



Artist Nick Ryan to reveal spectacular sensory art installation *DX17*, created to mark IWM Duxford's centenary year

Press preview on Thursday 15 June 2017 at 2pm
To RSVP email press@iwm.org.uk

2017 marks the centenary of Imperial War Museums (IWM) and 100 years since work began to create RAF Duxford. This landmark occasion has been commemorated with the creation of *DX17**, Duxford's first ever contemporary art installation. *DX17* will be revealed to the public on Friday 16 June.

Inspired by themes of flight and innovation, *DX17* is a dramatic large-scale sculpture, similar in size to a Spitfire, futuristic and aerodynamic in form. It has been created by BAFTA award-winning multi-disciplinary artist Nick Ryan whose previous projects have included Tate *Sensorium*, an immersive multi-sensory exhibition at Tate Britain and *A Living River*, the world's largest brand sound installation, currently on display at Gatwick Airport.

DX17 is presented in a dramatic darkened space providing an immersive experience for visitors. 100 bright lights are emitted by the sculpture, each representing one of one hundred discoverable 'memories'. Holding a receiver in the palm of one hand, the visitor can scan the device over the surface of the sculpture and magically transform these points of light into sound, effectively 'tuning in' to the sound of up to 100 voices.

A further sound system surrounds the sculpture providing a cinematic soundscape in which elements received through the headphones are dramatised around the listener. Sounds featured in the soundscape include Morse Code messages that reference the sculpture's name, fragments of historically significant music and original ambisonic recordings of a Spitfire performing a high speed, low altitude manoeuvre known as a 'run and break', captured by Ryan at Duxford especially for the project.

Artist Nick Ryan said: *"I wanted to create a sensory artwork that allows the many people whose lives have been shaped by this unique and special place to speak for themselves and to transmit their memories to us in a direct and palpable way. DX17 is a sculptural object symbolising the extraordinary achievement of flight and making sense of 100 years of memories through sound, light and touch."*

Diane Lees, Director-General of Imperial War Museums said: *"Nick Ryan's DX17 commemorates Duxford's centenary in a unique way that really reflects the wonderment of aviation and the unique history of the site. This futuristic sound sculpture will surprise and fascinate visitors, enabling them to physically and emotionally engage with personal stories of Duxford's past and present, immersing themselves in this absorbing sensory experience."*

The title *DX17* references the centenary narrative (1917-2017). DX was also the airfield identification code for Duxford during the Second World War. It forms part of the Airfield Signal Square, visible from

high above in the sky. The two consonants are quickly interpreted as a synonym for the museum and the airfield. DX as a verb describes the activity of listening in on long distance (short wave) radio linking the radiophonic narrative of the installation and the aural connection it provides to the long-distant past.

Stories that can be experienced in *DX17* include that of Jean Mills, who was an Aircraft Plotter with the Women's Auxiliary Air Force during the Second World War. Jean describes arriving at Duxford in 1941 and the sudden arrival of aircraft from all directions, returning from a dogfight. Excitement turned to shock as one aircraft nose-dived onto the airfield, killing the pilot. As Jean says in her interview: *"...we then realised it wasn't a great lark, it was quite a serious business we were in for."*

Visitors can also hear from Alan Tomkins and Gerry Massey, Art Director and Cameraman for the 1968 *Battle of Britain* film, who describe creating a film set at Duxford airfield and the challenge of creating the famous explosion of Duxford's hangar. Alan explains: *"...the big moment came and you think it's never going to come and 'bang!' and all that happened were the doors blew off and the hangar didn't go up. So everyone rushed to see and ...didn't realise that the whole place was live, it could have blown up at any minute so we all got ushered out and the experts went in...they said 'right, ready to go again' and so we all went back to our hidey holes to watch and it went and it was quite something."*

Making *DX17*

A novel new technology has been engineered for the project by mechatronic engineer Sean Malikides that allows audio to be encoded into the 100 light sources and then decoded by a receiver into audible signals.

The system is based on the principle behind the 'Photophone': a telecommunications device that allowed transmission of speech on a beam of light, invented jointly by Alexander Graham Bell and his assistant Charles Sumner Tainter in 1880. Ryan worked with Malikides to develop a fully analogue electronic transmitter and receiver circuit that makes it possible to transmit speech through the light beams that illuminate *DX17*'s surface and enable people to decode the signals as sound with a battery-powered handheld device.

Ryan collaborated with design studio Kin and designer/engineer Tom Cecil to develop *DX17*'s sculptural form. Taking the size of a Spitfire as a reference of scale, the team designed a 10m x 6m aluminium spaceframe structure with a 3D mesh fabric covering. A selection of recognisable aerodynamic shapes (winglets of a Eurofighter Typhoon, the exhaust manifold of the Spitfire) found in aircraft in Duxford's collection evolve *DX17*'s basic delta into a hybridised shape that is both evocative and futuristic. *DX17* was hand-built by Tom Cecil (by coincidence the grandson of Wing Commander Rupert Cecil) and Kin in Tom Cecil's workshop in Leyton.

