

ROOF-NESTING GULLS IN LISKEARD

Survey conducted 25 April 2018

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for Liskeard Town Council



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EXECUTIVE SUMMARY

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INTRODUCTION

The weather for the 2018 survey was unkind! Temperatures were well below the seasonal mean (which saw some pairs making a slow start to the breeding season). A cold wind was a constant companion, but the single heavy rain shower wasn't a problem. Thanks to the cherry picker operator, the survey was completed satisfactorily and in good time and a visit to the church roof was a bonus. Many thanks go to David Ambler and Tony Misson for organising things (this survey could not have been completed without the 20m cherry picker).

The survey encompassed the whole of Liskeard which was split into seven sectors defined by main roads and obvious landmarks (see attached map) and named, albeit somewhat arbitrarily!

SURVEY RESULTS

From observations of occupied nests and other procedures, it is estimated that the urban gull population of Liskeard is between 144 and 158 pairs with a presumed figure of 151 pairs.

This total is broken down as follows:

Table 1. The urban gull population of Liskeard by sector.

Legend: HG=Herring Gull, LB=Lesser Black-backed Gull

Sector	Sector Name	HG Pairs	LB Pairs	Total
1	West Street	12	2	
2	Church	30		
3	Castle	31		
4	Melbourne	15		
5	College	32		
6	Station	13		
7	Looe Mills	16		
Totals		149	2	151
%		98.7%	1.3%	100.0%

COMMENT ON THE SURVEY FIGURES

Liskeard is a small colony in national terms (where Bristol (Rock 2010), Gloucester (Rock 2009) and Cardiff (Rock 2017) with 2,495 pairs, 2,900 pairs and 3,150 pairs respectively are very large colonies in national terms).

As expected, the dominant species in Liskeard (as in Cornwall as a whole) is Herring Gull making up 98.7% of the population. This is very much in line with the 2007 survey of Penwith, Kerrier and Carrick (Rock 2007) where Herring Gull formed 98% of the total population of 1,832 pairs (had there been just one more pair of Lesser Black-backed Gulls in Liskeard, the Herring Gull figure would have been 98%).

The three most populous sectors were, again as expected, the leisure centre/community college (5) backing onto the centre, the town centre itself (2) and the residential area surrounding the Castle Pleasure Grounds (3). Somewhat surprisingly, the Looe Mills trading estate, with many suitable roofs, was under-populated.

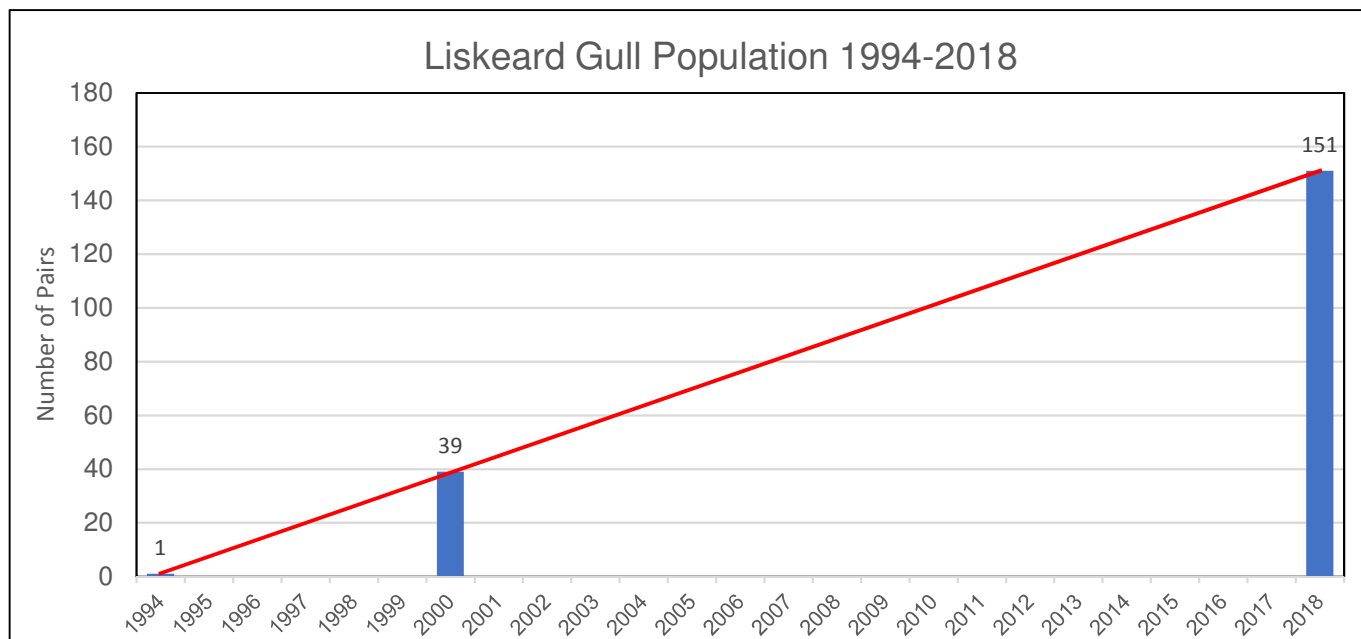
THE HISTORY OF BREEDING IN LISKEARD

The history of gulls breeding in Liskeard is unclear. The Birds of Cornwall (Penhallurick 1978) tells of several urban colonies in the county, but not Liskeard. However, the 1994 survey (Raven & Coulson

