Beaver reintroductions in England 2000 - 2021

First published 25 August 2021 Natural

England Joint Publication JP036

www.gov.uk/natural-england

Natural England Joint Publication JP036

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Published 25 August 2021

ISBN: 978-1-78354-679-4

Project details

This report should be cited as:

HEYDON M.J.[A], POUGET, D.[A], GRAY, S.[A], WAGSTAFF, G.[A], ASHTON, M.E.M.[A] & ANDISON, E.[B] 2021. Beaver reintroductions in England: 2000 – 2021. JP036. Natural England, York.

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Acknowledgements

The authors would like to acknowledge the help, support, and input of:

Richard Clarke for producing maps; Ben Payne for catchment analysis; Kate Gamez, Matt Stone and colleagues in the Natural England Wildlife Licensing Service for providing licensing data and records; Andy Brown, Hazel Carter, Julie Eaton, Claire Howe, Mel Sherwood and Kat Walsh, for helpful comments on this report; Liz Baldwin, Matt Pang, Tom Reid, Graham Scholey and colleagues at the Environment Agency for providing records and information on historic cases, as well as for helpful comments on this report; Liz Halliwell at Natural Resources Wales for information on the status of beavers in Wales, and Ian Carter for information on beavers in Devon. We also gratefully acknowledge the contribution of Charles Wilson, whose diligence collecting records of beavers from the 2000s proved an invaluable source of historical information.

The Environment Agency has reviewed, provided inputs, and made contributions to this report, particularly in relation to data and its organisational and regulatory remit.

Contents

1 Summary

After an absence of several centuries the Eurasian beaver, *Castor fiber* returned to the English countryside in the early 2000s. This report gives a brief history of the restoration of beaver as a native species in England over the last two decades. Encompassing both beavers kept in captive, but semi-wild conditions, and those living at large in the wider countryside, the report is based on information available to Natural England and the Environment Agency.

Eurasian beavers have been released into outdoor fenced enclosures at 25 sites in England since 2000. Escapees from these enclosures, as well as illegal releases, have demonstrated the capacity of beavers to thrive in England's highly modified landscapes. Populations of wild-living and breeding beavers are now present in as many as six separate geographical locations in southern England. There may also be additional, as yet unidentified, wild-living populations. The wild-living English beaver population is likely to exceed 60 territories and total as many as 400 individual beavers. That is approximately 1% of what Natural England considers represents a fully re-established and favourable beaver population in England. The current known distribution covers approximately 3% of the favourable range. Evidence suggests an upward trend in growth of both population numbers and range.

At one of these locations, the River Otter in Devon, wild-living beavers were temporarily removed from the wild in 2015, health-checked and disease screened, and then released back into the river as part of a licensed five-year trial reintroduction. This trial concluded in spring 2020. On 6 August 2020, the Government announced that the beavers on the River Otter would be allowed to remain permanently and continue to expand their range naturally. This marked the official reintroduction of the beaver to England. The next step is to consult on a national approach for further releases and a strategy for managing beavers in the wild. The report offers recommendations to inform the plans for the restoration and management of beavers.

Originating and subsequently establishing largely through escapes and illegal releases, the way the beaver was reintroduced as a wild species in England failed to comply with international guidelines for conservation reintroductions (IUCN, 2013). To improve adherence to international guidelines and to reduce the risks associated with poorly conducted reintroductions, the Government published a code and guidance on reintroductions and other conservation translocations in England in May 2021[1].

[1] www.gov.uk/government/publications/reintroductions-and-conservation-translocations-in-england-code-guidance-and-forms

2 Recommendations

Recommendation 1

Steps should be taken to improve knowledge of each beaver population in England and to monitor expanding ranges. Current knowledge is incomplete and there is a lack of provision to monitor population growth. This knowledge is needed to inform future assessments of the conservation and health status of the national beaver population and, where necessary, the management of local populations. It is recommended that comprehensive surveys are conducted at suitable intervals of all known populations using standard, repeatable methods. Wild-living populations outside the River Otter in Devon could also provide a focus for further research to address the evidence gaps remaining after the River Otter Beaver Trial[2].

Recommendation 2

The policy for releasing beavers into fenced enclosures, introduced in 2017[3] contributed to timely and generally well-executed responses to beaver escapes. It also ensured beavers used in release projects are sourced from populations that pose a low risk of introducing exotic pathogens to Britain. These controls should remain in place. The continued occurrence of escapes, however, demonstrates the difficulties of keeping beavers within fenced enclosures. It is recommended that policy is revised so that the potential implications of escaping beavers establishing a new wild living population is considered when applications to release beavers into enclosures are assessed. Only exceptionally is it advisable that a new beaver enclosure is permitted in an area where it is unlikely a release into the wild would be sanctioned at this time.

Recommendation 3

The future status of populations outside the River Otter catchment (all of which originate from escapes and illegal releases) needs to be resolved. This should consider the reality of the situation on the ground but also incentivise future compliance with good practice and legal controls governing reintroductions. Consultation and engagement with local people and stakeholders are recommended to inform the approach taken for each population. This process can help determine the level of interest amongst local groups and statutory bodies in forming local beaver advice and support groups. The formation of such groups is expected to help the public and riverine landowners acclimatize to the presence

[2] Evidence gaps are detailed in Howe and Crutchley (2020) and Howe (2020).

[3] Releasing Eurasian beavers into secured enclosures. Published 08/12/2017. Accessed 14/05/2020. https://www.gov.uk/government/publications/non-native-species-apply-for-a-licence-to-release-them

of beavers, including through a process of engagement and the provision of advice and support to anyone who is impacted by beaver activities. Adoption of such will be critical to achieving successful coexistence between people and beavers (IUCN, 2020).

3 Introduction

Purpose of this report

3.1 In 2018, three centuries after the Eurasian beaver's extinction as a wild native species in England (Coles, 2006; Harris & Yalden, 2008), the Government announced that the beaver was to be considered as a potentially suitable candidate for reintroduction to England in its *'A Green Future: Our 25 Year Plan to Improve the Environment'* (Defra, 2018).

3.2 This announcement acknowledged a growing interest in reintroducing beavers to Britain that began in earnest in the 1990s in Scotland and resulted in a trial reintroduction project in Knapdale, Argyll, in 2009 (Gaywood, 2015). In England, since at least the early 2000s, beavers have been released into large outdoor fenced enclosures, followed in 2015 by a trial reintroduction project on the River Otter in Devon led by the Devon Wildlife Trust (Brazier *et al.,* 2020).

3.3 Within a few years of the first beaver fenced enclosure projects, reports were received of sightings of wild-living beavers from various locations in England. Although not all sightings have proved to be of beavers, a growing number of confirmed records and credible reports continue to be received of beavers living in the wider countryside beyond the River Otter catchment.

3.4 The decision, in August 2020, to allow the River Otter beaver population to remain and to consult on a national approach to releases elsewhere in England provided the opportune moment to review what we know about the distribution of beavers in England, both in fenced enclosures and in the wider countryside. Using information available to Natural England and the Environment Agency this report provides a brief history of the beaver in England since the early 2000s and an assessment of current distribution.

Scope

3.5 This report is concerned with beavers in England, and only records of beavers living in the wild or held in enclosures encompassing natural or semi-natural habitats are included (i.e. beavers in zoo-type conditions are outside the scope of this report). While the report focuses on the Eurasian beaver, the possibility that some sighting records are of North American beaver (*Castor canadensis*) cannot be ruled out, and wild-living specimens of this species have been encountered in England in the past (G. Scholey, *pers. comm.*).

Sources of information

3.6 The principal sources of information used in this report are Natural England's licensing records, reports of sightings collected by Natural England and the Environment Agency or received from members of the public, and documented surveys available to the authors.

3.7 Natural England does not actively collect records of beaver sightings but does record reported sightings of 'exotic' wildlife submitted by members of the public. Not all sightings of beavers used in this report have been independently verified by Natural England, though only those considered credible have been used (e.g. supported by photographic evidence or reported by an expert observer).

3.8 A review of beaver sightings recorded on the i-Record[4] (accessed 12 August 2021), identified only one OS 10-kilometre square with a reliable beaver sighting for which we had no records. i-Record is operated by the Biological Records Centre and allows members of the public to record their wildlife sightings. We are, therefore, satisfied that the beaver distribution described in this report provides a reasonable assessment of their current status in England.

Legal status of the beaver relevant to this report

Possessing or transporting beavers

3.9 Since 2007, a licence (hereafter referred to as a 'possession licence') has been required to be in possession of, or to control, or to transport a beaver taken from the wild[5]. These legal provisions are intended to control exploitation of species and do not apply to beavers that are captive bred (so long as they remain in captivity) or are sourced from populations in certain specified countries, which are judged to have robust populations of beavers[6].

[4] Link to i-Record: www.brc.ac.uk/irecord/

[5] This prohibition applies to live or dead beavers and to parts or derivatives of beavers. Regulation 43(3)(a) and (b) of the Conservation of Habitats and Species Regulations, 2017. The Regulations were amended in 2007 to extend these controls to species on Annex IVa of the Habitats Directive.

[6] Possession controls do not apply to beavers taken from the wild in Estonia, Finland, Latvia, Lithuania, Poland and Sweden.

