home*. National Film and Television School.

Kyriakides, Y., 2001. *A conSPIracy cantata*. [CD]. Unsounds.

Kyriakides, Y., 2007. *Voices in limbo: a conSPIracy cantata and The Buffer Zone*. In: W. Cocroft and J. Schofield, eds. *A Fearsome Heritage: Diverse Legacies of the Cold War*. Walnut Creek: Left Coast Press, 221-237.

Kyriakides website, [https://www.kyriakides.com/a\\_conspiracy\\_cantata.html](https://www.kyriakides.com/a_conspiracy_cantata.html) Accessed 15/03/2017.

Labelle, B., 2006. *Background Noise: Perspectives on Sound Art*. NY/London: Continuum.

Lynskey, D., 2010. *33 Revolutions per minute: A History of Protest Songs*. London: Faber and Faber.

Lynskey, D., 2012. BBC World Service, Sleeve notes

Available on <https://www.bbc.co.uk/programmes/p010d95p>

Maconie, S., (date unknown) The People's Songs.

<https://www.bbc.co.uk/programmes/profiles/35wCfRBbX7QygTjkkPTr4sX/two-tribes>

Accessed 11/09/2018

Murphy, D., 2011. Auralization: Creating Sound Experiences. In. Chapman, C, and Wilson, L.K. eds. *Resounding Falkland*. Falkland Centre for Stewardship. P 39-47.

Nicholson, G., 2013. *Walking in Ruins*. Chelmsford: Harbour.

Parikka, J., 2016. The Signal-Haunted Cold War: Persistence of the SIGINT Ontology. In. J. Beck and R. Bishop, eds. *Cold War Legacies: Systems, Theory, Aesthetics*. Edinburgh: Edinburgh University Press, 167-187.

Prince, S., 2018. *A Year in the Country: Wandering through Spectral Fields*. UK: A Year in the Country.

Sandys, K., 2012. *I Thought I Grew An Ear in My Stomach: The Phenomenological Experience of the Art Event as Sublime Encounter*. Thesis (PhD). University of London.

Sandys, K., 2017. Sublime Concrete: The Fantasy Bunker, Explored. In: Bennett, L. ed. *In the Ruins of the Cold War Bunker*. London: Rowman & Littlefield, 57-73.

Scrapple Records (2008) <http://www.scrapplerecords.com/kgb.html>

Website now archived <https://archive.md/J5Hb0> Accessed 16/09/2017.

Schofield, J. and Rellensmann, L., 2015. Underground Heritage: Berlin Techno and the Changing City. *Heritage & Society*, 8:2, 111-138.

Slessor, C., 2004. The Deactivated Landscape. In. F. Watson, ed. *The Hush House: Cold War Sites in England*. UK: Hush House Publishers, unnumbered.

Smyth, David. A feast for the senses. *New Statesman*; London Vol. 136, Iss. 4850, (Jun 25, 2007): 45. Accessed 16/12/2018.

<http://www.bentwatersparks.com/tv-film-locations/> Accessed 12/12/2018

<https://media.nationalarchives.gov.uk/index.php/protect-survive-casualties/> Accessed 13/12/2018.

Sterne, J., 16 May 2007. A Simple Theory of Convolution Reverb, as presented at the works-in-progress meeting of MIX-ARRT, Montreal.

Tennant, N., 1984. Frankie Goes To Hollywood in the war game. In. *Smash Hits*

<https://www.zttaat.com/article.php?title=55> Accessed 11/12/2018.

Toop, D., 2010. *Sinister Resonance: The Mediumship of the Listener*. NY/ London: Continuum.

Welch, C., 2010. The Spirituality of, and at, Greenham Common Peace Camp. In *Feminist Theology*. Volume: 18 issue: 2, page(s): 230-248.

Wilson, L.K., 2017. Processual Engagements: Sebaldian Pilgrimages to Orford Ness. *In: Bennett, L. ed. In the Ruins of the Cold War Bunker*. London: Rowman & Littlefield, 75-93.