1997) revealed a single pair, but without any historical details. That record sets a time-frame of 24 years ago for the first breeding. It is possible, of course, that at that time the population was under-recorded. Councillor Ian Goldsworthy, in conversation, recalls gulls in Liskeard when he ‘was a lad’. Assuming that this was more than 24 years ago, it may be that breeding in the town started prior to 1994.

The most recent assessment of the Liskeard population is to be found with the Seabird Monitoring Programme ([online](#)) which formed the basis of Seabird 2000 (Mitchell et al 2004) and states that 39 occupied nests were found on 21/05/2000 from a ‘vantage point’ (perhaps the church?). The increase is 112 pairs (287.2%) since 2000. HOWEVER, simple nest counts result in a bare-minimum figure (not all nests will have been visible from a single vantage point and if this vantage point was the church, many parts of Liskeard would have been unseen...). Nevertheless, these are the published figures.

Figure 1. Assumed development of the Liskeard Gull Population 1994-2018.



Liskeard is not an isolated urban colony. Within 30km there are at least another 17 colonies as shown on the map, left. It is certain that Liskeard receives recruits from the other colonies and, at the same time, supplies recruits to the others. In Cornwall as a whole there are at least 41 colonies ([Rock in prep](#)).



TYPICAL NESTING LOCATIONS IN LISKEARD

Breeding locations in Liskeard are varied from residential dwellings via industrial units to the schools, but for the large gulls asbestos is a firm favourite. This is because, in the first instance, the projecting bolts connecting the asbestos sheets act as anchoring points for nests.



Lichens quickly colonise surfaces to be followed by moss. Succession growth of grasses and other plants follows once wind-blown detritus is trapped on the surface but, as can be seen from this picture from Looe Mills, nests from previous years provide the ideal, well-fertilised growing medium. Given time, asbestos roofs (like this near the station, below) can become rather well decorated!



The highest breeding density in Liskeard was noted on asbestos roofs such as these.

Other typical nesting locations include the angle behind chimney stacks (as on the report cover) or heating flues or ventilation units where these are set on the roof slopes rather than the roof apex. These nest locations are seen commonly in every urban gull colony especially where the roof slope angle is shallow.



College (left), St Martin's School (above).

Similarly, the dormer window (right) also provides ample support for a nest even on a roof with a steeper slope angle.



Chimney stacks with two rows of chimney pots are commonly used (with apologies for the picture quality!). Stacks with only a single row of pots are rarely used. Despite the picture quality, spikes can be seen between the rows which this pair has bent out of shape and covered with nest material...

Buildings with steeply sloping roofs are unlikely to be used unless, as above, there is some kind of support for a nest. Similarly, chimney stacks with only a single row of chimney pots are almost always ignored by gulls. Gutters where rainwater is frequently carried to downpipes are also mostly ignored.

ASSESSING URBAN GULL POPULATIONS

All surveys involve detailed counts of nests. However, the number of nests recorded can only represent the bare minimum population. Therefore, in order to correct for under-recording and enable an estimate with a high degree of confidence, counts of breeding age birds are also vital.



Whilst many nests are large and easy to identify, such as the Herring Gull nest (above) others, for various reasons, are very difficult to identify and yet others are obscured or hidden.



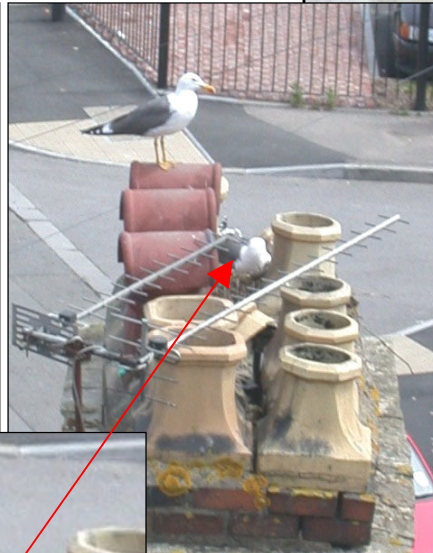
Two nests: one Herring Gull nest which is quite obvious and one Lesser Black-backed Gull nest which is constructed with minimal nest material and would be very easy to overlook. The detail shows the nest material. Curiously, the tendency is for Herring Gulls to build more substantial nests than Lesser Black-backed Gulls (pers obs).

Sometimes nests have next to nothing in the way of nest material. Provided the eggs cannot roll away (as in the 'nest', right), incubation can take place.

