

EveningStandard.

2017

Pictured: Unexploded World War II bomb found in Brondesbury Park



BBC

2017

NEWS

Unexploded bomb shuts Aston Expressway



The Telegraph

2015

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Giant WWII bomb dug up by builders in London

A massive evacuation procedure is carried out in Bermondsey, south London, after the 1,000lb explosive measuring 9ft long was uncovered



EveningStandard.

2017

Bomb disposal expert reveals dramatic details of how huge WW2 bomb found in Thames was detonated



MailOnline

2016

Hundreds of people evacuated after a massive WWII bomb was found in the grounds of a Bath school face a weekend away from their homes



Top Left: 500lb UXB found in Brondesbury Park, London – March 2017.

Bottom Left: UXB discovered in the Thames near the Houses of Parliament – February 2017.

Top Right: The discovery of a 500lb UXB in Priory Road, Aston resulted in the closure of nearby Aston Expressway – May 2017

Middle Right: A 400m cordon was established after a 1,000lb UXB was found in Grange Walk, Bermondsey – March 2015

Bottom Right: 500lb UXB discovered in Lansdown, Bath – May 2016

Report Reference:

7666TA

Client:

TPS Ltd

Project:

Orchard Street, Dartford



Source: Various News Sources



1994

RESCUE workers search for survivors after a Second World War bomb exploded at a building site in Berlin, killing three people and injuring at least eight others.

A fire brigade spokesman said he feared the final death toll could be higher. One worker was still missing, believed to be trapped under a machine. "We've

Blown up by history

found human remains 100 metres away but we can't tell if they belong to the dead already found," the spokesman said.

The blast, set off by drilling work on Frankfurter Allee, one of east Berlin's busiest avenues, trapped

workers under building machinery and sent huge chunks of concrete tumbling through the air.

A large office block was being built on the site of the explosion which sent shoppers scrambling for shelter and paralysed

dense afternoon traffic. One eyewitness said: "There was a bang, then silence, and then it started raining stone and dirt."

Dozens of cars within a 250-metre radius were wrecked and the top two floors of a nearby apartment block carved in.

Radio reports claimed that the total number of injured stood at 14.



2006

World War II bomb kills three in Germany

Three people have been killed and six injured trying to defuse a World War II bomb in central Germany.

Workers building a sports stadium had earlier unearthed the bomb in the town of Goettingen.

It was not immediately clear why the bomb, reportedly weighing 500kg (1,100lb), had detonated.



2010



2006



2014

A World War Two bomb has exploded at a construction site near a west German town, killing a man and injuring eight others, police say.

The explosion occurred after a digger accidentally struck the device during excavation work in Euskirchen in the state of North Rhine-Westphalia.



2008

1 dead, 2 critical after explosion at Malaysia MRT construction site caused by WWII bomb

