

Ramsgate A.R.P. Shelters

World War II

The County of Kent has long been regarded as the UK's Bomb Alley, and positioned at the sharp end of Bomb Alley is Ramsgate. Stories abound of raids over Ramsgate when enemy aircraft returning from failed missions decided to 'unload' over the town rather than take their bombs home. Shelling from German guns situated just 30 miles across the Channel in France was also a frequent danger.

On the 24th August 1940 Ramsgate received more than 500 bombs when a squadron of German aircraft were approaching Manston. Their leading aircraft was shot down over the harbour and in vengeance they decided to release their bombs over Ramsgate. This was the first air raid by the Germans on an unprotected town.

On that fateful occasion countless lives were saved by an underground Air Raid Protection (A.R.P.) system of tunnels dug for the purpose. These tunnels extended for approximately 2½ miles around the town with 11 entrances at strategic points providing refuge within 5 minutes walk of most areas. A 1500 yard long former railway tunnel was also used and linked to the A.R.P. system. The tunnels were equipped with chemical toilets, bunk beds, seating, lighting and a loud speaker system. Many people took up residence below ground having lost their homes above. Others used them just for shelter or to move around town during a raid.

The design and construction of the tunnels was masterminded by the Borough Engineer Mr. R.D. Brimmell B.Sc. A.M.I.C.E. as early as 1938, but was repeatedly turned down by the Home Office. Ramsgate's flamboyant Mayor of the time A.B.C. Kempe kept the pressure on, and with the increasing intensity of the war in Europe permission to start construction was given in the Spring of 1939.

Work started immediately at a cost of just over £40,000 plus a further £13,500 for services and fittings. The first section between Queen Street and the Harbour was opened by the Duke of Kent on the 1st June 1939.

The tunnels were 6 feet wide, 7 feet high and constructed at a depth of 50-75 feet to provide an adequate degree of protection against random bombing with 500 lb. and 1000 lb. medium capacity bombs. In the case of a direct hit, a 500 lb. bomb would not be expected to damage the tunnel; but some spalling (splintering) of the chalk would be expected if the bomb was a 1000 lb. medium capacity type and the overhead cover was less than 60 feet.

After the end of World War II a large sewer pipe was installed in part of the system under Ellington Road and continued down to the Harbour. The remaining entrances were sealed and the tunnels began to fall into disrepair.



The Cold War

The Cold War can trace its beginning back to early 1945 when the "big three" of Stalin, Roosevelt and Churchill met at Yalta to discuss the re-establishment of the nations of war-torn Europe. As a result of this meeting Eastern Europe came under the control of Stalin's Soviet Union. In 1946 Stalin gave a speech declaring that Communism and Capitalism were incompatible and Winston Churchill gave a speech in which he declared an "Iron Curtain" had descended across Europe. In 1949 Russia tested its first atomic bomb and in 1950 President Truman approved development of the H bomb. By 1952 Britain was developing atom bombs. The Cold War had begun.

As in WWII, the British authorities became concerned about the escalating situation and plans were drawn up to protect the public. Little was known about the plans for Ramsgate until confidential government records were opened in 2008.

Again, Ramsgate's Borough Engineer Mr. R.D. Brimmell was ahead of the game and in January 1951 he produced a plan to re-open and reinforce the existing A.R.P. tunnel system from WWII and new tunnels were to be constructed with access points covering the expanding town.

Scheme I was to open up the Ellington Road section which was partly blocked by the Newington Trunk Sewer. This scheme would serve 2860 houses, 10000 people, and would include 1500 yards of the tunnels. The cost was estimated at £16,500. Included in this figure was the cost of re-opening the remainder of the existing network.

Scheme II was for a new 700 yard tunnel to be dug under London Road from Pegwell Road to Nethercourt with an entrance at each end. This would serve 1150 houses, 4010 people at an estimated cost of £15,500.

Scheme III was to serve the Newington area and was by far the most ambitious. The tunnel was to start under the northern end of Princess Margaret Avenue and continue to the southern end, follow the boundary of Newington Estate to Cheriton Avenue, along Cheriton Avenue to Newington Road, along Whitehall Road to Margate Road, and then along Margate Road to its junction with Allenby Road. This tunnel would be 2850 yards long (1.62 miles) and would serve 2850 houses, 10250 people. The total estimated cost was £52,500.

The three schemes would make available more than 4¼ miles of tunnels for almost 41,000 people living or working with a ¼ mile radius of an entrance. The total estimated cost was £84,500.