Releasing beavers into the wild

3.10 It is unlawful to release or to allow to escape into 'the wild' any Eurasian beaver, except under the authority of a licence[7] (hereafter referred to as a 'release licence'). Although the beaver is a former native species, its release was prohibited under section 14 of the Wildlife and Countryside Act, 1981 (as amended; 'the 1981 Act') because it ceased to be 'ordinarily resident' in Britain following its extinction. Defra guidance on interpreting this legislation (Defra, 2010) states that for a species to be considered 'ordinarily resident', "*the population should have been present in the wild for a significant number of generations and should be considered to be viable in the long term*." This prohibition was extended in 2015 so that, irrespective of the status of the population, releases would remain unlawful through the inclusion of the beaver on schedule 9 of the 1981 Act.

3.11 What constitutes 'the wild' is not defined in the legislation, but in Government guidance (Defra, 2010) it is described as:

"… *the diverse range of natural and semi-natural habitats and their associated wild native flora and fauna in the rural and urban environments in general. This can also be broadly described as the general open environment."*

3.12 Whether a release, which is described as the "*deliberate introduction of an animal into an area*" (Defra, 2010), is regarded as into 'the wild' depends on the ecology of the species in question and the environment into which it is released. The guidance states that under certain circumstances a release into an enclosed area may constitute a release into the wild. Criteria are provided to inform this assessment (Annexes A and B of Defra, 2010).

3.13 Prior to 2017, only one project releasing beavers into a fenced enclosure had been issued a release licence. In December 2017, acting on advice from Natural England, Defra updated its guidance on licensing to indicate that all new releases of beavers into fenced enclosures (except those kept under zoo conditions) would be considered a release into the wild and would therefore require a release licence [8]. The reasoning is explained in Appendix A of this paper.

3.14 Licences for releases into enclosures only allow the release of beavers within a defined enclosure. The release of these beavers outside the enclosure, or allowing

[7] The prohibition in section 14 of the Wildlife and Countryside Act, 1981 (as amended) and the power to issue licences in sections 16(4) and (5) of the 1981 Act. Natural England is the relevant licensing authority.

[8] Releasing Eurasian beavers into secured enclosures. Published 08/12/2017. Accessed 14/05/2020. https://www.gov.uk/government/publications/non-native-species-apply-for-a-licence-to-release-them

their escape, is an offence[9], unless separately authorised by Natural England. The only project so far licensed to release beavers outside a fenced enclosure is the River Otter Beaver Trial (see section 6).

[9] Unless the legal defence of taking all reasonable steps and exercising due diligence to avoid the offence applies (section 14(3) of the 1981 Act).

Surveying for signs of beaver activity on the River Avon catchment
© M Ashton/Natural England

4 Recent history in Britain

2000s: Beavers were released into a fenced enclosure near Castle Combe in Wiltshire. The precise date, conditions of keeping, and location of this site are uncertain. Beavers are believed to have been kept at the site until at least the mid-2000s.

2003: Beavers were released into a large fenced enclosure at Ham Fen Site of Special Scientific Interest (SSSI) in Kent under a release licence as part of a project to investigate the use of beavers as a habitat management 'tool' to improve site condition.

2005: Beavers released into a fenced enclosure at Somerford Keynes in Gloucestershire. This release was unlicensed. The legality of the release was examined by Defra (Adam, 2005) but legal action was not pursued. Unlicensed releases into fenced enclosures at four other known sites followed over the next few years.

2006: First confirmed report of beavers escaping from a fenced enclosure in England (see section 5, below), and first confirmed record of wild-living beavers on the River Tay, Perthshire, Scotland. The latter were believed to have originated from escapes from private collections and/or illegal releases (Scottish Natural Heritage, 2019a).

2007: Legislative reforms mean that a possession licence is necessary to keep, and to transport beavers taken from the wild. Licences are issued to premises in England holding beavers sourced from a wild population. This provided an opportunity to influence keeping conditions, but these controls did not apply to captive-bred animals (including progeny of wild-caught animals).

2008: Natural England announced a temporary 'presumption against' issuing further beaver possession licences due to escapes from (at least) three of the five known fenced enclosure sites (details in Table 1). Premises where escapes occurred were encouraged to recapture animals and inspected to advise on keeping conditions.

Guidance on whether a release of animals that are subject to controls in section 14 of the 1981 Act into fenced enclosures should be considered an offence and thus require a licence to proceed lawfully was issued by Defra (see Annexes A and B of Defra, 2010). This clarified the legal situation following the unlicensed release of beavers at Somerford Keynes in 2005 and at other sites. On this basis, releases of beavers into secure enclosures, not including sensitive habitats, were assessed as not requiring a licence.

2009: A five-year trial reintroduction of beavers commenced at Knapdale Forest in Argyll, Scotland (Gaywood, 2015).

2011: A female beaver tested positive for exposure to the tapeworm, *Echinococcus multilocularis*, for which the beaver is an intermediate host (the definitive host is

the fox). The animal originated from Bavaria and had died in a fenced enclosure in Devon in 2010 (Barlow *et al.,* 2011). A subsequent Defra qualitative disease assessment recommended sourcing beavers from disease free countries to protect the UK's disease-free status for this zoonotic parasite (Defra, 2012).

2012: Defra issued a policy on releasing beavers into the wild, stating it would be premature to issue any licences pending results of the Knapdale trial reintroduction project.

2014: The beaver reintroduction trial at Knapdale concluded.

Defra published a voluntary code of practice advising that beavers are sourced only from *E. multilocularis* free countries (Defra, 2014).

A group of wild-living beavers was reported on the River Otter near Ottery St Mary in Devon. The source of the beavers was not definitively identified but the location was close to a fenced enclosure site (the site where the beaver infected with *E. multilocularis* was recovered).

A multi-partner project, led by the Devon Wildlife Trust, applied for a licence to allow the beavers to remain on the River Otter to study the colonisation of a lowland English River catchment by beavers.

2015: The Secretary of State approved a release licence permitting a five-year trial reintroduction of beavers on the River Otter. The release of beavers back on to the River Otter took place following the capture and disease screening of most, but not all the wild-living beavers on the river (all animals caught tested negative for *E. multilocularis*).

Eurasian beaver was added to schedule 9 of the 1981 Act to maintain controls on releasing beavers into the wild. This measure was a response to the growing population of beavers on the River Tay in Scotland, which potentially established the beaver as an 'ordinarily resident' species in Britain. Unless listed on schedule 9, ordinarily resident species may be released without a licence (this is explained in section 3.9).

2016: The Scottish Government announced that wild-living beavers could remain in Scotland (Scottish Natural Heritage, 2019b). Only two populations, one in Argyll and the other in Tayside, were officially recognised.

2017: Following advice from Natural England, Defra revised its policy on beaver releases (see Appendix A). Due to escapes and concerns that losses were not being reported, nor adequate steps taken to recover escapees at all enclosure sites, future releases into fenced enclosures would be regarded as releases into

the wild and subject to licensing to strengthen measures to prevent escapes[10]. The policy on releases into the wider countryside was also revised to permit releases that are part of a trial to investigate issues relevant to the reintroduction of beavers to England.

2018: A single animal in a group of 12 wild-caught beavers imported from Bavaria (in 2017) for use in release projects recorded a positive test result for *E. multilocularis*. Due to the absence of import controls, non-compliance with the voluntary code and new veterinary advice that testing could not definitely conclude absence of *E. multilocularis,* Natural England stopped allowing use of wild-sourced beavers from countries with endemic *E. multilocularis* in release projects and revised other disease screening requirements.

2020: River Otter Beaver Trial submitted its final Science and Evidence report (Brazier *et al*., 2020) to Defra in January 2020.

On 6 August, Environment Minister, Rebecca Pow announced that the River Otter beaver population would be allowed to remain permanently and continue to expand their range naturally. Further releases into the wider countryside would not, however, be licensed until after a consultation on a national approach and strategy for the management of beavers in the wild.

2021: At the time of publication of this report, Natural England had identified 25 sites where beavers had been released into fenced outdoor enclosures and up to six distinct geographical locations (including the River Otter) with wild-living beaver populations. The following sections of this report outline the history and current status of these beavers.

[10] Releasing Eurasian beavers into secured enclosures. Published 08/12/2017. Accessed 02/08/2021 https://www.gov.uk/government/publications/non-native-species-apply-for-a-licence-to-release-them

Hard to miss?
Beaver activity recorded from two rivers in southern England where beaver presence was first reported in 2020 and 2021, respectively.

5 Beavers in fenced enclosures

Number and distribution of fenced enclosures

5.1 Natural England has identified 25 sites at which beavers were released into fenced enclosures since 2000 (see Table 1). Seventeen were licensed and eight were not[11]. Three of the unlicensed sites no longer keep beavers, and one licensed site has temporarily removed its beavers while the fencing is upgraded to prevent escapes.

5.2 The number of projects seeking to release beavers has increased markedly since 2018 (see Figure 1). Since 2000, beavers have been released into fenced enclosures in 15 English counties (Figure 2).

Source of beavers

5.3 Beavers in most early release projects were sourced from Bavaria in Germany, either directly as wild caught animals, or indirectly as the progeny of imported animals captive bred in the UK. More recently, beavers have increasingly been taken from the wild in Scotland (Table 1). The source of the beavers which founded the population on the River Tay in Scotland is also believed to be Germany (most likely from Bavaria; McEwing *et al.,* 2015; Campbell-Palmer *et al.,* 2020a). Since Natural England introduced restrictions on sourcing beavers to use for release projects (see 'Recent history' section), beavers approved for use in licensed releases have been either born in captivity or taken from the wild within the UK.