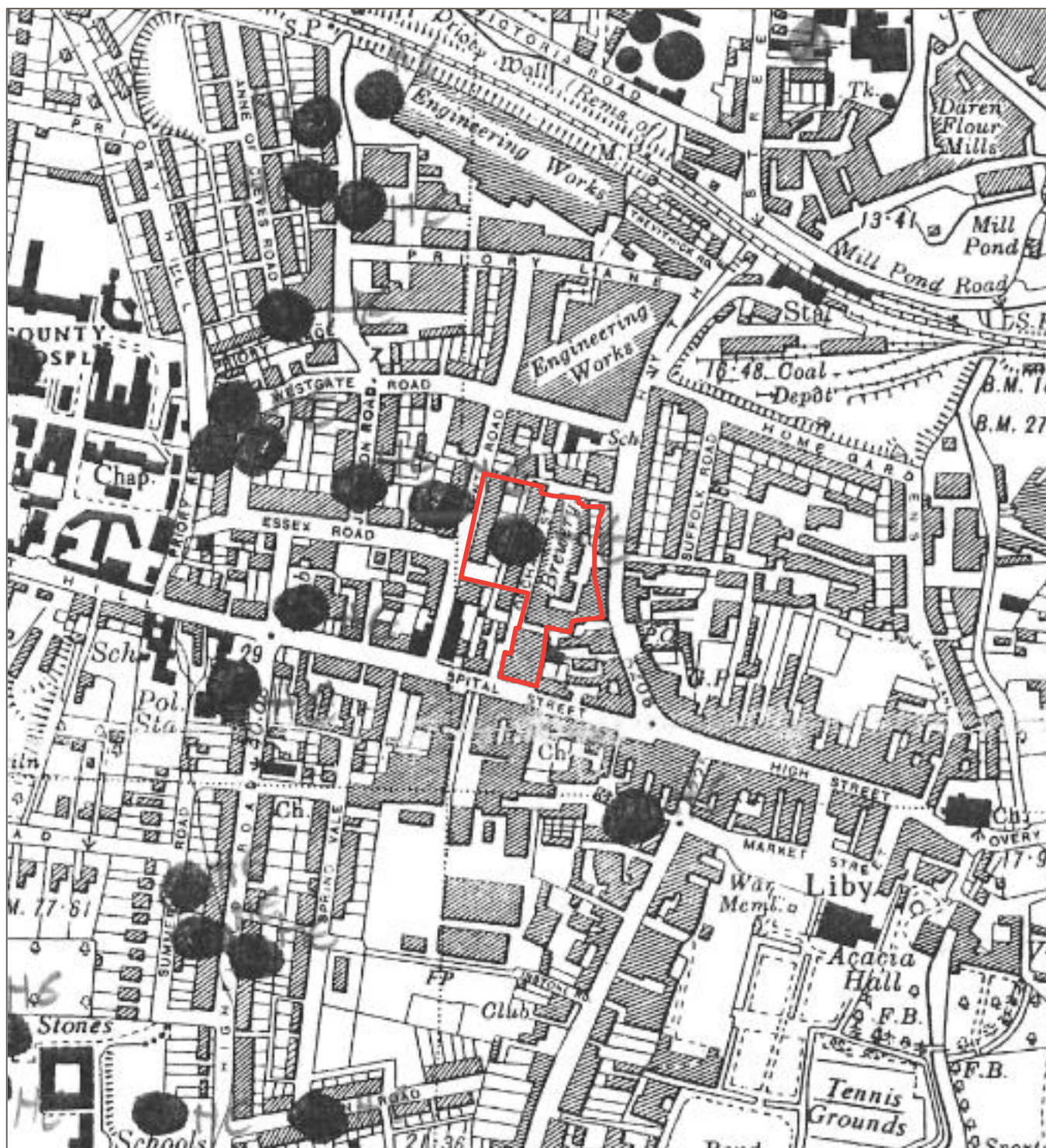


2017

- Top Left:** WWII bomb killed 3 and injured 8 in Berlin – 1994.
- Middle Left:** WWII bomb killed 3 in Goettingen, Germany – 2010.
- Bottom Left:** Excavator operator killed by WWII bomb in Euskirchen, Germany – 2014.
- Top Right:** A highway construction worker in Germany accidentally struck a WWII bomb, killing himself and wrecking several passing cars – 2006.
- Middle Right (Top):** Destroyed piling rig and dump truck after detonation of WWII UXB in Austria – 2006.
- Middle Right (Bottom):** WWII bomb injures 17 at construction site in Hattingen, Germany – 2008.
- Bottom Right:** A buried WWII-era bomb exploded during construction works in Bandar Malaysia, Kuala Lumpur – 2017.

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	Project: Orchard Street, Dartford





— Approximate site boundary

● HE bomb strike

Report Reference:

7666TA

Client:

TPS Ltd

Project:

Orchard Street, Dartford



Source: National Archives



98

99

94



93

92



Approximate site boundary



Bombing Incidents

HE bomb stick

Report Reference:

7666TA

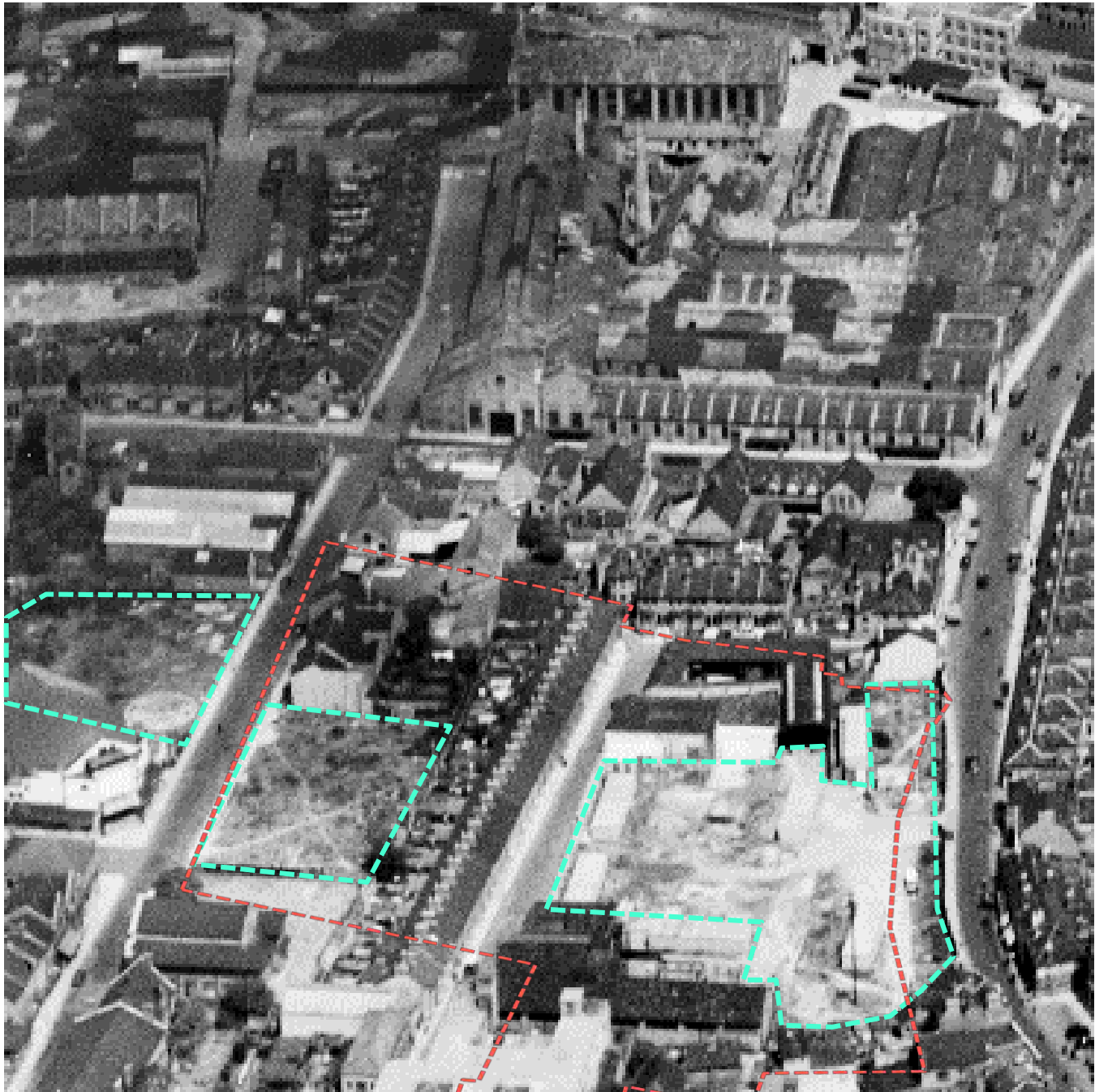
Client:

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Project:

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- Approximate site boundary
- Clearance

Report Reference:

7666TA

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Source: Britain From Above

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NEWS

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23 July 2010 Last updated at 18:28

Covert British troops 'could have buried' WWII devices

World War II incendiary devices found on a building site in Gloucestershire could have been left by covert British troops, according to researchers.

More than 20 phosphorus bombs were unearthed in Birdlip after a digger hit one, causing it to burst into flames.

A former worker at the site said he saw a Home Guard officer burying objects there 65 years ago.

The Coleshill Auxiliary Research Team said auxiliary officers often used Home Guard uniforms as cover.



The bombs were put into vats of water to make them safe

Thursday, September 10 2015

KM KentOnline
The UK's fastest-growing regional news network

Army bomb disposal team called to Blacksole Bridge in Herne Bay

Comments 13

by Aidan Barlow abarlow@thekmgroupp.co.uk

08 July 2015

It was like a scene from Dad's Army when Army bomb disposal experts found wartime explosives made by the Home Guard in makeshift bottles.

