3 Conservation programmes are used to save endangered species.

The Scottish wildcat, shown in the photograph, is a subspecies of the European wildcat, Felis silvestris silvestris.



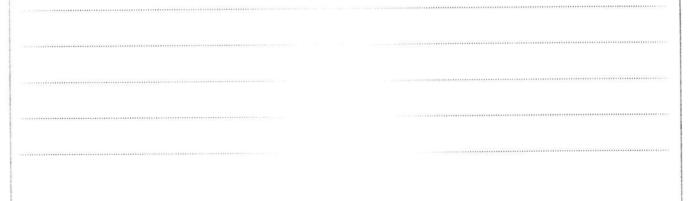
The Cairngorms Wildcat Project estimates that there are 150 breeding pairs left, but the Scottish Wildcat Association believes that only 35 cats remain.

A conservation group proposed that a captive breeding programme, and the relocation of Scottish wildcats, would be necessary to prevent extinction.

(a) (i)	State why the Scottish wildcat has been described as endemic .	
(# 15 m) (# 15 m)	200 V	(1)

(ii) The Scottish wildcat can interbreed successfully with domestic cats.

Explain the effect this could have on the genetic diversity of the Scottish wildcat.



between the Scottish wildcat and other subspecies of European wildcat.	(2)
c) Describe how the proposed conservation programme could prevent the Scottis wildcat from becoming extinct.	h (4)



Guidance Mark				3/2/(::)
	Additional Guidance	Answer		Question Number
habitat (1)	DO NOT ALLOW habitat	on / only in Scotland} (1)	 it is found {in one location / only in Scotland} 	
		nce to the following:	An answer that makes reference to the following:	3(a)(i)
Guidance Mark	Additional Guidance	Answer		Number

3(b)	Question Number		3(a)(II)
 An explanation that makes reference to the following: (compare) sequences of {bases in DNA /amino acids in proteins} the more similarities in common the more closely-related the subspecies 	Answer	 increases (genetic diversity)/increases size of gene pool because of introduction of {new/different} alleles (into the population) 	An explanation that makes reference to the following:
ALLOW nucleotides for bases ALLOW more recently evolved from a common ancestor ALLOW converse statements	Additional Guidance	ALLOW increase variety of alleles ALLOW maintain genetic diversity	
9	Mark	(2)	

Question Number	Answer	Additional Guidance
3(c)	A description that makes reference to the following:	
	 (relocating) isolates Scottish wildcats from domestic cats 	ALLOW moves away instead of isolates
	use of {studbooks/selection of mates} (1)	
	• increase the number (of Scottish wildcats) (1)	
	 prepared for reintroduction (to native habitat) 	ALLOW hacking out