Escapes

5.4 Escapes of beavers from fenced enclosures have been reported at 11 sites where beavers have been released since 2000, of which seven held licences to permit releases into a fenced enclosure and four did not (see Table 1). This represents 44% of sites. It is uncertain if this is the full extent of escapes as the track-record of reporting escaped animals to Natural England has been variable, especially for unlicensed sites. During the same period there has also been a single documented escape of beavers from a zoo-type collection. This occurred in 2008 in Kent. Two beavers escaped: one was recaptured and the other was killed in a road traffic accident.

[11] The projects without licences listed in Table 1 released beavers into enclosures before the policy on licensing was revised in 2017.

5.5 Sightings of escaped beavers are typically local to the enclosure site. There have, however, been notable examples of beavers travelling longer distances after escaping. One escaped beaver from the site at Lifton in Devon was found about 20 km from its fenced enclosure (>30 km by river) and two beavers that escaped from the site at Somerford Keynes in Gloucestershire were recaptured on the River Cherwell near Oxford and the River Thames near Abingdon, respectively, about 50 km from the source enclosure (between 65-70 km by river).

5.6 Enclosures at five of the 11 sites where escapes are documented were constructed in the early years of keeping beavers and their design features or a lack of experience in managing beavers in such enclosures may have played a part in escapes. Explanations for escapes have included: beavers burrowing out of enclosures; falling trees or badgers damaging fencing; climbing over gates; enclosure sites being flooded; escapes via watercourses passing through enclosures (where beavers have managed to pass between grilles or they have dug around barriers) and aggression between animals, which may have increased the motivation of animals to escape enclosures. Escapes have also occurred without any apparent signs that the enclosure fence or entrances have been compromised.

5.7 The earliest confirmed escapes and (in parenthesis) the earliest credible beaver sighting from the vicinity[12], if earlier, were:

- Somerford Keynes: July 2006.
- Lifton: October 2008.
- Ham Fen: January 2009 (credible sightings dating from January 2008).
- Ottery St Mary: July 2011 (credible sightings dating from March 2010).

5.8 Multiple escapes are known to have occurred at three of these sites, and possibly also at the fourth. A concerted effort was taken to recover escaped beavers at all sites in the early years, with reasonable success. All beavers known to have escaped from Somerford Keynes in 2006, for example, had been recaptured by 2009. Unknown to Natural England at the time, however, it now appears that recapture success, and possibly the effort expended to recapture beavers that escaped, later declined or was over-stated. This conclusion is evident from the continued presence of wild-living beavers near all four sites, although illegal releases by unknown third parties are a plausible alternative source of some beavers.

5.9 Beavers are also reported to have escaped from the private collection near Castle Combe. It is uncertain, however, when this occurred, how many beavers escaped or if any action was taken to recover the beavers. It is likely that the first beavers

[12] We cannot exclude the possibility that earlier sightings are animals that have been illegally released by unknown parties, rather than being undocumented escapees from fenced enclosures.

escaped in the mid-late 2000s and that beavers had successfully established in the wild locally by the early-mid 2010s.

5.10 Escapes have been reported from six sites since introduction of the revised policy on releasing beavers into enclosures in 2017. Specifications for beaver enclosures and preparedness for dealing with escapes are important considerations for all projects releasing beavers under a licence. Most escapes are now reported to Natural England immediately after the escape is detected. The continued occurrence of escapes does, however, demonstrate the difficulty of containing beavers within enclosures that contain natural habitats. These escapes are summarised below (see Table 1 for site details):

- *Pickering, Yorkshire in April 2019* (licensed site). This escape occurred immediately after the animals were first released into the enclosure, probably via a culvert. The single escapee was trapped and returned to the enclosure within five days. Remedial work has since been undertaken to reduce the risk of further escapes and a smaller grille size (10 cm instead of 15 cm) is now required where a fence line crosses a watercourse for newly licensed enclosures.
- *Lowther, Cumbria in or around July 2020* (licensed site). A beaver at this site was reported to have died, although the body was not found. Despite the absence of signs of damage to the fence or of any escape a neighbouring landowner reported signs of beaver activity in autumn 2020. At the time of publication of this report steps were being taken to locate and capture this beaver.
- *Holnicote, Somerset in October 2020* (licensed site). This escape involved a total of three beavers from two separate enclosures at this site and followed heavy rainfall. This resulted in flood damage to a fence at one enclosure and, most likely, a beaver climbing over a gate at the second enclosure. All three beavers were recaptured by mid-November.
- *Southwater, West Sussex in November and December 2020* (licensed site). A female beaver escaped shortly after release. The beaver was subsequently located about 5 km upstream from the site, where it settled at a series of fishing ponds. The beaver was recaptured but escaped and was recaptured again. The male beaver also escaped, travelling approximately 15 km downstream along the River Adur. It was recaptured in January 2021. This site used a combination of fencing near water courses and the natural topography of the site to contain beavers, and it is most likely that the beavers escaped by circumventing the fenced sections. There are no beavers currently at this site while fencing specifications are being reviewed and improved.
- *Plymouth, Devon in December 2020 and July 2021* (licensed site). The single male beaver in this enclosure escaped shortly after its release, most probably via tunnels dug by badgers. This beaver was recaptured in late December. Additional badger passes were constructed to discourage tunnelling. In July 2021, two beavers escaped after heavy rain damaged the fence. One was killed on the road and, at the time of publication, steps were being taken to locate and recapture the remaining animal.

- *Cartmel Fell, Cumbria in February 2021* (licensed site). A juvenile beaver was sighted by a member of the public approximately 0.6 km from the enclosure site. It was observed in a watercourse that would have required the beaver to have crossed several hundred metres of terrestrial habitat. It is thought the beaver used a badger tunnel to escape as there was no other damage to the fence. This animal was recaptured in July 2021. There was a second escape from this enclosure in June 2021. The animal is assumed to have climbed the fence as the fence was intact. It was quickly recaptured.

5.11 Two reports of beavers in February 2021 may indicate further escapes, although this is unconfirmed.

- *Ladock, Cornwall in February 2021* (unlicensed site). A beaver was reported by a member of the public near Truro on the River Fal in Cornwall (OS 10-kilometre square: SW84). The location is approximately 15 km downstream of the Ladock enclosure site, which is located close to the Tresillian River, a tributary of the River Fal. A beaver, possibly the same animal, was found dead in March in the same area. No beavers are reported missing from the Ladock enclosure, but an escape from this site or an illegal release are the most plausible explanations for the presence of a beaver in this area.
- *Witheridge, Devon in February 2021* (licensed site). Sightings of a single beaver on the Little Dart River, 6 km from the Witheridge enclosure site, were reported on social media (OS 10-kilometre square: SS71). Although camera recordings subsequently identified a wild-living juvenile beaver, an adult male beaver from this site has not been observed within the enclosure since January 2021 and is presumed to have either escaped or died.

Future proposals

5.12 A review of enclosure projects conducted in 2019 found that almost all (92%; 12 out of the 13 projects at that time) expressed an interest in their enclosure site becoming the focus of a wild-release project in the future.

5.13 Natural England is aware of between 20-30 further potential projects that propose either releases into fenced enclosures or wild releases.