A team was called to the Blacksole Bridge in Herne Bay after the wartime bombs were found.

The team from the Royal Logistics Corps set up a 30 metre exclusion zone for pedestrians around the railway embankment after the suspected homemade phosphorus bombs were found.



MailOnline

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Treasure hunter stumbles on deadly Dad's Army bomb cache

By MAIL ONLINE REPORTER
Last updated at 4:06 PM on 9th July 2010

Comments (0) Add to My Stories

A treasure hunter escaped serious injury when he unearthed a cache of bombs that were buried by the Home Guard during the darkest days of World War 2.

The weapons - primed to go off when they made contact with the air - were secreted on a beach by a Captain Mainwaring of the day.

Loaded with dangerous benzene and phosphorus, the Dad's Army-style team would have used them in battle against Nazi troops in the event of invasion.



'Are you sure that's wise?': The Home Guard's stash of bombs finally goes off, 70 years later

Eastbourne
Herald

10/09/15 11°C to 21°C Sunny Like us Follow us Place your Ad Subscribe

VIDEO: Explosion after 80 grenades detonated in Eastbourne



16:31 Monday 13 April 2015

Marked 'AW Bomb 1940' the grenades were thought to have been phosphorus incendiary grenades created as improvised anti-tank weapons when Britain was facing invasion following the army's evacuation from Dunkirk in 1940.

He said, "I remember the grenades being buried. It was part of the Home Guard stash, it was put there in case we were invaded. It had to be in 1943. There were a lot of them [stashes], they were all over the place."

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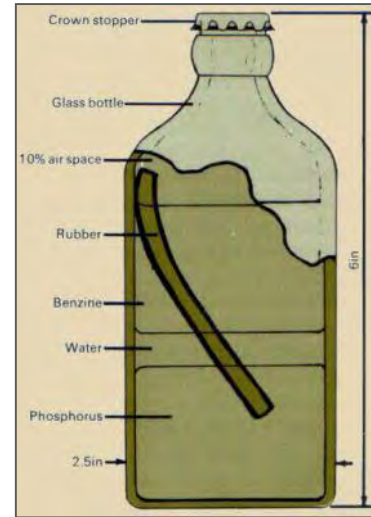
Orchard Street, Dartford



Source: Various news sources

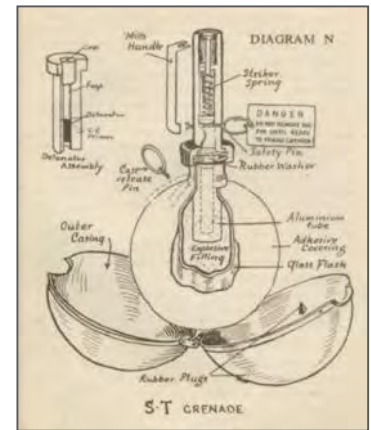
Self Igniting Phosphorous (SIP) Grenades

Filling: White Phosphorous and Benzene
Remarks: The grenade comprised a glass bottle with a total volume of approximately one pint. It was filled with White Phosphorus, benzene, a piece of rubber and water. Over time the rubber dissolved to create a sticky fluid which would self ignite when the bottle broke. Fired by hand or Northover Projector. Sometimes called the "A & W" (Albright & Wilson) grenade.



No 74 Grenade (Sticky Bomb)

Remarks: Designed as an anti-tank grenade and used by the Home Guard. The grenade consisted of a glass ball on the end of a Bakelite (plastic) handle. Inside the glass ball was an explosive filling whilst on the outside was a very sticky adhesive covering. Until used, this adhesive covering was encased in a metal outer casing.



Flame Fougasse Bomb

Remarks: A Flame Fougasse was a weapon in which the projectile was a flammable liquid, typically a mixture of petrol and oil. It was usually constructed from a 40-gallon drum dug into the roadside and camouflaged. Ammonal provided the propellant charge which, when triggered, caused the weapon to shoot a flame 3m (10ft) wide and 27m (30 yards) long. Initially a mixture of 40% petrol and 60% gas oil was used, this was later replaced by an adhesive gel of tar, lime and petrol known as 5B.

