Attachment 3 to Item 10.3.1.

Conservation Treatment Report by International Conservation Service Pty Ltd for the Krupp Field Gun Number 153

Date of meeting: 29 July 2025
Location: Council Chambers
Time: 6:30pm

Conservation Treatment Report

Fried. Krupp 75mm Field Gun Nr.153, 1904 Model

Prepared for:
Hawkesbury City Council

Octoberr 2017

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Contents

1 Executive Summary

In December 2016 International Conservation Services (ICS) was engaged by Hawkesbury City Council to carry out conservation and restoration treatments to the Fried. Krupp 75mm Field Gun Nr.153, 1904 Model. The Krupp Gun is significant for technological, historical and social reasons.

The scope of works was based on recommendations made by ICS in the October 2015 report "Fried. Krupp 75mm Field Gun Nr.153, 1904 Model. Conservation Assessment and Treatment Proposal", wherein a range of treatment options for the conservation of the Krupp Gun were outlined.

ICS was engaged to undertake Option 1 – Full Conservation Treatment. The works were carried out between January and July 2017.

The main objectives of these works were to ensure the gun and its components were structurally sound, to stabilise corrosion and to provide the Krupp Gun with an appropriate aesthetic appearance as determined by historical research.

Separately, a provenance report of the Krupp Gun was undertaken by historian Damien Allen (Appendix B). A key factor in the historical research was to determine whether the gun was captured from Turkish forces in the Battle of Beesheba by the Australian Light Horse Brigade.

This report contains a summary of the works undertaken and ongoing maintenance recommendations. It includes a photographic record of the Krupp Gun before, during and after treatment, followed by Damien Allen's provenance report (Appendix B) and a treatment report conducted by Favcote (Appendix C)

Upon completion of treatments, the Krupp Gun was placed on display by Hawkesbury City Council in the foyer of the Windsor Public Library.

2 Provenance – Windsor War Trophy

The Windsor 75mm War Trophy cannon is a 1903 designed Krupp export model manufactured for the 408 gun Rumanian contract. The WW1 Turkish army had several of these guns that were captured or gifted to them between 1912 and 1916.

Based on photographic evidence and the 4th Brigade Light Horse War Diary, approximately nine 75mm guns were captured by the 12th Light Horse Regiment during their charge on Beersheba on 31st October 1917. Of these, at least one, probably two, and up to three of the guns captured were the same model as the Windsor Krupp gun.

Detailed research identified that the main source of provenance for captured artillery is the War Trophy card index. Unfortunately the War Trophy card for this particular Krupp Gun does not state where it was captured. The provenance report commissioned for this report (appended to this report Appendix B) investigates the provenance of the Windsor Krupp Gun and the conclusion is likely that it was captured during the famous Light Horse charge at Beersheba[1].

[1] Allen, D 2017 'Windsor 75mm Gun War Trophy Provenance'

3 Proposed Scope of Works

The proposed scope of works was based on Option 1 – Full Conservation Treatment as outlined in the ICS 2015 "Fried. Krupp 75mm Field Gun Nr.153, 1904 Model. Conservation Assessment and Treatment Proposal"

The aim of this treatment is to ensure the Krupp Gun is structurally sound, stabilise all corrosion and present a gun with a new paint system and authentic reproduction wheels.

Proposed methodology: (Note that treatment was modified as appropriate based on information revealed as treatment progressed)

- Document and record treatment processes
- Remove Krupp Gun from site and transport to treatment facility
- Paint sampling, analysis and historical research
- General clean and preparation of components for dismantling
- Determine desired appearance of gun based on discussions with Council
- Dismantle into component parts; barrel/cradle, saddle and trail
- Grit blast to two and a half grit level to remove paint and corrosion
- Reinforce, weld additional panels or fill losses to structure as appropriate
- Fabricate new replacement wooden wheels sympathetic to original design
- Repaint guns to agreed paint colour based on paint samples and historical research
- Reassemble components and set barrel at agreed elevation
- Install tampion
- Transport to site

4 Treatments Undertaken

The following outlines the treatment carried out between January 2017 and July 2017 on the Krupp Gun:

4.1 Conservation & Restoration Works

The following outlines the treatment carried out between January 2017 and July 2017 on the Krupp Gun:

- Krupp Gun loaded by crane onto flatbed truck at Hawkesbury Council Depot and transported to Favcote professional coatings
- After Krupp Gun arrived at Favcote, preliminary inspections were made and a scope of works discussed with ICS, Hawkesbury City Council and Favcote. Decisions made in regards to the works involved:
  - Weld connecting brake lever to trail door to be removed to allow access to inside of trail
  - Abrasive blasting and coating to be undertaken to the inside of the trail
  - New trail section (skin) to be attached to the outside of the existing trail to resemble a fully complete trail arm and conserving the original fabric internally
  - Patch repairs to the corroded areas of the upper and lower trail where the new 'skin' was not installed
  - Creation of a weep hole at end of trail to reduce moisture build up
  - Removal of all four sections of the lower cannon sleeves to inspect for corrosion
  - Fabrication of replicas to replace two damaged rear cannon sleeves on the proper left and right hand sides due to severe corrosion
  - Taubmans Stony Creek paint system was chosen by the Hawkesbury heritage advisory committee as being the most fitting given the historical reference supplied
- Removal of the wheels and hubs from the Krupp gun undertaken and sent to Mahbrook Carriage supplies for restoration. See section 4.2 Fabrication of Wheels
- Abrasive blasting of the Krupp gun undertaken with a fine grit medium to remove existing coating and all active surface corrosion. Extra care taken to prevent loss of detail around engraved sections of the barrel including insignia and serial numbers
- Base layer (primer) of paint coating applied (Interzinc 52 light grey)[2]
- Intermediate paint coating applied (Intercure 200 sand) in order to protect all newly treated surfaces of the gun during the repair process of the trail and cannon sleeves[3]
- Restoration of the trail arm with new fabricated 'skin' placed and applied over the original trail and patch repairs to the upper and lower areas of the trail
- Replication and installation of the rear cannon sleeves below the muzzle of the cannon to the PR and PL sides
- All areas where replications and repairs on the gun had taken place were spot blasted and coated in the base primer (Interzinc 52 light grey)
- Intermediate paint coating applied to all areas of the gun that were affected by the replication and repairs (Intercure 200 sand)
- Full paint coating applied (Interthane 870 tinted to Taubmans Stony Creek)[4]

[2] See product information at http://www.international-pc.com/PDS/2561-P-eng-usa-LTR.pdf

[3] See product information at http://www.international-pc.com/PDS/2086-P-eng-A4.pdf

[4] See product information at http://www.international-pc.com/PDS/2475-P-eng-usa-LTR.pdf

- Final touch ups of coating as required
- Restored wheels reattached to gun with original pins
- Transport and installation of the restored 1904 Krupp Gun placed in Windsor Public Library foyer
- The original two rear cannon sleeves were given to Hawkesbury City Council for inventory
- Final onsite touch up of the full paint coating system was applied on 28th July 2017
- The Krupp Gun tampion was installed on 2nd August 2017. The tampion was made of merbau timber in a cylindrical form with an M6 sized stainless steel removable eyebolt. A stainless steel hexhead screw was placed in the tampion once the eyebolt was removed

4.2 Fabrication of Wheels

The timber wheels attached to the Krupp Gun were extremely deteriorated from the outdoor environment and were not the original wheels. It was decided that new wheels would be replicated in the form of the original wheels. The wheels were removed and sent down to Mahbrook Carriage Supplies. (Note: Due to the timber on the wheels being extremely deteriorated and not original they were disposed of when being disassembled).

The following outlines the wheel fabrication process carried out at Mahbrook Carriage Supplies

- Replica wheels fabricated using original hubs and tyres.

  (Note: dimensions based on the rolling diameter and steel rim tyre thickness)
- Spokes constructed from dried spotted gum. 1/3 diameter rims steam bent from American ash
- Spoke boots fabricated from mild steel
- Original flat steel tyre rim removed and then hydraulic pressed onto the new wheels
- Hubs, bolts and spoke boots sandblasted and primed with Dulux Zincanode 402 two pack zinc rich epoxy primer
- Spoke boots attached to timber rims by two timber wood screws in each
- Wheel spokes and rims fine sanded and coated with Penetrol[5]
- Arrival of the wheels from Mahbrook Carriage Supplies to Favcote. Painting of the wheel hubs, spoke boots and metal rims. Paint coating was applied as follows:
  - Intercure 200 sand
  - Interthane 870 tinted to Taubmans Stony Creek

[5] See product information at http://www.floodaustralia.net/brochures_guides/pdf_files/Penetrol-brochure.pdf

5 Maintenance Recommendations

5.1 Environment

We understand the Krupp Gun will be on display in the foyer of a public space for a short period of time. We recommend signage informing people not to climb on the heritage exhibition.