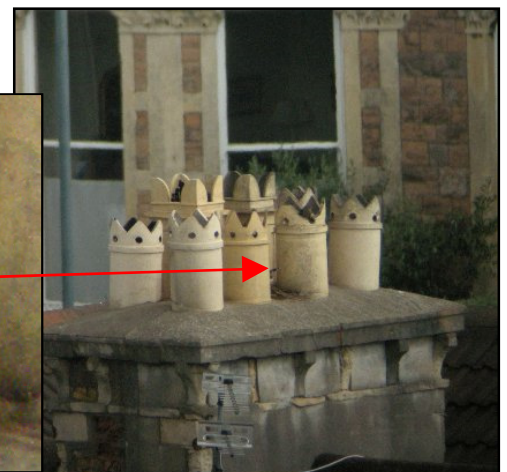
Static vantage points (e.g. tall buildings) whilst offering commanding views of the colony, usually do not allow the observer much lateral movement. Therefore, because of complexity in the roofscape, a percentage of nests will be obscured.



These pictures were taken in Cardiff where Lloyd's Bank did offer considerable lateral movement. The adult Lesser Black-backed Gull perched in attendance (as is the norm) on the chimney pot is the mate of the incubating bird which cannot be seen. However, by moving some 20 metres, the nest is revealed.



More difficult, still, are those nests which are extremely well hidden and are usually only found by pure luck. This Bristol nest (right) was just such a piece of luck.



And another tricky nest to find (behind the satellite dish) from Berrow

Below are some examples (from Bath) of how easily nests can be missed for the want of only a few metres. Pictures on the right show the nests revealed by moving those few metres.



The situation on some roofs is even more difficult – not because finding nests is difficult, but because deciding which species belongs to each nest is a mistake when the gulls have walked away from or flown the nest. The eggs are impossible to separate.



This very large roof in Highbridge is populated by a large number of gulls. The detail below shows many occupied nests, especially around the vents, but it also shows several unattended nests and many adults in areas where there may or may not be nests. It is for this reason that counts of breeding age birds of each species are so important (1st and 2nd summer birds are excluded from counts under the assumption that they will not be breeding).



A very crude estimate of the breeding population would be to subtract the number of nests from the number of breeding age adults of each species. However, there are complicating factors (absent, or flying birds, complexity of roovescape, unidentifiable nests, etc.) which require estimates to be scaled. This roof, for example, required a scaling of 30%.



A row of Herring Gulls like this in a residential area adds to the difficulty when assessing sectors. They may well simply be assembling to see what's going on. This kind of situation requires judgment.

THE GULL SPECIES INVOLVED IN ROOF-NESTING

Several gull species have been recorded breeding on rooftops in Europe. However, in UK (and much of continental Europe) the species primarily involved are **Herring Gulls** (*Larus argentatus*) and **Lesser Black-backed Gulls** (*L. fuscus*). **Great Black-backed Gulls** (*L. marinus*) also breed on rooftops, but numbers in comparison are insignificant. Cornwall, though, has good numbers of urban Great Black-backed Gulls, but none in Liskeard, unfortunately...

Identifying adult Herring and Lesser Black-backed Gulls is straightforward (e.g. Olsen & Larsson 2003). Both are large with white bodies, yellow bills and black, primary flight feathers. Herring Gulls show a silvery mantle (back) and have pink legs whereas Lesser Black-backed Gulls have variably dark, slate-grey mantles and yellow legs.



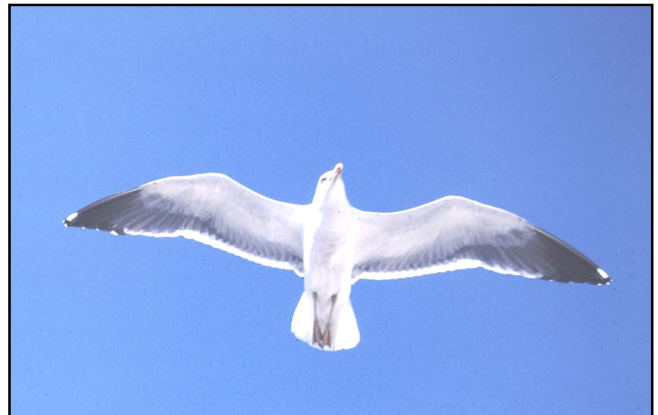
Herring Gull

Breeding Adult above and below in flight

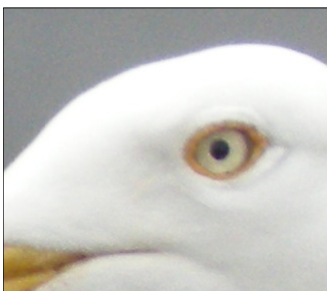


Lesser Black-backed Gull

Breeding adult above and below in flight



The two species are equally easy to separate in flight (from below). Herring Gull wings show a white trailing edge and the inner primaries are pale whereas Lesser Black-backed Gull wings show a dark, sub-terminal bar at the trailing edge and the inner primaries are dark.