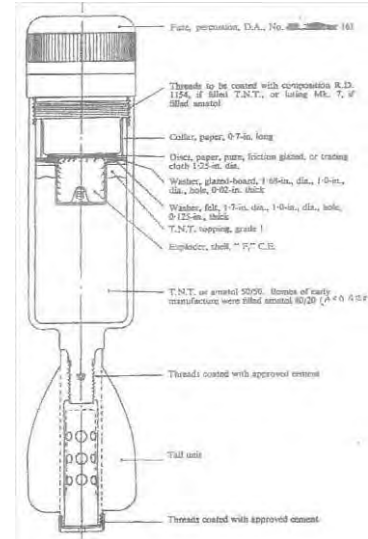


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	Project: Orchard Street, Dartford



Typical 2 inch High Explosive Mortar

Bomb Weight: 1.02kg (2.25lb)
 Type: High Explosive
 Dimensions: 51 x 290mm (2in x 11.4in)
 Filling: 200g RDX/TNT
 Maximum Range: 457m (500yds)
 Remarks: Fitted with an impact fuze which detonates the fuze booster charge (exploder) and, in turn, the high explosive charge. The main charge shatters the mortar bomb body, producing near optimum fragmentation and blast effect at the target.



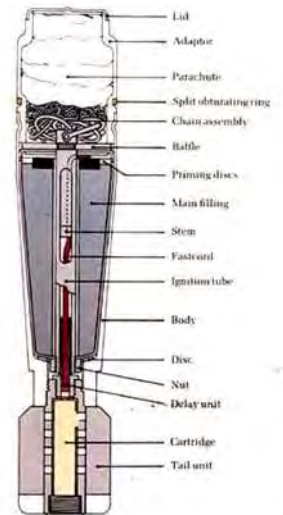
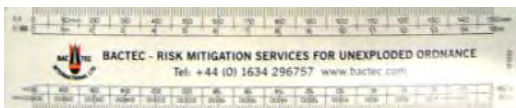
Typical 3 inch Smoke Mortar

Type: Smoke
 Dimensions: c490 x 76mm (19.3in x 3in)
 Filling: Typically white phosphorous
 Maximum Range: 2515m (2,750yds)
 Remarks: On impact, the fuze functions and initiates the bursting charge. The bursting charge ruptures the mortar bomb body and disperses the white phosphorous filler. The white phosphorous produces smoke upon exposure to the air.



Typical 2 inch Illuminating Mortar

Type: Illum.
 Dimensions: 51 x 290mm
 Filling: Various
 Remarks: The expulsion charge ignites and ejects the candle assembly. A spring ejects the parachute from the tail cone. The parachute opens, slowing the descent of the burning candle which illuminates the target.

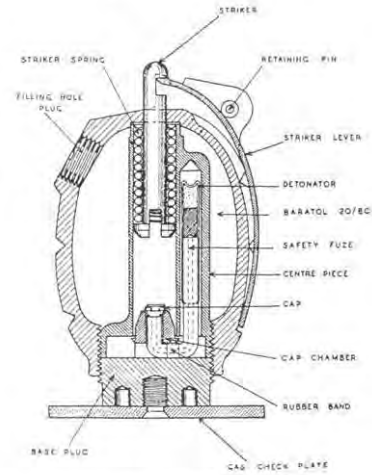


Report Reference: 7666TA	Client: TPS Ltd
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No. 36 'Mills' Grenade

Weight: 0.7kg filled (1lb 6oz)
 Type: Hand or discharger, fragmentation
 Dimensions: 95 x 61mm (3.7 x 2.4in)
 Filling: Alumatol, Amatol 2 or TNT
 Remarks: 4 second hand-throwing fuse with approximate 30m range. First introduced May 1918.



Grenade, .303 inch rifle, No. 36M, Mark I.

