London Borough of Sutton
Carshalton & Clockhouse Local Committee
Report of Bill Wyatt – Assistant Parks Manager

CARSHALTON PARK AIR RAID SHELTER

Ward Location: Carshalton Central
Area Served: Borough Wide

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Executive Councillor:
Councillor Colin Hall

The Parks Service received a report from a member of the public about a hole in Carshalton Park on the 3 January 2012, following this the area was inspected the area of the hole was made safe.

Upon further inspection, it was found to be more than just a hole, and officers looked at aerial photographs, and satellite images which revealed the outline of the air raid shelter on the grass.

The area of the air raid shelter was fenced off by contractors to make safe, but despite double fencing the area people were still gaining access and entering the shelter even after a skip was placed over the entrance. (The ITV London News item showed an earthenware bottle in the shelter that was no longer there when the structural survey took place.)

Officers arranged for a structural survey to look at any ongoing safety issues, and provide information for future management. Sections of the information from the Structural Survey are set out below.

Officers have instructed a local company to construct and install a lockable metal cover.

The Parks Service will discuss what is possible with the Heritage Service which is usually the custodian of such features; however there are no resources available to carry out any further works. The primary concern at this stage is to secure the shelter so that access can be controlled and the shelter kept free from damage.

Structural Survey
Peter Watkins (Structural Engineer) & Gary Marshall of URS Corporation Ltd carried out the visual site walkover survey on the 18th January 2012.

The shelter is located below existing ground level in Carshalton Park off Ruskin Road in Carshalton. The shelter was constructed with pre-cast reinforced concrete sections for the walls and ceilings and insitu concrete for the stairs and floors with an internal steel frame that appears to provide lateral stability for the pre-cast concrete panels.

There were 3 main stair entrances into the shelter all are circa 1.4m wide. The shelter consists of corridors, laid out in a series of doglegs which we understand provided some blast protection in the event of a nearby bomb explosion. The passageways are all c. 1.4m wide and 1.8m high internally, dimensions being dictated by the pre-cast wall and roof sections. The passage floors were generally clear apart from 2 of the corridors where it would appear that the timber benches had been collected and burnt after the war.

The shelter provided basic facilities for the comfort of its occupants, and would appear to have had some form of electric lighting powered either by battery or from the mains, and supplied by wires running through steel conduit, which still survives in some areas. At the ends of each corridor a recessed area was provided for occupants to boil water on a concrete plinth. A vent pipe carried the steam to the surface.
A toilet block was located in the centre of the shelter and would appear to have been split for Ladies & Gentlemen. The toilet block appears to be constructed in rendered brickwork with a reinforced insitu concrete roof spanning between a concrete beam.

This form of pre-cast trench construction would appear to have been widely used across England and would’ve been constructed utilising the cut-and-cover technique, using spoil from the trench to cover the pre-cast concrete structure.


The following observations were made during the visual site inspection:

- There were no obvious signs of collapse apart from the hatch that provided our access into the shelter. One of the other escape hatches had collapsed in the past and would appear to have been repaired with a steel plate covering. (Refer to plan for location)
- There were no visible signs of root or vegetation ingress through the wall, ceiling or concrete floors.
- The precast concrete wall and ceiling panels are generally in good condition, however water has penetrated several panels causing the reinforcement to corrode and crack the concrete.
- Some of the wall & ceiling panels had been charred during the burning of the timber benches though there was no visible evidence of concrete spalling.
- There were no visible pools of water, however significant water seepage is present on the ceiling and wall panels.
- The water seepage has caused the internal steel frame to corrode, some delamination is present. In order to assess the full extent of the corrosion the steelwork would need to be cleaned up with a wire brush to remove any loose scale. The loss of section & remaining capacity could then be assessed.
- The remaining escape hatches have been plugged with concrete held in place by timber shuttering, friction and concrete overspill. The hatches are in varying states of deterioration and there is a significant risk that other hatches could suddenly collapse.
- Brick built soakaways were present at the stair entrances and in some locations of the passageways.
- The toilets connected to an internal manhole within the toilet block. The manhole’s cover had been lifted and debris has collected in the manhole. If the manhole serves other local properties this could cause a blockage if not cleared.

As a precaution URS suggest that gas monitoring for oxygen, carbon dioxide, methane and hydrogen sulphide should be undertaken during entry to the air raid shelter. URS suggests that an asbestos survey should be undertaken in the air raid shelter to evaluate the asbestos risk to future entrants.

As a precaution we would recommend that gas monitoring for oxygen, carbon dioxide, methane and hydrogen sulphide should be undertaken during entry to the air raid shelter. We would also advise that the appropriate PPE be worn and that persons entering the shelter be accompanied by a suitably qualified safety officer, whilst at least one person remains outside the shelter.

We understand that Carshalton Park hosts a number of public events each year, whilst a detailed load capacity check has not been undertaken on the structure of the shelter, we would advise that the extent of the shelter is marked out and the load restricted to pedestrian traffic only.

Maintenance of the shelter in its present sealed condition

In the short term it will require repairs to the escape hatches, to provide secure access points into the structure for inspection & maintenance purposes. Due budgetary provision would have to be made to cover regular (annual) inspections & security.
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