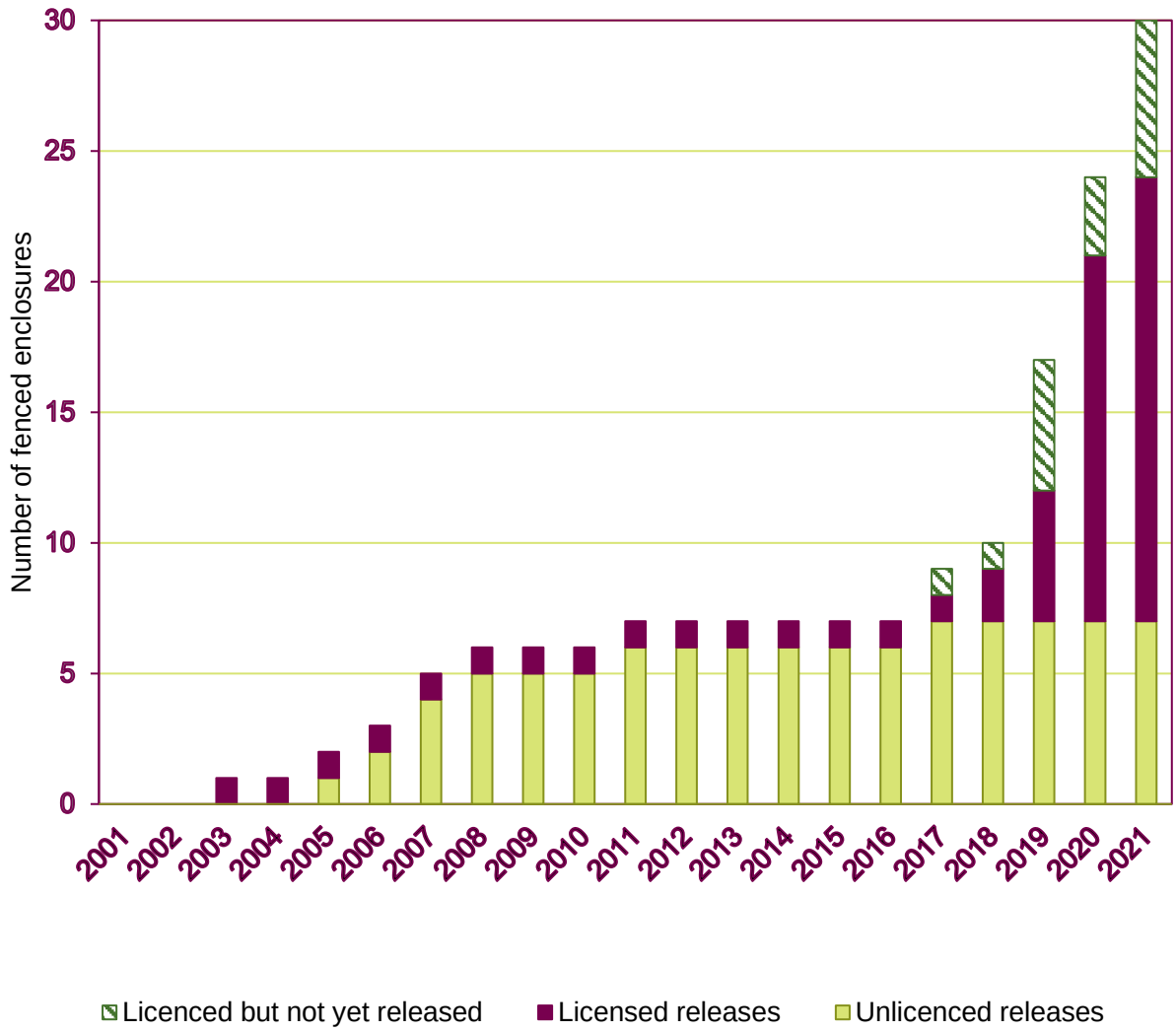

Figure 1 Cumulative growth in releases of beavers into licensed and unlicensed fenced enclosures in England between January 2000 and August 2021. Since December 2017 all releases have required a licence.

The Castle Combe enclosure is not included as its initial release date is unknown.

Between December 2017 and August 2021 five applications for a licence were rejected and two were withdrawn. As of 10 August, three applications were being assessed.

Beavers are no longer kept in two of the unlicensed enclosures and have been temporarily removed from one licensed enclosure while the fencing is improved following escapes.

Table 1 Identified outdoor enclosures sites for beavers since 2000 (excluding zoo-type conditions)

#	Location	County	1 km OS grid sq.	Release licensed	Source of beavers	First released	Beaver escapes*
1	Castle Combe**	Wiltshire	ST8476?	No	Unknown	early-mid 2000s?	Yes
2	Ham Fen	Kent	TR3255	Yes	Norway, Poland & Germany	2003	Yes
3	Somerford Keynes	Gloucestershire	SU0293	No	Germany	2005	Yes
4	Lifton	Devon	SX3991	No	Germany	2006	Yes
5	Ottery St Mary	Devon	SY1295	No	Germany	2007	Yes
6	Burscough**	Lancashire	SD4213	No	Germany	2007	No
7	Slimbridge**	Gloucestershire	SO7206	No	Germany	2008	No
8	Okehampton	Devon	SX4291	No	Germany?	2011	No
9	Ladock	Cornwall	SW8851	No	Germany?	2017	No

#	Location	County	1 km OS grid sq.	Release licensed	Source of beavers	First released	Beaver escapes*
10	Lydbrook	Gloucestershire	SO6115	Yes	Germany[13] & Scotland	2018	No
11	Finchingfield	Essex	TL6733	Yes	Captive bred (UK)	2019	No
12	Pickering	Yorkshire	SE7790	Yes	Scotland	2019	Yes
13	Holnicote***	Somerset	SS9144	Yes	Scotland	2019	Yes
14	Lowther	Cumbria	NY5121	Yes	Scotland	2020	Yes
15	King's Lynn	Norfolk	TF6735	Yes	Scotland	2020	No
16	Haslemere	Surrey	SU9031	Yes	Scotland	2021	No
17	Plymouth	Devon	SX5058	Yes	Scotland	2020	Yes
18	Southwater***	West Sussex	TQ1420	Yes	Scotland	2020	Yes

[13] The German sourced beavers were replaced by beavers sourced from Scotland in 2019

#	Location	County	1 km OS grid sq.	Release licensed	Source of beavers	First released	Beaver escapes*
19	Bodmin	Cornwall	SX0978	Yes	Captive bred (UK)	2020	No
20	Bodmin	Cornwall	SX1570	Yes	Germany[14] & Scotland	2020	No
21	Upper Hooke	Dorset	ST5000	Yes	Scotland	2021	No
22	Cartmel Fell	Cumbria	SD4086	Yes	Scotland	2020	Yes
23	Hatch Mere	Cheshire	SJ5572	Yes	Scotland	2020	No
24	Witheridge	Devon	SS8016	Yes	Scotland	2020	No
25	Willington	Derbyshire	SK2827	Yes	[release pending at time of publication]		
26	Lound	Nottinghamshire	SK7186	Yes	[release pending at time of publication]		
27	Hempstead	Norfolk	TG1137	Yes	[release pending at time of publication]		

[14] A beaver sourced from the wild in Germany was released at this site without Natural England's prior knowledge and agreement. The beaver was reported to have died a short time after its release.

#	Location	County	1 km OS grid sq.	Release licensed	Source of beavers	First released	Beaver escapes*
28	Tregony	Cornwall	SW9046	Yes	[release pending at time of publication]		
29	Mortonhampstead	Devon	SX7884	Yes	[release pending at time of publication]		
30	Gweek	Cornwall	SW7026	Yes	Scotland	2021	No
31	Fakenham	Norfolk	TF9030	Yes	[release pending at time of publication]		

Key * only sites with a confirmed or highly likely escape are marked. Additional escapes are suspected (see text); **: site where beavers are no longer kept; ***: site >1 fenced enclosure (data correct 10 August 2021).

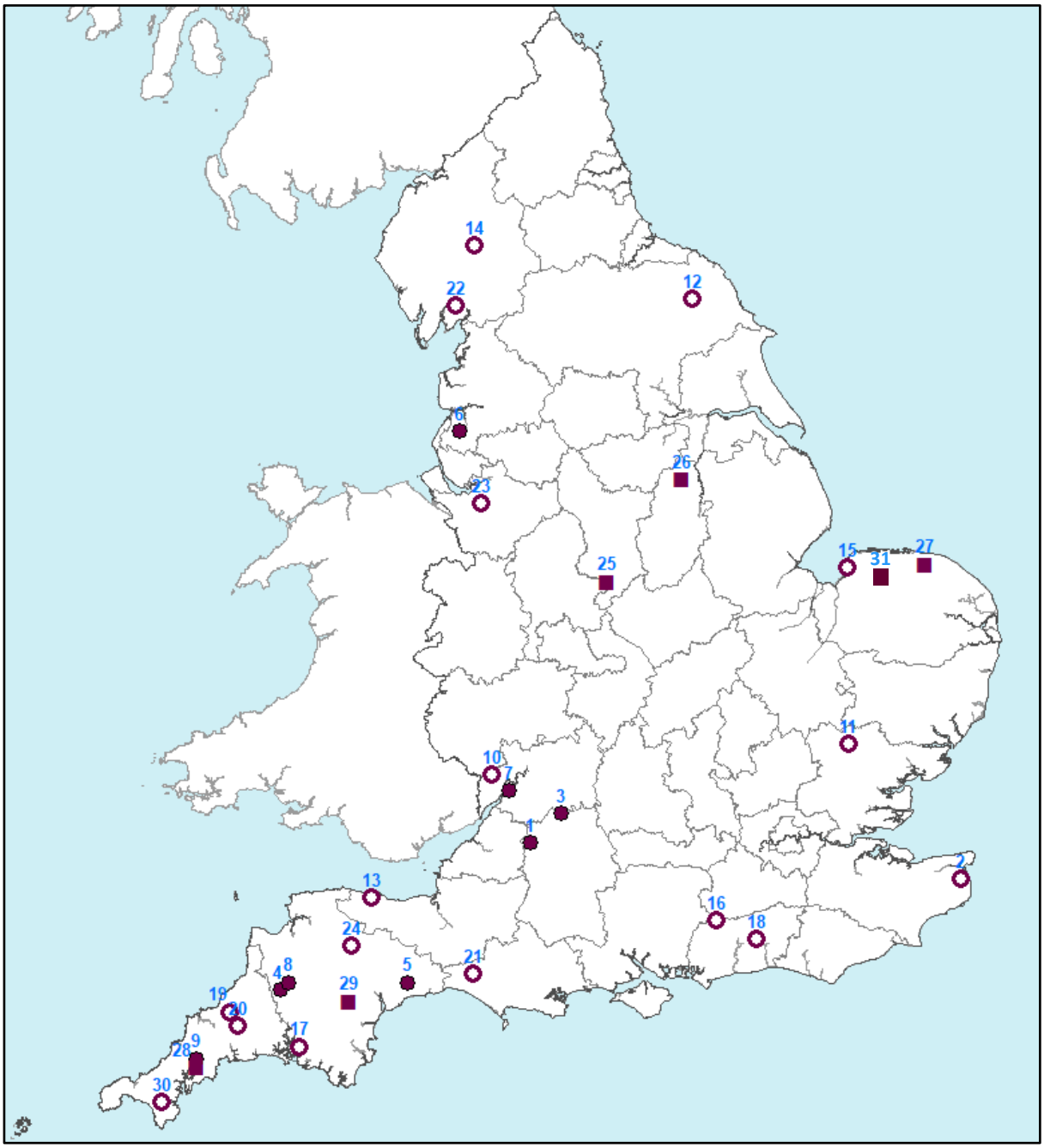

Figure 2 The location of known outdoor fenced enclosures with beavers in England during the period 2000 - 2021. Zoos are excluded.