Ryan also collaborated with Kin to design the receiver object that holds the receiver electronics and is used by visitors to decode light into sound. The receiver's form is inspired by various metallic, leather and Bakelite objects found in vintage aircraft including avionics, pilot oxygen masks and headsets and are manufactured using 3d printing technology.

Kin project managed and produced the project and, alongside Tom Cecil and his team, installed the sculpture inside a purpose-built structure on the hanger base at Duxford.

DX17 was created with the generous support of Bowers & Wilkins. The installation uses 14 x Bowers and Wilkins 685 S2 loudspeakers and its P5 Series 2 model headphones. *DX17* was also generously supported by MOTU whose AVB system is used to distribute audio to the sculpture.

DX17 will be open to the public from Friday 16 June and the experience is included in general admission to IWM Duxford.

– Ends –

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Notes to Editors

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Nick Ryan

Nick Ryan is a multi-disciplinary artist and composer exploring the use of sound and music to represent information, physical sensation, materiality and place. He is widely recognised as a leading thinker in relation to the future of sound for creating unique, immersive and highly conceptual audio experiences that push the boundaries of audio.

His work involves applying emerging technology to the process of creating and experiencing audio, introducing people to new ways of thinking about sound. His novel sound installations, bespoke instruments, generative music compositions and interactive audio experiences explore ways of representing information, language, story and perception solely through the act of listening.

Nick is the recipient of a BAFTA for Technical Innovation, a Motion Picture Sound Editors Golden Reel for sound editing and holds an Honorary Doctorate of Music from Plymouth University. He is currently an artist in residence at Somerset House studios.

www.nickryanmusic.com

Sean Malikides

Sean Malikides is a mechatronic engineer and designer working at the intersection of science, technology and the arts. His work explores novel scientific concepts and their application in an artistic or educational context. He works closely in collaboration with artists, scientists and educators to further develop the link between these fields.

Kin

Kin is an interaction design practice using technology and research to make connections between people, information, spaces, and things. Kin are a team of designers, developers, makers and strategists based in London and work on projects big and small for clients ranging from commercial businesses to cultural organisations. Kin's research-led approach draws together ideas and knowledge from a range of disciplines specialising in designing interactive exhibition spaces, installations, displays and objects. www.kin-design.com

Tom Cecil

British designer and engineer Tom Cecil runs a specialist wood and metal workshop in East London formulating boundary-pushing products, furniture and installations. He produces a range of objects under his own name, also fabricating work for artists and design agencies.

Bowers and Wilkins

Bowers & Wilkins is Britain's leading manufacturer of the world's most advanced luxury audio technology. Since 1966, Bowers & Wilkins' "Quest for Perfection" has resulted in a succession of technical loudspeaker innovations that have satisfied the world's most demanding listeners. Its products' rave reviews and universal endorsement as reference monitors for professional recording industry have helped Bowers & Wilkins become the premium loudspeaker company of choice for audiophile quality sound.

MOTU

MOTU is an engineering-driven music technology company based in Cambridge, Massachusetts. MOTU's award-winning hardware and software are used by top professionals every day on hit songs, mega tours, primetime shows and blockbuster films. <http://www.motu.com>

IWM and Duxford centenaries

- This year marks the centenary of IWM Duxford. This landmark occasion will be commemorated with the creation of an exciting new interactive artwork inspired by Duxford's remarkable history and a season of thrilling air shows.
- This year also marks the centenary of Imperial War Museums (IWM). Since 1917, people have entrusted us with their personal accounts of war, in the knowledge that we will continue to share them with future generations.
- Work began to build Duxford's airfield in 1917 and it became pivotal to the air defence of Great Britain throughout the Second World War - particularly during the Dunkirk evacuation, the Battle of Britain and D-Day operations - and into the Cold War era.
- Over the past 100 years, Duxford has been a continual witness to world-changing events, where ordinary people have shared extraordinary experiences. As part of the commemoration of IWM's centenary, IWM Duxford shares surprising stories and personal memories from across the former RAF fighter station, our museum and the collections held here.
- Duxford's internationally-renowned museum, vibrant working airfield, exhibitions, air shows and events continue to create shared moments and personal memories for all generations.
- Throughout 2017, visitors can explore Duxford's history through our iconic objects – large and small – discover the stories of those who lived, worked and flew from Duxford and encounter a brand new immersive storytelling experience, especially commissioned for IWM Duxford's centenary.
- As we commemorate Duxford's remarkable centenary, it's an exciting time to be planning for Duxford's future. Our vision for the future focusses on Duxford's unique character: the historic site, living airfield and astounding objects. Duxford's rich heritage and engaging personal stories form the heart of everything we do and will ensure that Duxford continues to enthuse and excite audiences now and in the future.