Coverage of existing and proposed tunnels within ¼ mile of an entrance

It wasn't until 1954 that central government took an interest when the Ministry of Works carried out a survey of the existing tunnels for reservation by the Home Office as air raid shelters. The survey of the chalk tunnels reported the following:

Class of Property *The tunnels were cut specially for the provision of air raid shelters during the war.*

Access *There are 11 entrances, (not all usable). They are situated at various usable points in the district and consist of flights of steps leading down from street level. The steps are well constructed in reinforced concrete. They are not roofed over, but are open at the top and railed round to protect the public.*

In addition to the street entrances the tunnels were originally connected to the old railway tunnel; but the connection is now blocked. This connection could be re-opened.

Description *The tunnels have been cut in chalk and are 6 feet wide by 7 feet high. They are neither lined nor propped.*

Since the war, a considerable length has been used to accommodate a sewer. In this length the headroom is now reduced to about 3 feet high and it is only sufficient for the tunnel to be used for ventilation and for crawling through in an emergency. Consequently, the number of useful entrances is now reduced from 11 to 8.

In general, the tunnels are in good condition and dry. In normal circumstances, heavy roof falls are unlikely to occur but there has been a considerable fall over a length of about 60 yards. This was due to the bursting of a water main above; otherwise only light spalling has occurred. In tunnels of this kind, the flatness of the roof, together with the percolation of water, tends to produce spalling and light falls over a number of years, until the arching of the roof becomes stabilised.

Ventilation *Ventilation is natural between the entrances and by three shafts. It is understood to have been adequate during the war.*

Services *Electricity, gas and water are available from the streets above.*

The tunnels have been wired for electric light but the installation is no longer serviceable.

Vulnerability *The overhead cover consisting of chalk is from 50 feet to 75 feet deep over the tunnels, and provides an adequate degree of protection against random bombing with 500 pounds and 1000 pound medium capacity bombs.*

In the case of direct hits, a 500 pound bomb would not be expected to damage the tunnel; but some spalling would be expected if the bomb was a 1000 pound medium capacity type and the overhead cover was less than 60 feet.

Recommendations *The tunnels are suitable for use again as air raid shelters; but before making use of them, a detailed examination of the roof should be made by a competent tunnel miner and all loose pieces of chalk should be removed.*

If the shelters are to be fully occupied for long periods, some mechanical ventilation may be found necessary.

The usual services and amenities should be provided.

A similar survey was carried out on the disused railway tunnel which reported:

Description *The tunnel is an old double track railway tunnel and was used as an air raid shelter during the war. It runs approximately north from the Merry England Amusement Park on*

the seafront, to the Greyhound racing track and is at present used for running a miniature electric railway in connection with the amusement park.

The tunnel is about 25 feet wide, 25 feet high, 1500 yards long and passes under a closely built up area. In addition to the two open ends there are two entrances in branch tunnels 8 feet 6 inches wide by 8 feet high. These two are provided by reinforced concrete steps leading from Hereson Road and Dumpton Park Drive. The steps are provided with a centre handrail and are in good condition.

During the war there was an opening to a branch tunnel near the southern end of the main tunnel. The opening lead to other tunnels specially constructed as shelters.

It is now blocked but could easily be reopened.

The whole of the tunnel is usable and approximately level. The roof is lined throughout with a brick arch but the sides are only lined in places. Where the walls are unlined, some scaling of the chalk has occurred; particularly near the southern open end. This is probably the effect of damp and frost as frequently found near the entrances of unlined tunnels of this kind.

The floor is covered with a layer of sand and the tunnel is dry.

Ventilation is natural and the atmospheric humidity is not as high as usually found in disused tunnels.

Services *Gas and water mains and a sewer are available at the ends of the tunnel. Electricity is available inside the tunnel.*

Vulnerability *The overhead cover consists mainly of chalk from 75 to 100 feet in depth. This is adequate overhead protection against random bombing the 500 pounds and 1000 pound medium capacity bombs; but the open ends of the tunnel will need to be protected with blast walling.*

Recommendations *The tunnel is suitable for use again as an air raid shelter.*

The open ends will require to be built up with reinforced concrete walling of a more substantial construction than that usually required for blast walls erected in the open. Entrance openings should be left in the end walling and protected by blast walling.

The tunnel could accommodate about 6000 people in bunks; but the entrance facilities fall somewhat short of what is desirable for so many.

The construction of two or three more branch tunnel entrances would be advisable.

If the tunnel is to be occupied as a shelter, the existing natural ventilation will be insufficient and mechanical ventilation will be necessary.

The usual services and amenities should be provided.

As far as is known the Cold War proposals were never adopted, and the WWII tunnels remain under Ramsgate largely as described in 1954. Generations of residents have gained access to the "Wind Tunnels" as part of growing up in Ramsgate but ventilation has become an increasing concern as efforts to prevent access have restricted the natural airflow.

Hopefully the tunnels will re-open one day as part of Ramsgate's heritage rather than as the result of war.