Additionally, if close views are obtained, the colour of the orbital (eye) ring is diagnostic. Herring Gulls have YELLOW orbital rings (left) whereas those of Lesser Black-backed Gulls are RED-ish (right).

Though, on average, Herring Gulls are slightly larger than Lesser Black-backed Gulls, the mean weights of the two are around 1 kilo and they have a wing span of circa 4½ feet (Cramp & Simmons



1983). Longevity records for the two species are **34 years 9 months for Herring Gulls** and **34 years 10 months for Lesser Black-backed Gulls** as defined by ringing (Euring 2014).

Several colonies in UK support **Great Black-backed Gulls**. The picture, below, shows a pair in Highbridge. Note the very dark mantle which is almost as black as the primary flight feathers. These are very big birds (Lesser Black-backed Gull behind) with heavy bills and greyish-pink legs. They are the top predators in gull colonies (they eat the eggs and chicks of the other species).



And then there are birds looking like this



Note that the bird on the left is darker-mantled than the Herring Gull on the right. Note, too, that it has yellow legs where the Herring Gull has pink legs. This is a **Hybrid**. Hybridisation between Herring and Lesser Black-backed Gulls is not uncommon in town. Typically, the mantle colour of hybrids is intermediate between Herring and Lesser Black-backed Gulls, but leg colour can be variable. No hybrids were noted in Liskeard in 2018, but with 5 Lesser Black-backed Gulls recorded during the survey there is a small possibility that in years to come Liskeard might support a hybrid or two. I recorded 7 hybrids in Bath in 2015 in a population of 1,141 pairs (Rock 2015) and 10 hybrids in Wiltshire towns in 2018 (Rock in prep).

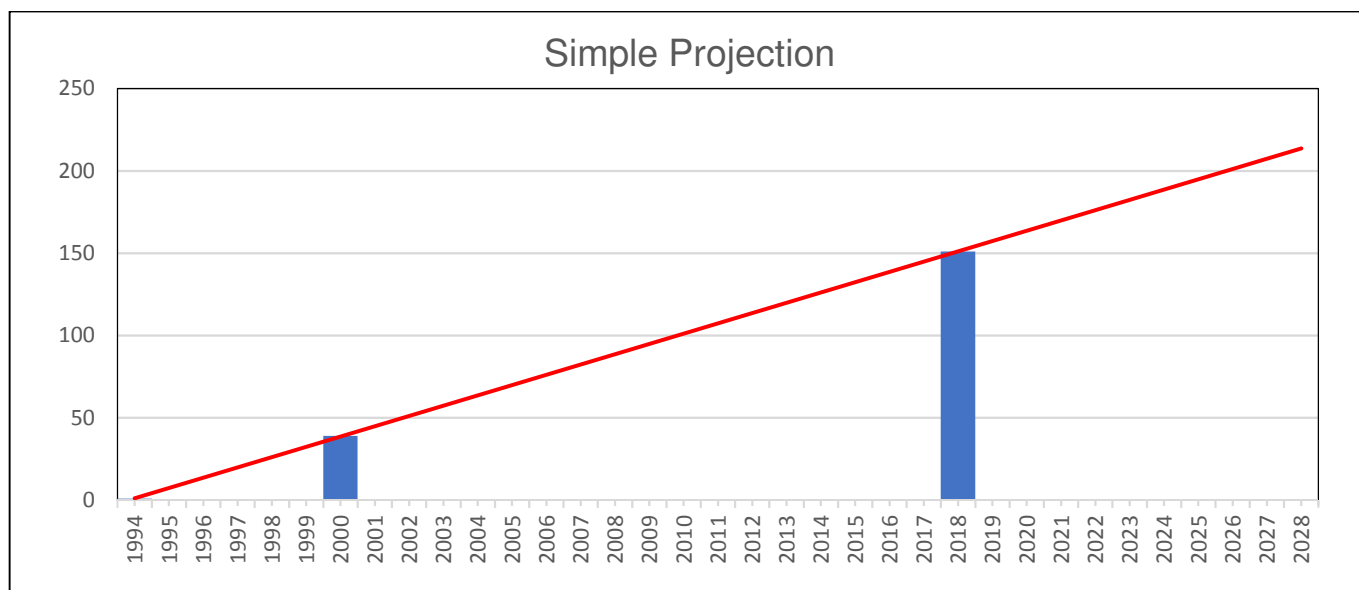
The young of all of these species are brown and speckled, but as they age, they progressively lose their brown feathering until they reach full adulthood in their 4th winter (see again Olsen & Larsson 2003). Differentiating between the species can be difficult in their first two years but becomes increasingly easier from their 2nd winter onwards.

The longevity records of almost 35 years, as could be expected, are the exceptions (my oldest bird was 28 years old last year). The most dangerous time for the large gulls (as for all bird species) is their first winter and many perish during this time. Survival from then on improves gradually, but once they reach adulthood, annual survival rates of above 90% can be expected (e.g. Rock & Vaughan 2013). And once they do reach adulthood, the majority will breed for at least 5 years, a good number will breed for 10 years, some will breed for 15 years and a few will breed for 20 years or more (unpubl. data).