Key Licensed sites are denoted by ○ and unlicensed sites by ●. Sites with licences that have yet to release beavers are indicated by ■. Only since December 2017 has it been government policy that all releases require a licence. Numerical references 1-29 correspond to the sites listed in Table 1 (data correct as of 10 August 2021).

6 Wild-living beavers

Status of beavers in England

6.1 The Eurasian beaver has been accepted as a returned native species in Scotland (Scottish Natural Heritage, 2019b). Although the beaver populations in Scotland are expanding, there is no evidence that any beavers from either of the populations in Argyll or Tayside (Perthshire) have yet dispersed into England.

6.2 The Welsh Government has not yet made its decision on the future status of beavers in Wales. There are beavers in fenced enclosures at three sites known to Natural England (located near Machynlleth, Brecon and Carmarthen, respectively) and in March 2021 a licence was issued to release beavers into an enclosure at Dyfi Nature Reserve. To date, no reintroductions of wild-living beavers have been licensed. There are, however, reports of wild-living beavers on the River Dyfi and the River Wye in Wales, which are assumed to be escaped or illegally released animals. A 2019 survey of beaver distribution along Welsh and English sections of the River Wye concluded that these beavers are likely to form a single 'population' (Campbell-Palmer *et al.,* 2019 & 2020b). The distribution of these beaver sightings and their proximity to the fenced enclosure site at Llangorse near Brecon is indicated in Figure 4.

6.3 As there is no evidence to date that beavers in England have dispersed naturally from populations that are present lawfully in the wild in a neighbouring country, any wild-living beavers in England fall into one of two categories:

- Beavers present on the River Otter or which have dispersed naturally from this catchment into other neighbouring waterbodies, which form the only authorised population, or
- Beavers elsewhere, which have been either unlawfully released or escaped from fenced enclosures or are descended from such beavers.

River Otter in Devon

6.4 The beavers on the River Otter catchment in Devon form the only wild-living population of beavers in England that is present as the result of officially sanctioned, licensed releases (see Figure 4). This population is descended from a total of ten beavers released as part of a five-year trial reintroduction that commenced in 2015. These beavers were released in three phases: five in 2015, two in 2016 and three in 2019. The five original founding animals (released as two 'family groups') have since expanded into a population that is distributed throughout the main stem of the River Otter, its tributary, the River Tale, as well as into some smaller tributaries. As a condition of the licence authorising the trial, any beavers dispersing to neighbouring

catchments were caught and returned to the River Otter. By 2019 the population had reached about 13 territories (Brazier *et al*., 2020), and by 2020, 15 territories or family groups (Devon Wildlife Trust, 2020).

6.5 This trial concluded in spring 2020 and following an assessment by Natural England (Howe and Crutchley, 2020) Defra announced that the beavers would be allowed to remain permanently and continue to expand their range naturally.

6.6 Although the River Otter trial studied a licensed reintroduction of beavers, the stimulus for the trial and its location were an outcome of the discovery of beavers living on the River Otter in 2014[15]. The origin of these beavers remains unknown but was either an escape from a fenced enclosure or an illegal release. The beavers were found on a stretch of river less than 2 km from the Ottery St Mary fenced enclosure and, although never confirmed, a Natural England investigation in 2014 considered this the most likely source (Wilson, 2014).

6.7 Because the site and source of animals for the trial was predetermined by the circumstances on the ground, this project did not comply fully with international guidelines on reintroductions published by the International Union for the Conservation of Nature (IUCN, 2013) and neither was it located in an area identified in a 2009 feasibility study as preferred habitat for beavers (Figure 5.3 in Gurnell *et al*., 2009).

Wider distribution of beavers

Prior to 2000

6.8 In the mid-1980s, a pair of beavers of unknown species were reported to be living on the River Axe near Forde Abbey in Somerset (A. Britton, *pers. comm.*; OS 10-kilometre square: ST30). One animal is believed to have died soon after the first report, but the remaining beaver survived until the late 1990s. Officers of the Ministry of Agriculture, Fisheries and Food visited the site on several occasions to investigate beaver damage to trees along the River Axe and Wessex Water Authority is reported to have regularly removed dam structures. The beavers are believed to have escaped from a nearby wildlife park, although this was denied by the park staff.

[15] The Natural England investigation reported that local people had observed beavers on the River Otter from as early as 2010 (Wilson, 2014), although a more recent article (Mills, 2021) states that the first, unconfirmed, observations were reported in 2008, and that a male beaver, that subsequently died, was recovered in 2012.

2000 – 2014 (early enclosure releases to the River Otter trial)

6.9 Reports of wild-living beavers in England were received by Natural England within a few years of the first publicised releases into fenced enclosures. While not all reported sightings proved to be beavers, and one early report in Kent was a deliberate hoax (McAllister, 2003), by 2006 a credible sighting of a beaver in the wider countryside had been documented (as detailed section 5.7). By 2009, confirmed or credible records of wild-living beavers had been reported in Oxfordshire, Devon and Kent; all associated with fenced enclosure sites. To Natural England's knowledge, at that time, most escaped beavers were recaptured and there were no reliable reports of beavers breeding in the wild.

6.10 Within a few years, however, evidence emerged that beavers were establishing in the wild (Jones *et al.,* 2013) and in 2014 the presence of a family group on the River Otter was reported to Natural England. This provided Natural England with its first reliable evidence of wild-living beavers breeding in England.

6.11 Collectively, over the period 2000 – 2014, confirmed or credible beaver sightings were reported from a total of 21 separate Ordnance Survey (OS) 10-kilometre squares in England. These squares are highlighted in Figure 3, with the locations of fenced enclosures with beavers present during this period. These beaver records were associated with the following river catchments and their tributaries:

- River Thames in Gloucestershire and Oxfordshire
- River Stour in Kent
- River Tamar in Devon
- River Otter in Devon

6.12 The distribution of beavers during this period has since been revised. In 2020, Natural England received a series of reports about a new locus of beaver sightings in Somerset. Information passed to Natural England following police enquiries suggests that beavers were deliberately released into a pond near North Brewham and Witham Friary in Somerset around 2009 (OS 10-kilometre square: ST73). This is close to the sources of the Rivers Frome and Brue, and this release is the most likely source of beavers on these catchments.

6.13 It is also now known that beavers escaped from a private collection located on or close to the By Brook near Castle Combe, Wiltshire in the early-mid 2000s (OS 10-kilometre square: ST87). This has been verified by a number of independent sources, including a biological record centre publication, which also documents a record of a single dead beaver (Harris & Linham, 2017). It is understood that the remaining beavers in the collection were relocated to the Black Isle, Ross and Cromarty in Scotland in the mid-2000's. This is supported by a newspaper report of a dead beaver on a beach at Eathie in May 2008 (Webster, 2008), which was investigated as a possible illegal release. The absence of further records linked to this locality during the 1997–2016 period covered by the record centre publication was initially assumed to indicate that wild-living beavers did not persist at this

location. Further enquiries, including a report of another dead beaver found in 2018 and photographic evidence obtained in 2021 has, however, confirmed the continued presence of wild-living beavers on the By Brook (further details below).

2015 – present (River Otter trial to decision allowing beavers to remain)

6.14 In the period since the start of the River Otter trial in 2015, confirmed or credible beaver sightings or activity have been reported to Natural England or reported in documented surveys (Campbell-Palmer *et al*., 2019 & 2020b; Elliott, 2020; Brazier *et al*., 2020, Devon Wildlife Trust, 2020 & 2021) for a total of 52 OS 10-kilometre squares in England. These squares are indicated in Figure 4. Sightings of recently escaped beavers or beavers that have been recaptured are not included.

6.15 Beaver distribution has expanded in all areas identified in the 2000-2014 period except the Gloucestershire – Oxfordshire locus. Wild-living beavers in this area are likely to have originated from the Somerford Keynes site (see Table 1). The failure of escapees to establish a wild population in this area is believed to be the consequence of early escapees being successfully recaptured and the neutering of all remaining animals in 2011, which occurred before a further significant escape of animals in 2014. There continues to be evidence of beaver activity in this area, but there are no reported signs of breeding. As it is unlikely there are any reproductively viable animals present, these sightings are not considered to indicate presence of a wild-living population.

6.16 Excluding the Gloucestershire – Oxfordshire sightings and reports of recent escapees, wild-living beavers in this period have been reported from 82 Water Framework Directive Catchment Cycle 2 sub-catchments, the spatial unit used by Natural England for range and distribution in its definition of favourable conservation status for the beaver in England (Morris and Mousley, 2021).

6.17 Except for the River Otter, which is well-studied, available data do not allow us to confidently predict which records indicate the presence of established, viable populations. Based on what we do know, however, it is likely that there are small populations of beavers confirmed or likely to be breeding in the wild on sections of the following five river catchments. This conclusion is based on the persistence and growth of these populations, and in some cases, by records of young beavers (see Figure 4 for locations):

A. River Otter in Devon

Surveys in 2020 and 2021 concluded that this population comprises of approximately 15 beaver territories or family groups (Devon Wildlife Trust, 2020 & 2021). Further details are given in section 6.4, above.

