

BRIEFING NOTE: TRANSLOCATION AND RELEASE

The process of bringing lynx to a reintroduction site in Britain is known as translocation and it is not a trivial undertaking. The end-to-end translocation process has a series of steps, each requiring a detailed plan and protocols. These are described below.



How many lynx would need to be reintroduced?

Our model predictions (see the 'Research Summary' note) of how a reintroduced lynx population would fare suggests that 20 lynx would be suitable for starting the population. These would ideally be equal numbers of male and female lynx. Recent lynx reintroduction projects in Germany have released similar numbers to this.

In general, the more animals that are reintroduced to create the founding population, the better it is for the future lynx population. In practice however, the more lynx that are required, the greater the potential impact on the source population being harvested (if wild), and the greater the logistical challenge and cost, so a balance is struck to release the fewest lynx that will nonetheless have a good likelihood of forming a healthy, self-sustaining population.

Translocation process

The lynx used to create a British population may either come from an existing healthy wild population in Europe, or from animals bred in captivity specifically for release in Britain, or a combination of the two. There are benefits and challenges with either option. Depending on the option decided, the translocation will look quite different.

Lynx sourced from the wild would need to be captured, health-checked, **quarantined, transported** to the UK, quarantined again, potentially moved to a pre-release acclimatisation **enclosure** at the reintroduction site, then either released directly from that facility or transported again to the release location (see section '**Release**' later).

Lynx bred in captivity would likely be transported while they are young from the zoo they are bred in (either in the UK or Europe), to a 'coordination' enclosure in which their behaviour and health is monitored to ensure they are suitable for release into the wild. They will likely require quarantining if they are being imported to the UK. They may then be moved to a separate pre-release enclosure, and similarly either released directly from there or transported again to the intended release location.

Capture of wild lynx

Wild lynx are captured using a form of trap. European lynx conservation projects tend to use either a 'box trap' or a modified foot snare which immobilises but does not harm the lynx. The capture site is remotely observed, using discreetly positioned video cameras, and personnel are stationed nearby to attend to the lynx immediately after it is captured.

The lynx is tranquilised and then undergoes veterinary examination, treatment, and vaccination, and they are microchipped for permanent identification. If the lynx is not suitable for use in the reintroduction it is released. A tracking collar is fitted to suitable lynx, to enable their whereabouts to be known once they are released into the wild.

Captive breeding lynx

To produce lynx from captive-breeding, European lynx conservation projects work with a network of approved zoos and breeding facilities that hold lynx suitable for breeding from (that is, they are of the correct age, health, genetics, and with known ancestry). The lynx pairings are planned within this network, then these lynx get moved to the correct facility where they meet their designated mate.

The intention is to produce enough kittens from the various arranged lynx pairings that are of good health, genetic diversity, and of the right biological sex to supply the reintroduction programme. The kittens that are produced are vaccinated when they are a few weeks old, then behaviour tested before being transported when they are 8-10 months old to a temporary 'coordination enclosure'. This is a similar timeframe for lynx kittens in the wild, which tend to disperse from their mother at approximately 10 months old. At the coordination enclosure, the kittens' behaviour and health are tested again to ensure they are suitable for life in the wild.

The coordination enclosure must be as free as possible from any human cues, so it must be in a rural area. Once the young lynx pass these tests and are deemed

suitable for release they are fitted with tracking collars and then transported to either a soft-release acclimatisation enclosure at the release site, or transported to the release site, and hard-released. Depending on whether these young lynx are bred in the UK or not, there may need to be an additional quarantine period upon import.

Quarantine

The purpose of quarantine is to strictly ensure that animals are free of disease and minimise any risk of spreading disease to the external environment. Lynx are quarantined prior to leaving their country of origin and again upon entry to the destination country. They remain in quarantine until all disease tests return negative results, or for the timeframe specified by the appropriate authority.

The quarantine facility is designed to allow easy cleaning and disinfection before / after it is occupied, and it must be sufficiently isolated from other animals, including other lynx, as well as people. It has a shelter and some naturalistic features to support the welfare and wildness of the lynx, but is often considerably smaller than the breeding, coordination, and soft-release enclosures.

There are design guidelines for quarantine facilities available based on the extensive experience of zoos and lynx translocation projects in Europe. An existing facility can be used for lynx if its suitable, or a facility may need constructing for this purpose.

Other enclosures

Besides the quarantine facility, different enclosures are required at each stage of the translocation process, depending on the source of the lynx (wild-caught or captive-bred), and the type of release ('soft' or 'hard' – see 'Release'). Captive-bred lynx require breeding and coordination enclosures. Any lynx that are soft-released (wild or captive-bred) require a pre-release acclimatisation enclosure at the reintroduction site. All these enclosures are typically large enough and with sufficient naturalistic features that the lynx are able to perform wild behaviours that will help to prepare them for a life in the wild. The lynx are monitored with 24h CCTV that allows their behaviour and any health issues to be continuously assessed.

Transport

Depending on the geographic location of the lynx, they are transported via road, rail, or air, and housed in a suitable and secure container throughout. The

container is designed based on those tried and tested by European lynx projects and to ensure they comply with global standards for live animal transport plus any domestic regulations in the country of origin, transit countries, and the destination country. Lynx are not anaesthetised during transport and they are monitored to ensure their welfare. Depending on the length of journey, they are provided with water. Their veterinary health certificates, any required movement permits, identification, and any other required certification accompany the cargo at all times.

Release

All lynx to be released are disease screened, vaccinated, are in good physical health and free of injury. They have also passed the behaviour test and are microchipped and wearing a GPS tracking collar for monitoring them after they are released.

There are two methods of release, 'hard' or 'soft'. In a hard release, the lynx is transported in a container to the release location, and the door of the container is simply opened allowing it to leave of its own accord. In a soft release, the lynx is transported in the same way to the release location, but at the destination there is a pre-release acclimatisation enclosure in which the lynx is held for a further period allowing it to acclimatise and put on body weight to ensure it is in good physical condition before release. Both methods are considered acceptable for lynx, and both have been implemented successfully in European lynx projects.

The release location/s needs to be an area with high quality lynx habitat (that is, woodland with good numbers of their preferred prey, roe deer), that can be accessed easily by the project team but is not accessible to the public or in an area with high public footfall. It should be a good distance from major roads, settlements, or other infrastructure. The exact location/s would be determined in agreement with the landowner.

Releases are usually staggered over several years so that each cohort (group) of lynx released can be monitored and any refinements made to the translocation process before the next cohort are released the following year. It is best to avoid gaps of longer than one year in releases because the lynx that are already living in the wild must be able to find and pair with other lynx in order to breed while they are of optimum breeding age.

After each annual release is completed, and before preparations are made for the following year, a review of the success of that year's releases is carried out. This evaluation is then used to adapt the release strategy for the following year,



so that the project can respond to any changing conditions or circumstances and have the best chance of success.

Project completion

Any lynx reintroduction would be planned in stages, comprising preparation, release, post-release monitoring and management, and a longer-term stage of less intensive monitoring with minimal intervention. Once each phase is complete the project transitions into the next phase, and eventually when the final phase is complete, the project ends.

At this point any ongoing management or intervention is not simply stopped abruptly, but rather there is an agreed responsible party, a plan for resourcing, and the necessary facilities are made available going forward. Learnings from other reintroduction projects suggest that there should also be ongoing lynx monitoring to detect issues such as declining breeding success, poor survival, or deteriorating genetic health, that may signal future problems for the population.