POPULATION GROWTH AND PROJECTION

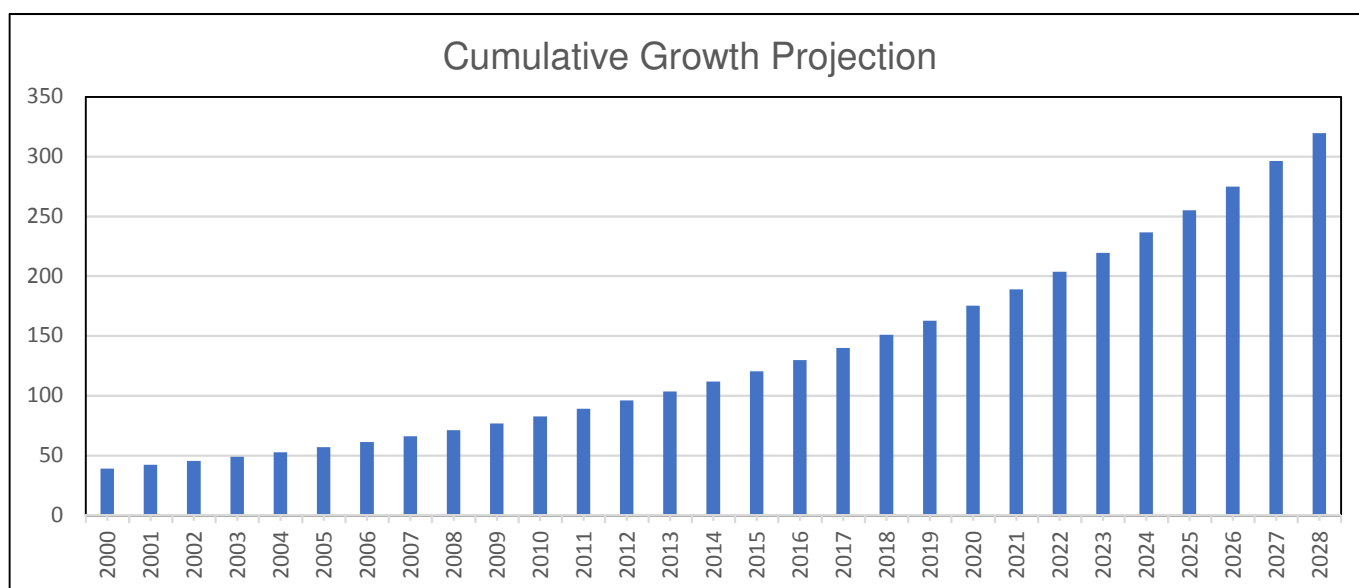
As suggested above, there is some doubt about the historical figures relating to the Liskeard roof-nesting gull population, but that these are now incontrovertible. Therefore, a simple analysis reveals that in the 18 years since the year 2000, the population has grown by 112 pairs (i.e. the population almost tripled) at a mean rate of 6.2 pairs per year. The simple projection following the existing trend would result in a population of circa 215 pairs in 2028.

Figure 2. Simple projection following the existing trend



However, the cumulative, mean growth rate from 39-112 pairs over the 18-year period is 7.8% per year. This projection results in a population of 319 pairs in 2028.

Figure 3. Continuing Cumulative Growth at 7.8% per year.



Neither of these projections takes into account the vicissitudes of survival, breeding success, immigration, redevelopment and possible relocation as well as human interference. Steady growth as projected above is, therefore, highly unlikely. The most likely scenario would be variable growth rates depending upon the year.

The best that can be said at this point is that these projections should be treated with caution. It is suspected that the Liskeard population might be growing, but at what rate is presently unclear. The assessment in 2018 provides a figure of 151 pairs with confidence limits of 5%. It should be viewed as an accurate base-line upon which future surveys can rely. A further survey in two years' time will define the growth rate far more accurately.

DETERRENCE METHODS

Table 2. Brief assessment of deterrence methods with comment below.

Method	Description	Comment
Nest Raking	Smashing eggs and/or destroying nests	Gulls simply rebuild nests and re-lay eggs. Persistence will prevent breeding in that season, but see below.
Bird Scarers	a) Loud bangs, screaming noises, waving streamers, etc. b) Plastic Eagle Owls, balloons resembling threatening eyes, bird of prey kites, etc. c) Distress calls. d) Wind-driven and other moving things (e.g. 'the spider', falconry, etc.).	Loud noises are quickly ignored in urban situations full of odd noises. Plastic and other objects of all types are ignored. A temporary effect, but quickly recognised and then ignored. No discernible effect
Wires & Spikes	Tensioned wires/spikes are positioned on parapets and other structures to prevent perching.	Mostly a waste of time with regard to deterrence, but if correctly installed, can prevent gulls perching in chosen locations.
Netting	Covering all or part of a roof so that gulls cannot get to it.	Well positioned and erected netting will prevent birds nesting on a particular roof, but will also cause displaced birds to relocate to roofs nearby or further afield. Careful maintenance is required. If it is not, birds will nest on top of it.
Egg Sterilisation	Dipping eggs in vegetable or light mineral oil at least twice per season.	Labour intensive and, possibly, dangerous getting to nests. Breeding is prevented for that season
Egg Replacement	Replacing full clutches with fake eggs.	Less labour intensive, but still possibly dangerous getting to nests. Breeding is prevented for that season.
Lethal methods	Shooting, poisoning, narcotising, trapping	Lethal methods are fraught with legal and other issues. Don't go there!