The Krupp Gun is due to be relocated to its previous location in McQuade Park, Windsor, on Armistice Day 2018. We strongly recommend that the Gun is located in an undercover shelter as this will help to slow deterioration and maximise the lifespan of the Krupp Gun's paint system. Exposure to an external environment will accelerate deterioration of the Gun and its new paint system, with the unpainted wheels being particularly susceptible.

5.2 Maintenance

ICS recommends a regular program of inspection and maintenance to help ensure the long term stability of the Krupp Gun.

To minimise deterioration it is advisable the following steps are followed;

- Annual cleaning with minimal water and microfiber cloths to minimise dirt and debris build up on the surface
- A condition inspection should be undertaken every 1-2 years to check for any damage to the paint system and/or any active corrosion
- Patching the paint system regularly will reduce the risk of corrosion developing and prevent further deterioration of the paint around susceptible areas.
- The bore of the barrel should be inspected every 1-2 years. Localised treatment of corrosion development can be performed in this confined space with a fish oil solution.

6 Authorship

Project management for the conservation and restoration works was undertaken by James Kleppen, Conservation Projects Manager with oversight by Katy Ross, Senior Conservation Projects Manager, ICS.

This treatment report was written by James Kleppen and reviewed by Katy Ross.

Abrasive cleaning, restoration and painting works completed by Favcote, led by Lee Woods.

Provenance of the Windsor Krupp Gun supplied by Damien Allan.

The replacement replica wheels were fabricated by Mahbrook Carriage Supplies, led by Mark Burton.

Appendix A: Photographic Record

Figure 1 Overall proper left side

Figure 2 Overall proper right side

Figure 3 Corrosion on trail

Figure 4 Abrasive blasting of trail

Figure 5 Intermediate coating and new trail skin

Figure 6 Krupp gun with full paint coating and wheels

Figure 7 Creation of weep hole in trail

Figure 8 Corrosion on nozzle sleeves

Figure 9 Abrasive blasting of corroded nozzle

Figure 10 New replica nozzle sleeves

Figure 11 Gun barrel with new sleeves installed

Figure 12 Insignia before treatment

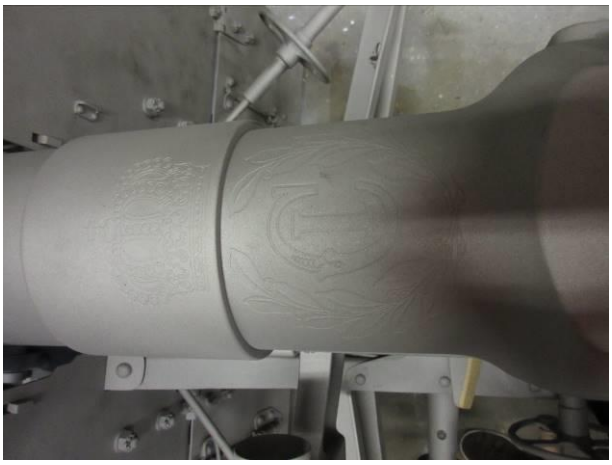

Figure 13 Insignia during treatment

Figure 14 Insignia after treatment

Figure 15 Insignia on parts of the gun

Figure 16 Insignia on parts of the gun

Figure 17 Gun section primed

Figure 18 Completed final coating of gun

Figure 19 Old wheels before

Figure 20 Replica wheels during construction

Figure 21 Replica wheels with final coating

Figure 22 Replica wheels attached to gun

Figure 23 Final coating to shield and nozzle

Figure 24 Final coating to trail and rear

Figure 25 Completed gun with wheels attached

Figure 26 Completed gun with wheels attached

Figure 27 Arrival of the gun at Windsor library

Figure 28 Unloading of the gun at Windsor library

Figure 29 Installation of the gun in library foyer

Figure 30 Installation of the gun with sandbags

Figure 31 Final installation of the gun

Figure 32 Installation of the gun tampion

Appendix B: Provenance Report

Appendix C: Favcote Treatment Report