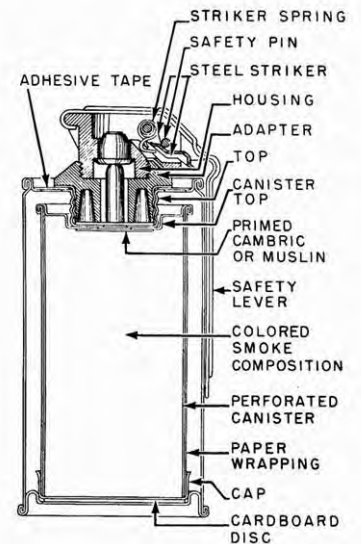
No. 69 Grenade

Weight: 0.38kg filled (0.8lb)
 Type: Percussion/Blast
 Date Introduced: December 1940
 Remarks: Black Bakelite body. Blast rather than fragmentation type. After unscrewing the safety cap, a tape is held when throwing the grenade releasing the safety bolt in the throwing motion. Detection is problematic due to its very low metal content.



Typical Smoke Grenade

Dimensions: Approx. 65 x 115mm (2.5 x 4.5in)
 Type: Smoke
 Date Introduced: Current MoD issue
 Remarks: Smoke grenades are used as ground-to-ground or ground-to-air signalling devices, target or landing zone marking devices, and screening devices for unit movement.



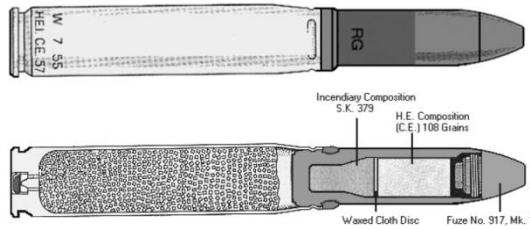
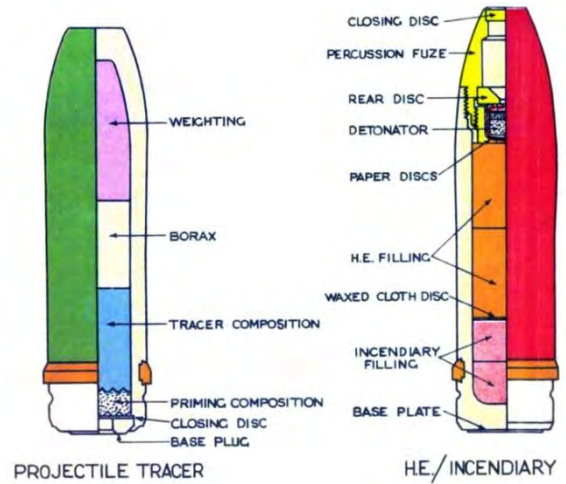
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Client: TPS Ltd
 Project: Orchard Street, Dartford



20mm Hispano HEI Ammunition

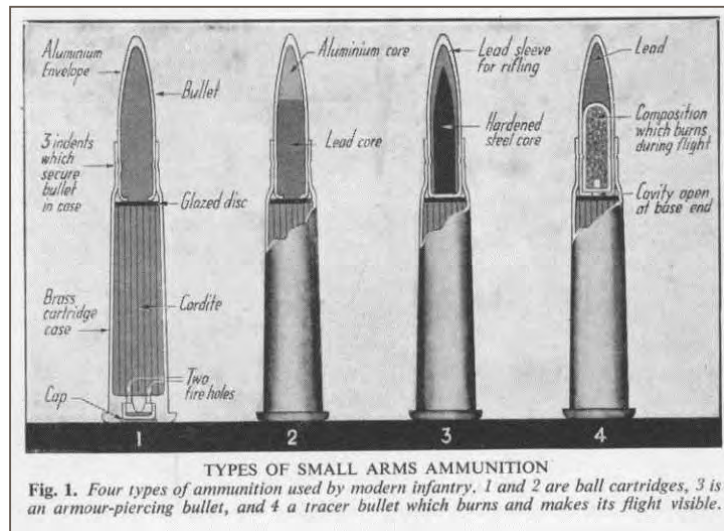
Type: Live canon round
 Markings: Upper half of projectile painted 'buff' colour, lower half is red.
 Cartridge Weight: 256 grams
 Dimensions: Total cartridge / projectile length - 182mm
 Fuzed: Contact fuze – No.253, No.254 or No.917
 Filling: 108 grains of contact explosive + 68 grains of SR.379 incendiary composition.
 Threat: Explosives within unspent cartridge as well as the projectile.
 Deployment: Royal Navy, RAF and British Army Light Anti-Aircraft guns. Also RAF aircraft canons.
 Remarks: Cartridges are belted or supplied lose in cartons.