Comment on deterrence methods

Preamble (which applies to most of the above)

As explained above, if gulls reach adulthood, they are likely to have long breeding careers. Failure to breed in any one season (or more seasons) is of little consequence: eventually, they will breed. All that is required for any species to maintain a stable population is for individuals to reproduce themselves once in their lifetimes. More than that results in population growth and less results in population decline – and this where the fundamental mistake is made...

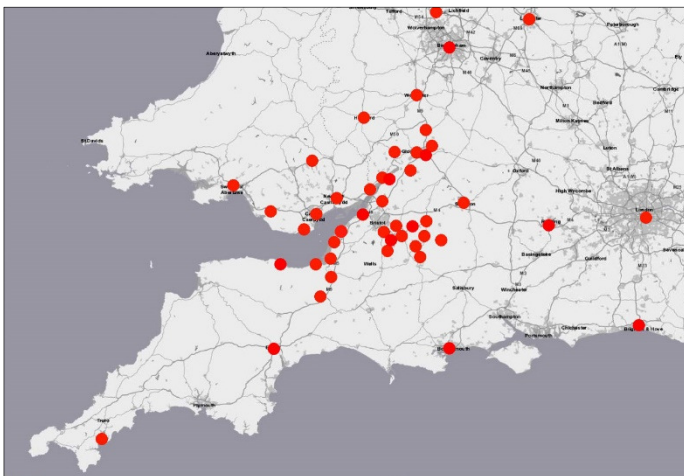
My data show (depending upon the cohort) that between 40% and 50% of the birds I colour-ring make it to adulthood: in other words, half, or more than half, perish getting there.

Nestlings of the large gulls fledge after 6 weeks. I only colour-ring nestlings in their 4th- 6th week of life. Picture shows a 5-week old Herring Gull nestling colour-ringed on a rooftop in Bristol in June 2014 and not seen since September 2014 – after all this time, it is presumed to have perished...



The riskiest time for nestlings is when they're small. Little chicks are prone to dying if they get wet, cold, hit by adults or eaten! Similar fates apply to eggs. Larger chicks which fall from roofs can be killed by the fall, or by traffic, or by predators (foxes, dogs, cats, etc.), or even by humans! Therefore, I estimate the losses from egg-laying to week 4 to be something around 20-30%. So, to put this into some order: of 100 untouched eggs 70-80 will make it to the age where I would ring them and of these 28-40 will make it to adulthood (4th summer) and then seek to breed.

However, there is also the sex ratio and it should be assumed that of the 28-40 the split will be half and half. Generally speaking, philopatry is a male thing with the females finding other colonies to breed in which leaves between 14-20 birds recruiting into the natal colony. This, it should be said, is a generous calculation because now we come to something of an imponderable, but which certainly has a marked effect: it is the ability or otherwise of first time breeders to recruit into the breeding population. Some birds do not manage to breed until they are 6 years old for a variety of reasons which include inter- and intra-specific competition, fitness and, more recently, urban redevelopment. It may be that preventing 100 eggs from hatching, fewer than 15 birds would have been prevented from recruiting in their natal colony had these eggs been left alone.



Perhaps equally important, based on the above, will be the recruitment into any population from surrounding colonies and, sometimes, from colonies at considerable distances. The map shows where my birds, mostly females (ringed in Bristol, Bath, Gloucester and Cardiff) have bred or are breeding – that I know of... What this means is that all colonies are importing and exporting recruits.

Probably, the immigration level of recruits from elsewhere would more than make up for the negative effects on the population of deterrence.

It should be said, however, that persistent breeding failure can result in pairs divorcing (e.g. Catry et al 1997). This has been demonstrated by Moon (2009) using egg-replacement where circa 25% of pairs moved out of the (small) treated area... But that numbers increased in surrounding areas...

However, some of the methods listed above may be worthwhile. Preventing breeding should result in a somewhat quieter environment surrounding sensitive areas (e.g. hospitals, etc.), but with the caveat that any action taken will not reduce the population.

Nest raking

Nest raking and/or removal is labour-intensive and, in large part, ineffective unless carried out over several years and then it becomes only partially effective... On one large building I know well, there has been no reduction in nesting attempts after 3 years of nest raking. Nest raking has, however, seen something of a resurgence in various local authorities due, in large part, to frustration with other methods. In the words of a councillor from one such local authority, "I will continue to advocate intervention in the breeding process. I have reached this standpoint because I know that these animals are intelligent enough to understand failure and they will react to that by moving to more successful breeding grounds". Or, more succinctly from an Environmental Services officer from a different authority, "I don't care where they go as long as they go away from here..."

