

FHBRO Number 96-51

Kingston, Ontario

**Commissariat Stores/East Reverse Fire Chamber, Advanced Battery**  
**Fort Henry*****FINAL DRAFT***

The Commissariat Stores/East Reverse Fire Chamber was constructed between 1841 and 1843 for the Master General, Board of Ordnance. The defensible casemated stores was built as a link between the advanced/sea battery and the redoubt, to cover the exposed ground to the east, to provide commissariat services to the Fort and to offer close-in protection of the advanced battery ditch. It was the work of two members of the Corps of Royal Engineers; Lt. Colonel Gustavas Nicolls, who prepared the original design and Lt. Colonel John Oldfield (CRE 1839-43), who supervised the work. External modifications include: the blocking up of the defensive gateway with a loopholed masonry wall (late 1840s), the blocking up of the loopholes in stores nos. 17 and 18 as part of their conversion to magazines (1859), the re-roofing of the east range of casemates and the replacement of the built-in cornice gutter by a hanging gutter (pre. 1922), the unblocking of the gateway and the restoration of loopholes in the casemates converted to magazines (1936-38). Internal modifications include: the fitting up of stores nos. 17 and 18 as magazines (1859), the fitting up of a further 10 casemates as magazines (c. 1866), and the breaking of arched openings between a number of casemates (date unknown). The building is currently used for visitor services, public washrooms, gift shops, a canteen, and a restaurant. The East Reverse Fire Chamber is not accessible to the general public. Fort Henry is owned by Parks Canada, a federal government agency and is leased to the St. Lawrence Parks Commission, an agency of the Government of Ontario. The Fort was declared a National Historic Site in 1923. See FHBRO Building Report 96-51.

**Reasons for Designation**

The Commissariat Stores/East Reverse Fire Chamber has been designated Classified because of its important historical associations, the qualities of its architectural design and the important role it plays in the environment.

The theme identified for the structure is its association with the active defence of colonial Canada by the British between the war of 1812 and 1870 and the development of the Canadian military from 1871-91. The School of Gunnery, "A" and "B" Batteries made use of both the redoubt and advanced battery in the course of their training exercises.

The completion of the Commissariat Stores/East Reverse Fire Chamber in 1843 was part of a major upgrade of the Kingston defences accomplished between 1832 and 1848. The civilian employment generated by this project and the increased personnel involved in staffing the commissariat establishment gave a boost to the economy of Kingston.

On its defensive face the work is impressive for the sheer length of regular coursed

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limestone ashlar shot-proof wall (almost 300', when the outer wall of the casemates and the musketry wall are combined), the depressed three-centred arched defensive gateway, and the regular pattern of vertical musketry loopholes (grouped in triplets and stepped to follow the grade) and heavy cantilever brackets (all that remains of the original built-in cornice gutter). Viewed from the parade the work is impressive for the matching bay treatment of the casemates (a central door flanked by windows within a sunken panel). The internal spaces, in particular the casemates with their squared uncoursed rubble masonry walls and ceilings of segmental brick vaulting demonstrates simple geometry, plain surfaces and solidity.

The east range of casemates has displayed a remarkable adaptability to change. Used initially by the commissariat department for stores, the casemates converted easily to magazines and shell rooms.

The east range of casemates contains two quite remarkable engineering achievements attributable both to the prowess of the designers and the skill of the masons. The first is the treatment of the side walls; a stepped foundation to accommodate the sloped site, "true level" stone coursing to give stability, and a uniformly (7.2%) sloped cornice and roof line to parallel the ground line. The second is the treatment of the defensive gateway; a single archway with depressed three-centred arched portals and three internal oblong vaulted compartments. The ceiling of the compartments at each end is a depressed three-centred vault intersected by a half-vault of similar profile to clear the head of the door leaves. The centre compartment has a depressed three-centred vault. The walls are pierced by musketry loopholes.

Of the works attributable to Lt. Colonel Gustavas Nicolls; e.g. the Halifax Citadel, this is one of the most notable.

As an integral component of the Fort Henry defence complex, the east range of casemates has a strong, reinforcing influence on the military character of the Fort.

### **Character Defining Elements**

The heritage character of the Commissariat Stores/East Reverse Fire Chamber resides in the features expressing their function as specialized military structures for the musketry defence of the exposed ground to the east, for bomb-proof storage of commissariat stores and for close-in protection of the advanced battery ditch. Externally, the features characteristic of the range of casemates are the simple elongated rectangular plan, the horizontal massing with low side walls, and the long moderately pitched hipped roof broken at intervals by squat masonry chimney stacks. Also characteristic of this work is the construction of the inner and outer walls (a

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coursed ashlar facing, rubble hearting/infilling and squared uncoursed rubble backing), and the design of the vertical musketry loopholes (straight sides with one check, an iron firing aperture, and splayed interior jambs). The features characteristic of the Reverse Fire Chamber are its plan (two interconnected subterranean stone cross vaulted musketry chambers behind an obtuse angled loopholed wall facing into the dry ditch), the design of the musketry loopholes (oblique, to both flank the ditch and loopholed wall face), the protection given the roof (a musketry gallery recessed into the parapet of the battery) and the mode of access (a stone vaulted stairwell served by a hatch in the floor of the most southerly casemate). These features should be respected

The heritage character of the exterior would be best protected by regular repointing of the limestone ashlar walling, timely repair or replacement of defective roofing, lightning protection and chimney flashings, the securing of the vertical iron bars in the windows by packing with lead and the repair of wood door and window elements exhibiting signs of fungal decay.

Internally the features most characteristic of this type of structure are the vaulted bomb-proof construction of the casemate roofs (segmental profile brick vaults of 8 rings, a gabled dos d'ânes of rubble masonry covered in rough flags), the heavy timber construction of the building roof (a system of queen-post trusses, purlins and rafter pairs supporting a dressed and matched heavy roofing covered in sheet metal shingles), and the stove heating system of the casemates (a stone thimble and cast iron clean-out in the party wall connected to a unlined masonry flue terminating in a cut stone chimney stack extending above the roof).

The heritage character of the interior would be best protected by conservation treatment of the bar iron inserted in the musketry loopholes as a firing aperture, stabilization of the historic heating system, and re-setting the limestone flagging over the dos d'ânes disturbed by the insertion of PVC vent stacks.

The historic relationship between the east range of casemates and its associated landscape has been enhanced by the removal of parking from the parade square and the re-mounting of guns on the terreplein of the advanced battery. The restoration of the turf grass surface to the parade square would enhance the military character of the area. The historic relationship between the Reverse Fire Chamber and its associated landscape has been enhanced by the restoration of the partially collapsed escarp wall of the advanced battery in 1936-38. Controlling the vegetation in the bottom of the dry ditch would assist in preserving the military character of this area.