B. River Stour in Kent

Survey information for this population is not available to Natural England, so the number of territories is unknown. Beavers have been reported along sections of

the River Stour from the coast to Canterbury (a distance of about 30 km) as well as along several of its tributaries. At least nine territories have been identified forming possibly two distinct loci of activity (T. Reid, *pers. comm*.).

C. River Tamar in Devon

A 2020 survey concluded that this population comprises of 14 sections of river with one or more beaver territories along the River Tamar and its tributary rivers: Carey, Inny, Lew, Lyd, Tavy and Wolf (Elliott, 2020).

D. Rivers Avon, Frome and Brue in Somerset and Wiltshire

Survey information for the beavers present on these rivers is not available to Natural England, so the number of territories is unknown[16]. The pattern of reported sightings suggests multiple loci of activity and an expanding population.

A report of beavers on the River Frome was first received in 2019, but it is only since 2020 that the locations where beavers are present have been identified. There are reports in the vicinity of the town of Frome, including the lower reaches of two tributaries: the Mells River and Rodden Brook; at several locations (mostly ponds) about 12 km to the south of Frome in the upper reaches of the river near Witham Friary; on a separate tributary near Maiden Bradley, and at a lake near Horningsham, which links to the River Frome via the Redford Water and Rodden Brook. There is also a report of beaver presence in the upper reaches of the River Brue catchment near North Brewham, which is within 2 km of the closest records on the River Frome catchment. These records may represent a single population of beavers originating from a common source but bridging two adjacent catchments. The source of this population could be the 2009 release (referred to in section 6.12) which was close to the upper reaches of both rivers. Alternatively, there may have been multiple unauthorised releases in this area.

In 2020, a credible report was received of beaver signs on the River Avon, between Bathford and Bathampton and an unconfirmed report of beavers further along the Avon in the vicinity of Bath. Surveys of beaver activity along this stretch of the River Avon by Natural England in 2021 have confirmed the persistent presence of beavers in this locality and evidence of breeding. Additional reports of beavers on the Kennet & Avon Canal in Bath itself have not been confirmed by Natural England surveys to date. In July 2021, a beaver was filmed on the River Avon east of Chippenham, approximately 36 km upstream from Bathford and close to its confluence with the River Marden. This may be a young animal dispersing from Bathford or from the population on the River Frome, which joins

[16] Beaver sightings for this population were first reported to Natural England in May 2020.

the River Avon 28 km downstream of the new record, or it could indicate the presence of a previously undocumented population more locally to the sighting.

Also, in 2021, Natural England confirmed the continued presence of beavers on the By Brook near Castle Combe, including damming activity. These beavers are assumed to be descendants of escapees from the private collection in this locality (see 6.12). The extent of the beaver distribution on the By Brook is currently uncertain. Single dead beavers have been found where the brook crosses under the A420 road near Ford (OS 1-km square: ST8474) and in a lake on a golf course to the north of the Caste Combe (OS 1-km square: ST8377). Signs of beaver presence have been found on the By Brook at Bathford, 12 km to the south-west of Castle Combe, close to the beaver signs found on the River Avon between Bathford and Bathampton. However, conversations with local anglers and limited surveys near Box have so far not identified further signs of beaver presence between Castle Combe and Bathford.

Signs of beaver presence have also been confirmed at Urchfont, near Devizes in Wiltshire. Following up a 2020 report, signs of beaver activity were identified at a small lake near the village in March 2021 (OS 10-kilometre square: SU05). Field signs suggest beaver activity is at least 2-3 years old. A small stream passes close to the lake and could have provided an exit route for beavers towards the Semington Brook which meets the River Avon north of Trowbridge. Beaver presence at this site is most likely the result of an illegal release.

The origins and current distribution of beavers on these rivers remains uncertain, but it is likely to have involved more than one illegal release as well as escapes from the enclosure site at Castle Combe. The beavers on the River Avon near Bathford and Bathampton are located approximately 18 km from Castle Combe by river, 25 km from the closest records on the River Frome and 35 km from Urchfont. While Castle Combe is perhaps the most likely candidate, any of these three, or an unidentified release, could be a source of the River Avon beavers.

E. Little Dart River in Devon

Survey information for this population is not available to Natural England, so the number of territories is unknown. The presence of beavers on the Little Dart River was first reported in February 2021 when signs of beaver activity near East Worlington were posted on social media. Initially, it was assumed that the beaver was an escapee from a new fenced enclosure site at Witheridge (see Table 1), located approximately 6 km upstream. Remote camera recordings showed it to be a juvenile and as all juvenile beavers at the Witheridge site were accounted for, it was concluded that this was a wild-living beaver. Shortly afterwards, Natural England was provided with evidence of beaver activity at other locations along the Little Dart River and at a pond on Witheridge Moor, at the head of the river (OS 10-kilometre square: SS81). An unverified record of a beaver on the River Taw within 1 km of its confluence with the Little Dart River in 2019 and a confirmed

sighting in April 2021 a further 4 km upstream may be associated with this population.

As there were no fenced enclosures on this catchment until late 2020, the presence of beavers, including the juvenile animal that may have been dispersing away from its natal territory, is most likely the result of an illegal release involving at least one pair of animals.

6.18 There is also a potential emerging population on the following river catchment, whose status is less well understood:

F. River Wye in Herefordshire[17]

A 2019 survey of English and Welsh sections of the River Wye catchment, including tributary rivers Arrow and Lugg, found four loci of activity in England, but '*no strong evidence of beavers living in established territories'* in either English or Welsh sections at that time (Campbell-Palmer *et al*., 2019 & 2020b).

Undeterred by human activities, a CCTV camera records a beaver (bottom right of image) as it travels between two sections of a river straddled by a paper mill in southern England.

[17] The distribution of beaver sightings in the Wye catchment extends into Wales forming what may be a single 'population' (Campbell-Palmer *et al*., 2019). See Figure 4 of this report.

7 Discussion

7.1 Interest in the restoration of a wild population of Eurasian beaver in England has grown considerably over the last two decades. It is an iconic keystone species capable of 're-engineering' riverine landscapes in a way that benefits other species and can assist flood management (Howe, 2020). Restoring the beaver is, however, controversial both because of its ability to shape landscapes and because it is a species with which we are no longer familiar.

7.2 The beaver's profile as a reintroduction candidate has gained considerable impetus in the last five years due to the River Otter Beaver Trial and the decision in Scotland to accept beavers as a returned native species. This enthusiasm is reflected in a surge in the number of projects seeking to release beavers into fenced enclosures since 2018. Ninety percent of these projects have expressed an interest in transitioning from enclosures to new wild-living beaver populations – assuming the government allows further introductions of beavers outside the River Otter.

Beavers in fenced enclosures

7.3 Releases into fenced enclosures were a first step towards full reintroduction of beavers: an opportunity to refamiliarise ourselves with this species and study it in a British context. Most early release projects were unregulated. The absence of independent scrutiny has proved to be a lesson for the governance of future projects involving reintroductions of former native species. Beavers escaped from several of the fenced enclosures (repeatedly in some cases); escapees were not always recovered nor escapes always reported to the authorities. Furthermore, projects continued to source beavers from populations with endemic *E. multilocularis* against Government veterinary advice (Defra, 2014).

7.4 Steps taken in 2017 to extend licensing measures to regulate all projects planning to release beavers into fenced enclosures was a necessary response to raise the standards of keeping and to require projects to report missing beavers and to have provisions in place to deal with escapes. In the absence of import controls, it was also the only means available to ensure beavers for release projects were sourced only from populations posing a very low risk of introducing *E. multilocularis* into Britain.

Wild-living beavers

7.5 Escapes from the fenced enclosures and illegal releases, one of which, on the River Otter in Devon, was subsequently brought into legal compliance by being made a licensed trial study, have resulted in small populations of wild-living beavers in five or possibly six, discrete areas of England. In only two areas, the River Axe in the 1980-90s and the River Thames, has an escape of multiple beavers failed to result in a

wild population establishing when the animals were not recaptured. Habitat conditions appear, therefore, to be generally suitable for this species. Current populations are all in the south and, predominantly, west of the country. To what extent these locations correspond with the five wild-living populations referred to in Jones *et al.* (2013) is unclear as the approximate location of only three populations was mapped.

7.6 At least two of the populations identified in this report are likely to have been the result of illegal releases. There is also evidence of an illegal release in Wiltshire, although the fate of these beavers is unknown. Additional wild populations originating from unauthorised releases cannot be ruled out.

7.7 Only the population on the River Otter catchment has been well-studied (Brazier *et al*., 2020). In the absence of comprehensive surveys our understanding of beaver status, particularly in the new and emerging populations, relies heavily on the passive collection of sightings and not structured surveys. About one-third of reports of beaver sightings linked to the River Stour population in the last five years, for example, are of beavers sighted in the sea or along the coast, often dead or in a distressed state. These records are more indicative of the locations that people frequent, than of the distribution of beavers in the Kent population.