Bird Scarers

Plastic Eagle Owls are found in just about every urban gull colony. Why?



Even in Liskeard (left). Two were noted during the survey.



And Kites?



Acoustic deterrence (i.e. playing distress calls, or bird of prey calls) initially excites the gulls making them fly, but after a couple of days they do not even respond beyond a turn of the head. Incubation, as here, is far more important.

Note that the Lesser Black-backed Gull at the bottom of the picture is carrying one of my colour-rings. This bird was ringed in Bristol and bred in Cardiff, clearly demonstrating that this is NOT A LOCAL ISSUE.



The owl eyes (right) are wind-driven and spin. The other side has a red border and the mirrors catch the light. This piece of kit has taken a great deal of careful thought. Note, however, that the roof surface behind is covered in gull droppings: this is where quite a lot of gulls come for a rest...

Wires & Spikes



Spikes and tensioned wires were originally developed in order to deter pigeons but were thought, wrongly, to be equally effective for gulls... Arrays of spikes (such as those pictured, left) are nowadays commonly seen in all urban gull colonies. They are most usually installed on parapets or the edges of roofs. However, this does not prevent gulls from landing on these roofs and the roof pictured supports five pairs. The large gulls do like to stand on vantage points, so this kind of spike installation with a railing behind (which gulls will readily stand on) is poorly thought out.



In some (limited) situations, spikes can be effective in deterring gulls from nesting. Typically, such situations will be sloping roofs where gulls nest between slope and an upstand (such as this chimney in Liskeard), but provided installation is correctly carried out. Not pretty, though...



Spikes on parapets or edges of buildings do not deter breeding gulls.

Spikes between rows of chimney pots are often no deterrent. Gulls simply bring enough nest material to cover the spikes (as in the Liskeard chimney stack on page 7).



This chimney stack in Liskeard (right), though heavily defended, was unlikely to have attracted a breeding pair in the first place. There is only a single row of pots...





Spikes and tensioned wires – a sort of belt and braces approach! What is highly unusual here is that the Herring Gulls are walking about underneath the wires which means that they cannot make a quick getaway if it becomes necessary.



The Lesser Black-backed Gull has constructed what is probably the most comfortable nest in the World!

Netting

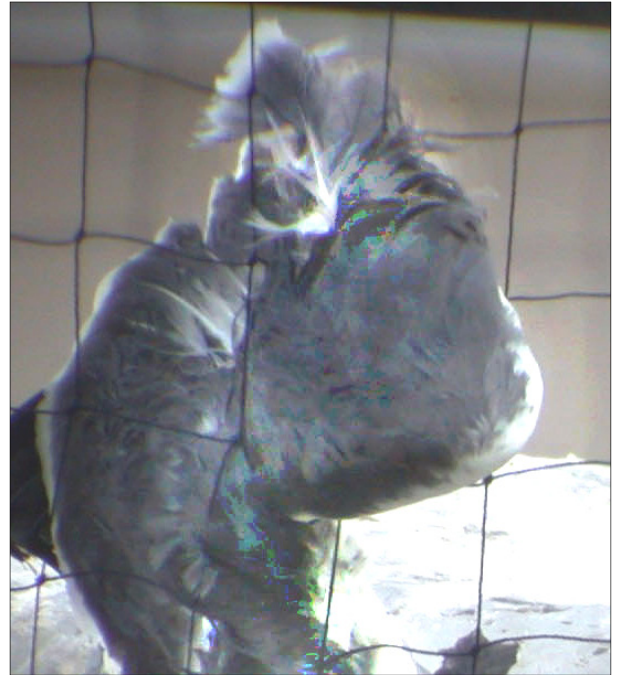
Netting is the most effective way of keeping gulls off particular roofs, but if it is wrongly situated or poorly maintained, the gulls will take advantage. However, displacement always results in relocation. If the gulls cannot breed on their chosen roofs, they will find alternatives.



One of the commonly seen mistakes is the use of the wrong mesh size as shown in the picture (left). The 50mm mesh was originally designed to stop pigeons perching or roosting in awkward recesses or on top of statuary attached to buildings, etc. No thought was given to mesh size when pest controllers started using it against gulls...



The problem for the large gulls is that the 50mm meshes will trap their carpal joints and with feathers acting as barbs, the more they struggle, the more trapped they become.



Unable to free themselves the gulls die a lingering death over several days. I have many pictures, but the situation is clearly understood from the picture below.



This Liskeard Herring Gull might well be in grave danger. Has this net trapped gulls in the past?



Egg-sterilisation/Egg replacement

The theory behind both egg sterilisation (oiling) and egg replacement is to prevent eggs from hatching and, thereby, reduce the number of gulls in the population. See the Preamble above for why this does not work.