COLOUR IDENTIFICATION		
BRITISH		
NATURE OF SHELL	H.E. FILLING	COLOUR
H.E. TRACER	T.N.T.	Blue
H.E.	T.N.T.	Orange
PROJ. PRACTICE		Purple
PROJ. TRACER		Green
H.E. INCENDIARY	T.N.T.	Red
H.E. INCENDIARY TRACER	T.N.T.	Green

.303" Ammunition

Type: Rifle / machine gun round
 Markings: Regular round - none. Tracer round – red Primer
 Bullet Weight: 150 - 180 grams
 Dimensions: Total cartridge /projectile length - 78mm
 Filling: Regular round – none. Tracer round - small incendiary fill
 Threat: Explosive cordite within unspent cartridge
 Deployment: Royal Navy, RAF and British Army Light Anti-Aircraft guns, machine guns and rifles. Standard British and Commonwealth military cartridge from 1889 until the 1950s.
 Remarks: Cartridges are belted or supplied lose in cartons.



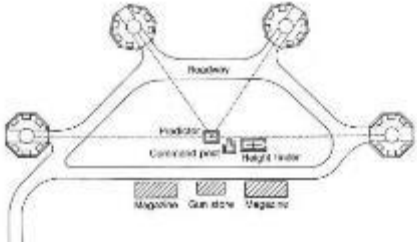
Report Reference:
7666TA

Client:
TPS Ltd
 Project:
Orchard Street, Dartford



3.7 inch Anti-Aircraft Projectile

Weight: 12.7kg (28lb)
 Dimensions: 94 x 360mm (3.7 x 14.7in)
 Carriage: Mobile and Static Versions
 Rate of Fire: 10-20 rounds per minute
 Ceiling: 9-18,000m (29-59,000ft)
 Muzzle Velocity: 792m/s (2,598ft/s)
 Remarks: 4.5 inch projectiles were also commonly utilised



Layout plan for a typical HAA battery site.



This AA shell was uncovered on a construction site in North London in February 2009.



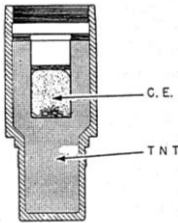
Hyde Park 1939 3.7 Inch QF gun on mobile mounting



3.7 inch AA Projectile Minus Fuze

Rockets / Unrotating Projectiles

Weight: Overall: 24.5kg (54lb) Warhead: 1.94kg (4.28lb)
 Dimensions: 1930mm x 82.6mm (76 x 3.25in)
 Carriage: Mobile – transported on trailers
 Ceiling: 6770m (22,200ft)
 Maximum Velocity: 457mps (1,500 fps)



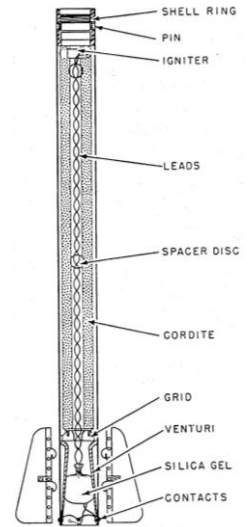
MK II HE Shell (3.5kg)



Rocket Battery in action



Home Guard soldiers load an anti-aircraft rocket at a 'Z' Battery



2' U.P AA Rocket

40mm Bofors Gun Projectile

Weight: 0.86kg (1.96lb)
 Dimensions: 40mm x 310mm (1.6in x 12.2in)
 Rate of Fire: 120 rounds per minute
 Ceiling: 23,000ft (7000m)
 Muzzle Velocity: 2,890 ft/s (881m/s)
 Remarks: Mobile batteries – normally few records of where these guns were located



Unexploded 40mm Bofors projectile



40mm Bofors gun and crew at Stanmore in Middlesex, 28 June 1940.