7.8 The unknown extent of releasing and limited surveying means there remains considerable uncertainty about the overall size and distribution of the beaver population in England. It is safe to assume, however, that the beaver population is expanding. The most recent review of British mammals (Mathews *et al*., 2018) identified the River Otter as the only English population and, based on information at that time, estimated its population at 12 animals. That figure is now out of date. The River Otter population alone is estimated at 15 beaver territories or family groups (Devon Wildlife Trust, 2020 & 2021). Given the continued expansion of the River Otter population and the presence, but uncertain status, of other populations it is not possible to provide a reliable estimate of the number of animals or territories of wild-living beavers in England. Based on available information, the national population is likely to exceed 60 territories (or family groups) and total as many as 400 individual beavers, distributed over about 82 Water Framework Directive Catchment Cycle 2 sub-catchments. To put this in perspective, if in future beavers occupy the full extent of suitable habitat across England, then Natural England considers that a favourable population would be achieved when there are 5,200 family groups occupying 2950 sub-catchments[18] (Morris and Mousley, 2021). The beaver population in Scotland remains considerably larger. The latest estimate, based on more comprehensive surveying, has identified 251 territories and an estimated population in the range of 954 individuals (mean range of 602 to 1381 individuals) excluding young born in

[18] There is a total of 4,081 Water Framework Directive Catchment Cycle 2 catchments in England

2021 (Campbell-Palmer *et al.,*2021). The population is judged to have doubled in size in the last three years.

7.9 Assuming there are no attempts to remove or contain these beavers, it is reasonable to conclude that the existing populations will continue to expand throughout their river catchments and eventually disperse into neighbouring catchments. Such behaviour has been observed in beavers on the River Otter both at the upper reaches of the river (Brazier *et al*., 2020) and at the coast (Mark Elliott, *pers. com.*). In early 2021 a beaver, assumed to originate from the River Otter, was recovered from the estuary of the River Exe, about 10 km to the west of the River Otter. This behaviour could explain reports of beavers in the upper reaches of the adjacent Rivers Frome and Brue in Somerset.

Beaver dam located on a river in southern England in 2021

Implications for species reintroductions

7.10 Populations emerging from escapes and illegal releases have implications for the future distribution of beavers in England as well as for the success of this reintroduction. None of these populations are the result of natural colonisation and all should, but none did, take place in accordance with IUCN Guidelines for Reintroductions and Other Conservation Translocations (IUCN, 2013). These guidelines aim to ensure reintroductions are a success for both people and the natural environment, and as well as the species released. Because of the lack of planning, populations descended from escapes and illegal releases are judged more likely to result in conflicts. This could impact negatively on public attitudes towards beavers and reintroductions more widely. Such releases can also be ecologically undesirable as populations are typically founded from a very small number of individuals possessing limited genetic diversity.

7.11 The population of beavers on the River Otter was brought into legal compliance in 2015 through the auspices of a five-year licensed trial. This project took steps to follow the IUCN guidelines retrospectively, including through extensive engagement with local people and providing advice and support to anyone affected by the beavers. A decision to allow this population to remain was subsequently made in 2020. This is the exception.

7.12 Other populations have appeared without official approval and without any engagement with local people or key stakeholders. There are, as a result, no formal provisions in place to provide advice and support to people concerned about, or who may be adversely affected by, the presence of these beavers. Reintroducing species in this way risks undermining public confidence in reintroductions both of beavers and of lost species more generally (Auster *et al.*, 2019; Inman, 2020). It also risks a repeat of the problems that arose on the River Tay in Scotland. Originating from escapes or illegal releases, the presence of beavers on the Tay catchment has led to conflict locally and controversy nationally (Coz & Young, 2019). Ultimately, it resulted in the culling of large numbers of beavers (Scottish Natural Heritage, 2020) at an early stage of the reintroduction process, which a planned project would aim to avoid.

7.13 Recognising the need for appropriate management to reduce the potential for conflict in England, locally based voluntary sector groups and statutory bodies have started forming unofficial management and discussion groups for the beaver populations found on the River Stour, River Tamar, River Wye and Frome. The *East Kent Beaver Advisory Group* is an example of such a local initiative. Established in 2019, it includes representatives of the Kent Wildlife Trust, Environment Agency, River Stour (Kent) Internal Drainage Board, Natural England and the Wildwood Trust. This is a voluntary initiative and the work of the group is largely unfunded. The group has begun providing advice to people and businesses affected by beavers in this area and it is engaging with local communities. The aim is to promote a positive, or at least tolerant, attitude towards beavers and to offer support to anyone interested in and adversely impacted by their activities. If the government permits further reintroductions of the beaver to England, then groups like this will play an important role in facilitating the return of this species to England's waterways.

7.14 Action is necessary to improve compliance with international guidelines for future reintroductions of species in England. As a response to the beaver experience, Natural England advised Defra to introduce a code and guidance on conservation translocations. This became a commitment[19] of *'A Green Future: Our 25 Year Plan to Improve the Environment'* (Defra, 2018) and was published in May 2021 (Defra, 2021). The code and guidance are based on the IUCN guidelines (IUCN, 2013), but tailored to English law and conservation policy following a model adopted in Scotland

19 See chapter 3.1

(National Species Reintroduction Forum, 2014). If unsuccessful in improving compliance and good practice, then a regulatory solution may be necessary. This could include similar provisions to those under Scottish law, where all releases of a species outside its 'native range' (the currently occupied portion of its natural geographical range) require a licence[20].

Recommendations arising from this report are given in section 2.

[20] Section 14, Wildlife and Countryside Act 1981, as it applies to Scotland.

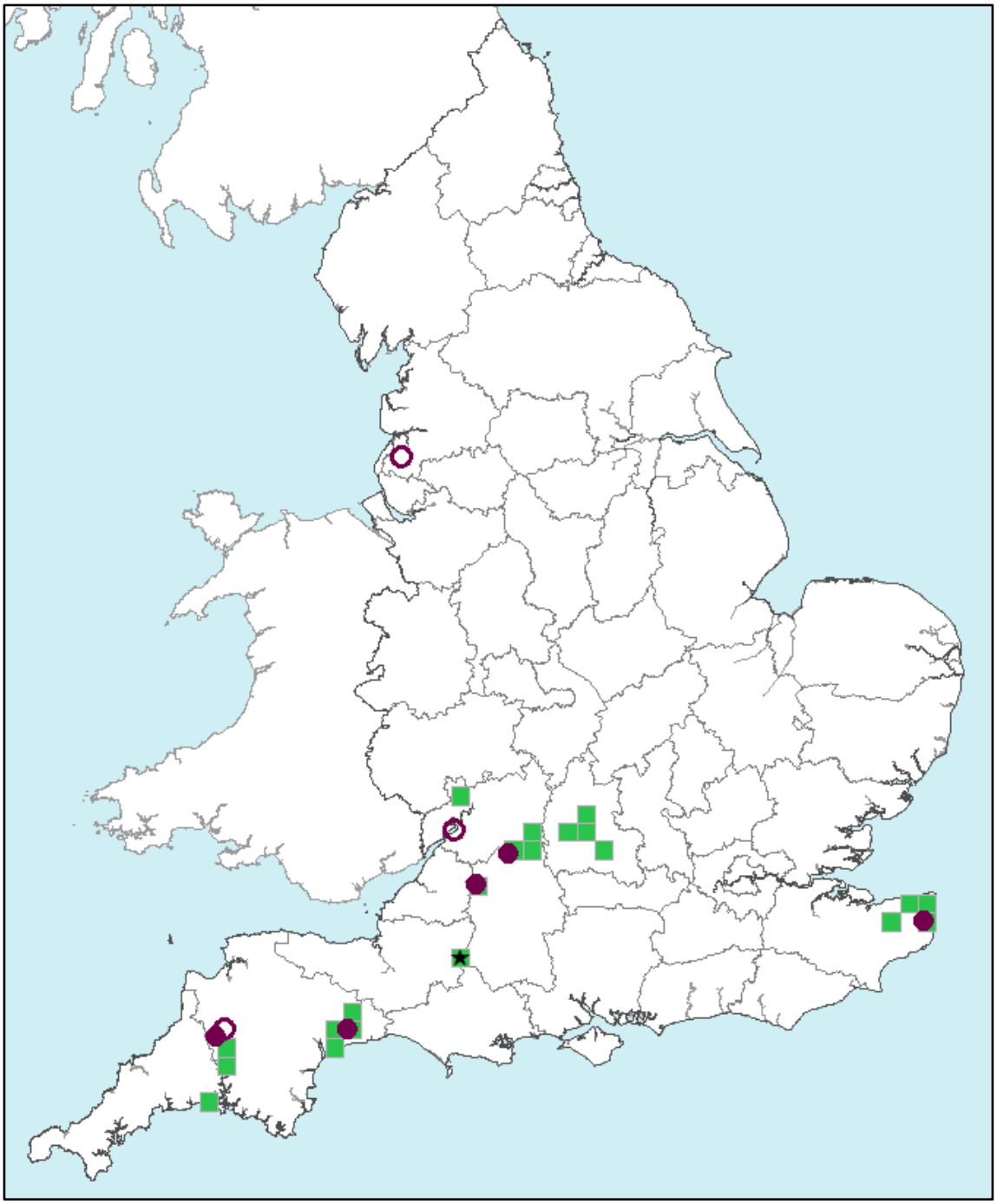

Figure 3 Distribution of wild-living beavers during the period 2000 – 2014

Key OS 10-kilometre squares with records of wild-living beaver are highlighted in green. Records of beavers that escaped and were recaptured are not included. Locations of sites where beavers were kept in fenced enclosures during this period are indicated by circles. Solid circles ● indicate sites where escapes are known to have occurred during this period. A square where there is evidence of an unauthorised release during this period is marked by ★. The highlighted 10-kilometre squares are listed in Appendix B.