IWM Duxford's remarkable story

- Work began to build Duxford during the First World War, in October 1917, under the auspices of the Royal Flying Corps.
- In April 1918, Duxford became No.35 Training Depot Station and was used to train pilots. Members of the United States Air Service were also stationed here to train as engineers.
- Flying ceased in 1919 after First World War active service ended but started again in 1920 with the

- opening of No.2 Flying Training School.
- In 1924, Duxford became one of the earliest operational Royal Air Force fighter stations.
- On 6 July 1935, to celebrate King George V's Jubilee Review of the Royal Air Force, Duxford hosted the Royal party for lunch at the Officer's Mess.
- By the end of 1938, No.19 and No.66 squadrons, based at RAF Duxford, became the first RAF squadrons to be equipped with the new Supermarine Spitfire fighter aircraft.
- Duxford played a vital role in the Battle of Britain, one of the most significant aerial battles of the Second World War. Famous fighter aces such as Douglas Bader flew and fought from this historic airfield.
- Post-Battle of Britain, Duxford was used by the Air Fighting Development Unit, testing the capabilities of new combat aircraft and evaluating captured enemy aircraft. It was here, in 1942, that the Unit suggested to Rolls-Royce's Ronald Harker that fitting a Merlin aero-engine to a North American P-51 Mustang could greatly enhance its performance. As a result, this new long-range fighter had much greater success at high altitude and was able to compete with Luftwaffe fighters.
- In April 1943, the airfield was handed over to the 78th Fighter Group of the United States Army Air Forces, flying fighter aircraft such as P-47 Thunderbolts and P-51 Mustangs. Duxford provided air support for the Allied D-Day invasion on 6 June 1944.
- During this time, the 78th Fighter Group played host to famous stars including Vera Lynn (1943), Bing Crosby and the United Services Organization Show Troupe, Bob Hope and James Cagney (1944).
- Post-Second World War, Duxford was handed back to the RAF. It then underwent a series of modifications to ensure that it was prepared to face a new kind of Cold War threat.
- In 1961, the station was regarded as unsuitable for the next generation of Cold War supersonic jet fighters and was officially closed as an RAF base.
- For several years, Duxford's future was uncertain. In 1968, Duxford became famous as the location for the *Battle of Britain* film.
- In the early 1970s, much of the site was semi-derelict. Imperial War Museums obtained permission to store aircraft onsite. With the help of a dedicated group of volunteers, the museum site began to evolve.
- In 1976, Duxford opened to the public on a daily basis. Since then, Duxford has grown into a world class museum and heritage site.

IWM Centenary

In 2017 Imperial War Museums (IWM) marks its centenary. IWM was established while the First World War was still being fought. Since its establishment, people have entrusted IWM with their stories of war from 1917 to the present day, in the knowledge it will continue to share these stories with future generations. IWM will commemorate its 100 years through a centenary of stories from its rich collections across its five branches (IWM London, IWM North, IWM Duxford, Churchill War Rooms and HMS *Belfast*).

2017 also marks the centenary of IWM Duxford. Work began to build the airfield in 1917 during the First World War. 100 years later, Duxford's vibrant, living airfield remains at the heart of its story and it is now a heritage site of international importance. As part of the commemoration of IWM's centenary of stories, Duxford shares extraordinary moments and personal memories from its own remarkable 100-year history.

IWM Duxford

IWM Duxford is Britain's best-preserved Second World War airfield, with a fascinating 100 year history that dates back to the First World War. Duxford has been a witness to world-changing events over the past 100 years where ordinary people have had extraordinary experiences. At this active and dynamic museum, historic aircraft can regularly be seen taking to the skies from Duxford's wartime airfield. Exploring state of the art exhibition halls and historic buildings, visitors walk in the footsteps of the men and women from across the world who served at RAF Duxford and explore the rich displays which share powerful stories of the impact of aviation on the nature of war and on people's lives.

Open Daily:

Summer 2017: 11 March to 22 October 2017 10am to 6pm. Last entry at 5pm.

Winter 2017/18: 23 October to March 2017 10am to 4pm. Last entry at 3pm.

IWM

IWM (Imperial War Museums) tells the story of people who have lived, fought and died in conflicts involving Britain and the Commonwealth since the First World War.

Our unique Collections, made up of the everyday and the exceptional, reveal stories of people, places, ideas and events. Using these, we tell vivid personal stories and create powerful physical experiences across our five museums that reflect the realities of war as both a destructive and creative force. We challenge people to look at conflict from different perspectives, enriching their understanding of the causes, course and consequences of war and its impact on people's lives.

IWM's five branches which attract over 2 million visitors each year are IWM London, IWM's flagship branch that recently transformed with new, permanent and free First World War Galleries alongside new displays across the iconic Atrium to mark the Centenary of the First World War; IWM North, housed in an iconic award-winning building designed by Daniel Libeskind; IWM Duxford, a world renowned aviation museum and Britain's best preserved wartime airfield; Churchill War Rooms, housed in Churchill's secret headquarters below Whitehall; and the Second World War cruiser HMS *Belfast*.

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First World War Centenary

2014 - 2018 marks the centenary of the First World War, a landmark anniversary for Britain and the world. IWM is marking the centenary by leading a vibrant, four year programme of cultural activities across the world. For more information visit www.1914.org

