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### NTS Bat Dusk Survey Form A (Buildings & Trees)

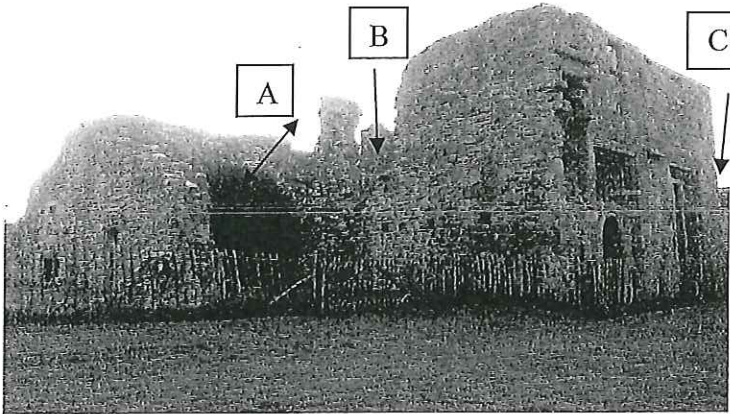
<b>Property:</b> Balmerino Abbey	<b>Building/Tree Name:</b> Abbey ruins	<b>OS Grid Ref:</b> NO 35756 24757
<b>Date:</b> 04 September 2015	<b>Surveyors:</b> Diane Megias Anna Jennings	
<b>Weather Description (Cloud cover, temp, rain, windspeed):</b> ~50% cloud, quite warm (14°C?), no rain and light wind		
<b>Survey Start Time:</b> 20:00	<b>Survey Finish Time:</b> 21:00	<b>Reasons for Survey:</b> Monitoring the presence of bats roosting in the ruins on which works are planned.

Surveyor Name (initials)	Surveyor Location <i>e.g.</i> east side of cottage	No. of Bats leaving roost (if applicable)	No. of Bat Passes (if not from roost)	Bat species ( ) = no. of each species	Time of first bat record	Time of last bat record
DM	South	About 20 seemed to emerge from or go in different parts of the abbey	~60 passes	Soprano pipistrelles	20:12	20:45
AJ	North, Chapter house	2 possible emergences, from ruined wall above chapter house	10	Pipistrelle sp.	20:22	20:40

## Photos and Diagrams

**Property:** Balmerino Abbey

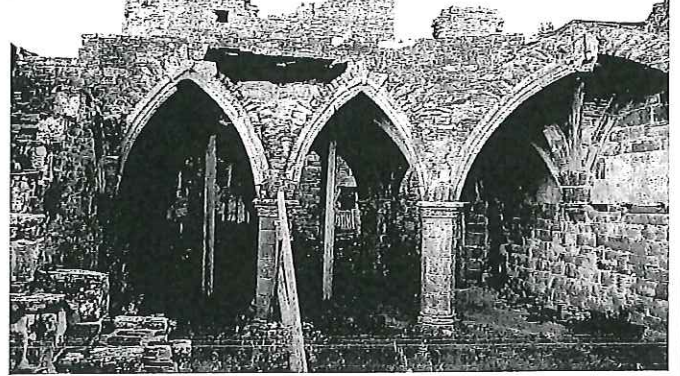
**Photo 1:**



View from South side of the Abbey

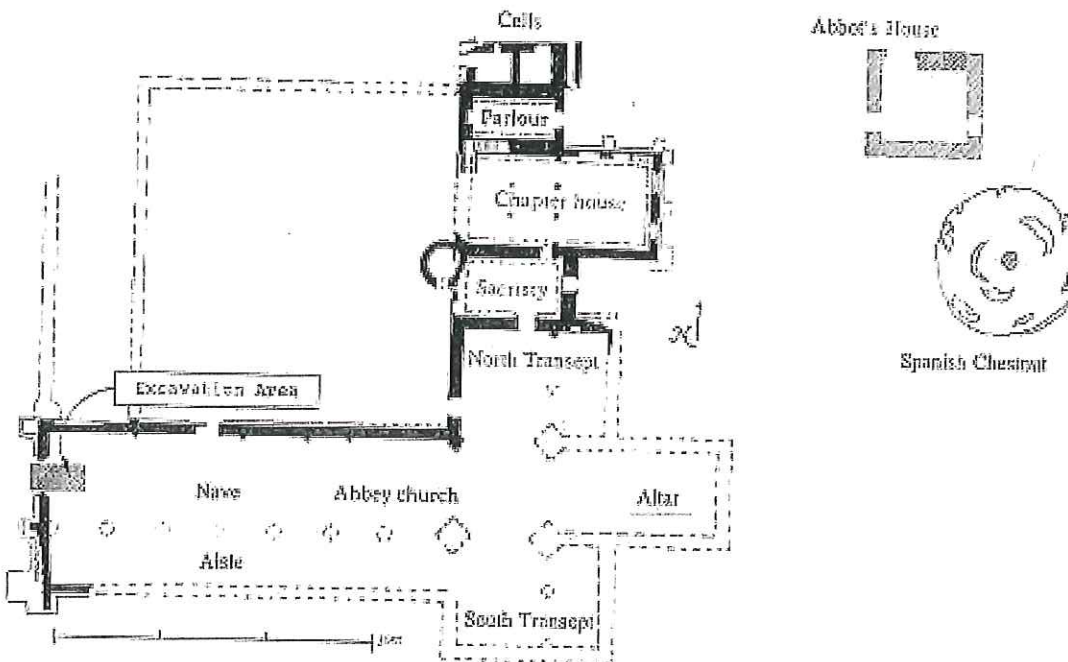
**Building/Tree Name:**

**Photo 2:**



View from North side of the Abbey – Chapter house (B)

**Site Diagram:**



**Extra Notes:**

From the south side, bats seemed to be emerging from three main parts of the abbey.

A (on photo n°1) >Tunnel: bats coming out and going in.

B >Inside the ruins/chapter house area: bats seen coming out of this area and swarming within the ruins

C >North-West Side of the building: bats thought to be also coming out from this side as they were seen appearing from there when surveying on south side. A further study with a surveyor monitoring the north-west side would be needed to confirm this.

From the north side, 2 bats possibly emerged from the ruined wall above the chapter house. Bats were also seen flying with the chapter house area (B).

Some bats seemed to be coming from the woods on the south side of the abbey. This could mean that several of them roost in the trees of this area.

Many bats were seen flying in pairs. Several bats were not echolocating (at least not heard with the detectors), some were echolocated "by batch", or echolocating at a very narrow range (bats heard from 50 to 60 khz but not at all under or above this range).

The detectors were set most of the time between 45 and 55 khz to hear pipistrelles calls but they were also regularly set at 25 khz to pick up any *Nictalus* species that could be passing. None were heard on this night. Around 21:40 it went very quiet, suggesting the bats had moved to another foraging habitat, potentially in the woods behind the abbey.

#### **Conclusion and Summary of Recommendations:**

The abbey area appears to be a great habitat for bats. The edges and the woods near it could be potential sheltering, foraging or commuting habitats. Many feeding buzzes were heard from bats flying around the lawn on the south side of the abbey.

Many bats were heard and seen swarming around the abbey and several of them seem to be emerging from different parts of the abbey itself, although the exact locations of emergence have not been found. The gaps between the stones and the two tunnels formed by the ruins represent great potentials for bats roosts. Further surveys should be conducted to identify where exactly bats are emerging from.