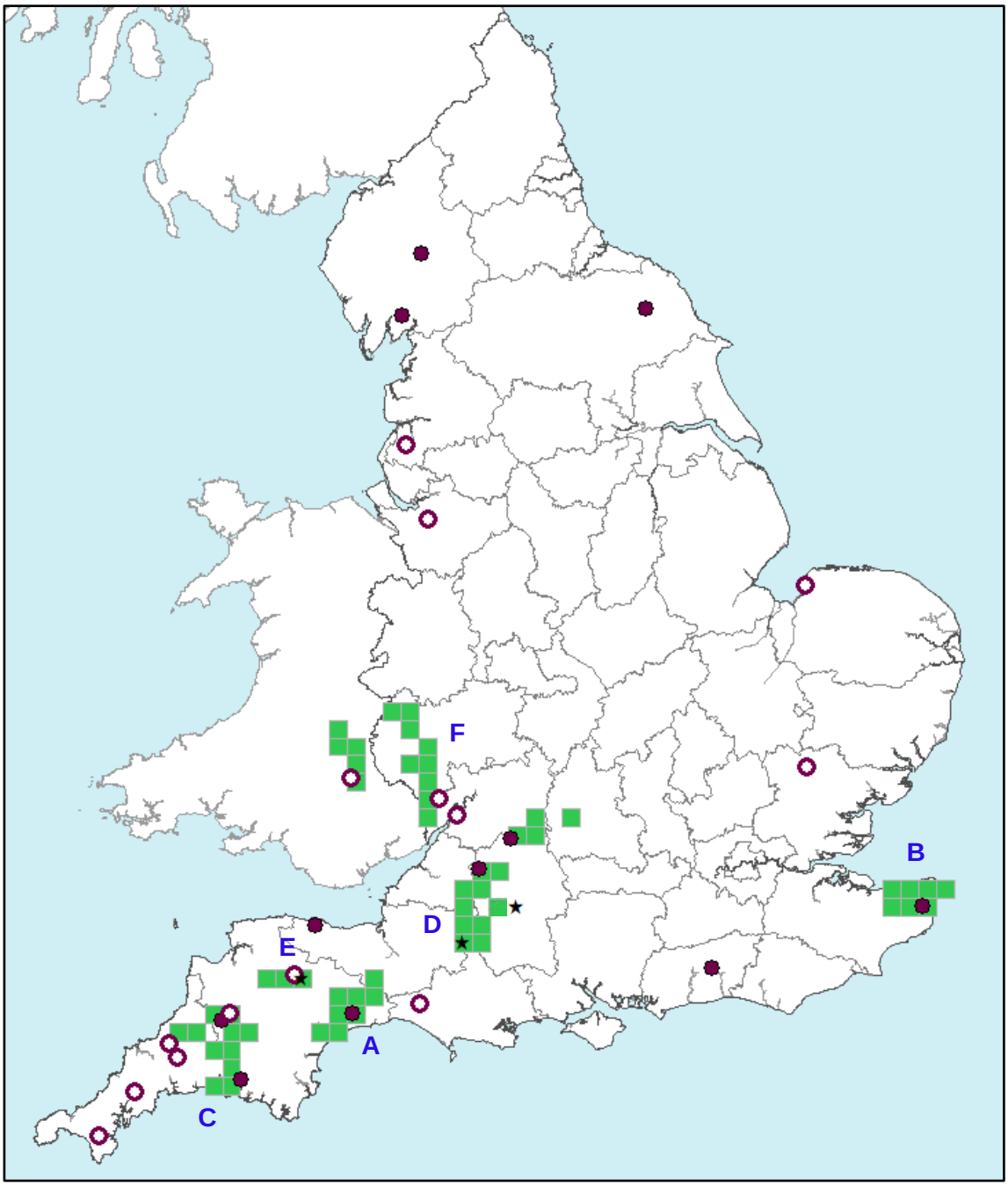

Figure 4 Distribution of wild-living beavers during the period 2015 – August 2021

Key OS 10-kilometre squares with records of wild-living beaver are highlighted in green. Records of recently escaped beavers and escapees that were recaptured are not included. Squares forming part of the River Wye catchment in Wales are included as they may form a single 'population' with beavers on the English section of this river system (Campbell-Palmer *et al.,* 2019). The location of the licensed trial reintroduction on the River Otter is marked by the letter **A**, while **B** to **F** mark possible 'populations' (see text). Sites where beavers have been kept in fenced enclosures during this period are also indicated by circles, including a site in Wales that is close to the River Wye. Solid circles ● indicate sites where escapes are known to have occurred during the period 2000 – 2021 (see text). The squares where there is evidence of an unauthorised release are marked by ★. The highlighted 10-kilometre squares are listed in Appendix B.

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Appendix A: Licensing releases into fenced enclosures

In 2017, following new evidence of escapes, Natural England reviewed the practice of releasing beavers into fenced enclosures against the criteria in Government guidance (Defra, 2010). This led Natural England to advise Defra to treat future releases into fenced enclosures as releases 'into the wild', and to recommend that future projects be licensed. The advice and reasoning are summarised below.

Summary of 2017 Advice

Whether or not releasing beavers into an enclosure is an offence and requires a licence to proceed lawfully is decided on a case-by-case basis, informed by the published guidance explaining application of the law (Defra, 2010). In summary, following this guidance a release into an enclosure is likely to require a licence if **any** of the following criteria apply:

1. **The beavers are likely to escape**

   If the beavers are likely to escape then the area within the enclosure is, for practical purposes, linked to the wider countryside surrounding the pen and the beavers are thus capable of having potential impacts on natural habitats and wild native flora or fauna. They would, therefore, be considered to be in part of 'the wild'.

2. **The beavers are capable of having an adverse environmental impact**

   If the beavers are capable of having an adverse impact on natural or semi-natural habitats or associated species within the enclosure or indirectly outside the enclosure (e.g. by changing the hydrology of a watercourse and thus the environmental conditions downstream) then they are considered to be in part of 'the wild'. Particular regard should be given to impacts on protected sites (e.g. Sites of Special Scientific Interest, SSSI).

3. **The enclosure is so large that it includes natural and semi-natural habitats and their associated wild native flora and fauna that could be impacted**

   If the enclosure encompasses a large area of natural or semi-natural habitat, sufficient to be considered part of the open countryside on which the beavers could have an impact, then the enclosed space is part of 'the wild'. There is no specific size threshold and this decision should consider not only the actual area, but also the habitats enclosed and the use of the space by wildlife. This criterion is unlikely to apply to enclosures of less than one hectare.

Where any of these criteria apply, a release into an enclosure should be considered to be a release into 'the wild', which is an offence under section 14(1) of the Wildlife and Countryside Act 1981 (as amended) unless authorised under a licence.

Until November 2017 only one project involving the release of beavers into an enclosure had been licensed (at Ham Fen, Kent). This was licensed because the enclosure encompassed a SSSI and the beavers were being used as a habitat management tool to 'engineer' the site.

In response to the discovery, in 2017, of an escape of beavers from a fenced enclosure, following which the animals were neither recaptured nor reported, Natural England reappraised releasing activities against the Defra guidance.

On the basis that:

(i) there was a continuing high risk of escapes, and an inadequate response to these, and
(ii) there were an increasing number of projects proposing to use beavers to alter the hydrology of watercourses, thereby impacting their environmental conditions

Natural England concluded that all future releases should be considered to be a release into 'the wild' and therefore lawful only if carried out under the authority of a licence. Natural England also recommended that licences should:

- permit beavers to be released only into a defined and **securely** enclosed area (i.e. limited and clearly demarked part of 'the wild'), not the wider countryside, and
- include conditions aimed at ensuring: the installation and maintenance of appropriate fencing; the monitoring and tagging of beavers; effective provisions to deal with escapes and to manage beaver numbers within the enclosure, and a clear plan for the beavers at the end of the project.

The escape (or release) of beavers outside the fenced enclosure would still be regarded as unlawful under section 14(1) as a licence would only derogate the offence of releasing into the permitted area defined within the licence. Prompt and effective steps to recapture beavers would be expected as a condition of the licence.

This advice did not apply to releases into secure enclosures containing artificial environments (e.g. of a type that you would typically associate with a zoo).

Appendix B: 10-kilometre squares with beaver records

The OS 10-kilometre squares with confirmed or credible beaver sightings, which are used in Figures 3 and 4.

2000 - 2014
SO72
SP10
SP30
SP40
SP41
ST10
ST73
ST87
SU09
SU19
SU59
SX35
SX47
SX48
SY08
SY09
SY19
TR15
TR26
TR35
TR36

2015 – June 2021	
SO30	ST95
SO43	ST97
SO45	SU09
SO46	SU19
SO50	SX18
SO51	SX28
SO52	SX35
SO53	SX37
SO54	SX39
SP10	SX45
SP30	SX46
SS61	SX47
SS71	SX48
SS81	SX49
ST00	SX58
ST10	SX98
ST20	SY08
ST21	SY09
ST73	SY19
ST74	TR15
ST75	TR16
ST76	TR25
ST83	TR26
ST84	TR35
ST86	TR36
ST87	TR46

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ISBN 978-1-78354-679-4

Catalogue code: JP036

NATURAL ENGLAND