Report Reference:

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Client:

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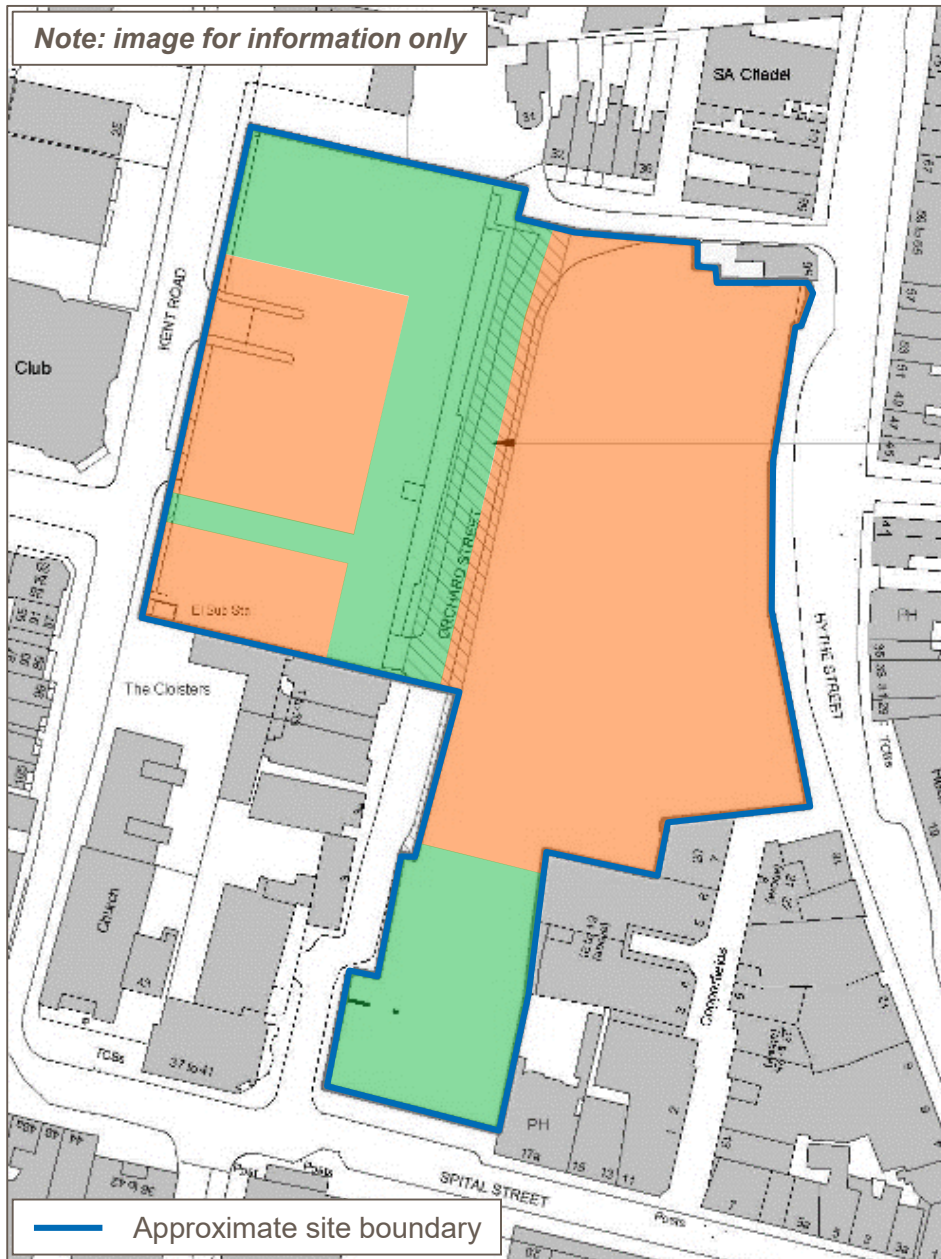
Project:

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Note: image for information only



Low Risk Zone

- Buildings / roadways which survived WWII intact

Medium Risk Zone

- Areas of significant bomb damage / clearance
- Areas of open ground during WWII
- Buffer area to account for the J-Curve Effect

Both Risk Zones:

- Site Specific Explosive Ordnance Safety and Awareness Briefings to all Personnel conducting Intrusive Works.
- The Provision of Unexploded Ordnance Site Safety Instructions.

Medium Risk Zone only:

- Explosive Ordnance Disposal (EOD) Engineer presence on site to support shallow and basement intrusive works.
- Intrusive Magnetometer Survey of all pile locations down to the maximum bomb penetration depth

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