Oiled eggs (with a mark on each to identify oiled eggs later).



Fake eggs are sand-filled to imitate the weight and feel of real eggs. No patterning necessary.



An unexpected side effect of these actions was that parent gulls would persist with incubation long after the 24-28 days required. The record for oiled eggs is 15th August and for fake eggs 3rd September. Under normal circumstances nestlings would have fledged by mid-July...

Lethal Methods

Effectively, there are only two lethal methods (with variations). These are shooting and poisoning. It should be categorically stated that lethal methods can contravene the Law and may also be considered unwise if publicised.

Urban gulls elicit strong feelings amongst members of the public and where people have some experience of urban gulls there is little ambivalence. They are either hated or loved. Those who love the gulls can prove to be determined to stop any lethal control of urban gulls and can create considerable Media interest which could reflect poorly on those commissioning a cull as was the case in Scarborough in 1990 (T. Fenter, Environmental Services, Scarborough, pers comm.).

HEALTH ISSUES

The much-vaunted notion that urban gulls spread disease has been repeated so often that it now seems to be a part of the culture. The epithet 'disease-ridden' is frequently applied to urban gulls (and is usually followed by 'vermin'). One of the qualifying stipulations for obtaining a General Licence to take action against 'pest' species as listed in the Wildlife & Countryside Act is if these species are a risk to human health. It has long been proposed that gull droppings affect water supplies (e.g. Jones et al 1977, Gould & Fletcher 1978, etc.) and that gulls may be transmitting agents of Salmonella to livestock (e.g. Coulson et al 1983). It is possible that these findings have encouraged some of the pest control agencies to state, categorically, in their promotional literature that urban gulls are carriers of disease. However, the facts are less clear.

Monaghan et al (1985) showed that Salmonella carriage rates amongst Herring Gulls in the Clyde area of Scotland were less than 10% (and rather higher than those observed in other parts of Scotland) and, critically, the highest rates were found in birds specialising in feeding at sewage outfalls. It was concluded that a positive correlation existed between gulls carrying Salmonellae and the incidence of Salmonellosis in the human population at the same time and that carriage rates in gulls “reflected the level of contamination in the environment”. However, a more recent study in Sweden (Palmgren 2002) showed that Salmonella carriage rates amongst Black-headed Gulls were only 2.7% and, again, that carriage reflected environmental contamination. In other words, it is more likely that humans are infecting gulls, rather than the other way around.

In both studies, gulls appeared not to be affected by carrying Salmonellae and the Swedish study supported the findings of Girdwood et al (1985) that carriage lasted between two and four days. In other words, in order to contract Salmonellosis, or other diseases, one would have to be unlucky in the extreme.

The World Health Organisation (WHO) defines health as “a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity” (1946). With this in mind, it could be argued that gulls pose a threat to health, not simply by the debatable spread of disease, but by creating circumstances where physical, mental and social well-being are affected...

THE LAW RELATING TO THE LARGE GULLS

All wild birds, their nests and eggs are protected by the provisions of the Wildlife & Countryside Act 1981 (WCA). However, some species are designated as pests and amongst them are the large gulls. A General Licence allows authorised persons to destroy nests and eggs or kill adult birds and nestlings in order to preserve public health, public safety, air safety and to prevent the spread of disease (General Licences England 2014). There is no provision for these actions to be taken for nuisance alone.

Birds of Conservation Concern (Eaton et al 2009) placed Herring Gull on the RED List as a consequence of greater than 50% declines in the last 25 years in UK (actually 61%, JNCC 2012) which resulted in the removal of Herring Gull from the pest species list in England in 2010 (Lesser Black-backed Gull is AMBER Listed). Herring Gulls in England, therefore, are fully protected (save for the derogation in urban colonies to take nests and eggs under the General Licence). In effect, taking and killing a live Herring Gull of any age (including nestlings) would be against the Law.

SOME ITEMS OF INTEREST

The roofs of Liskeard Community College support several pairs of Herring Gulls and whilst 60 can be seen on this roof, there is no evidence of breeding and though most are adults, many are immatures (i.e. non-breeders). Tinbergen (1953) referred to such collections of gulls as ‘the Club’. The reason they have chosen this roof is because it is a place where they can rest in their down-time from other duties such as incubation without having to face problems of territoriality. This roof was popular at the time of the survey, but the Club’s location can change without notice.



Perhaps of slightly more concern would be the college's solar panel array where there certainly is breeding between the panels. Note the decoration on the surfaces of several of the panels in the foreground. This will only get worse as the breeding season goes on...



The Lux Leisure Centre (left, below) and Hillfort Primary School (right) provide good examples of why a cherry picker is so important when assessing populations. Both of these birds appear to be incubating.



The Leisure Centre bird is incubating whereas the Hillfort bird is simply resting as revealed by the cherry picker's ascent. Someone analysing drone photographs from height would be hard-put to identify which is a nest and which is not. It should be said that a good proportion of nests within all colonies are tricky to identify.

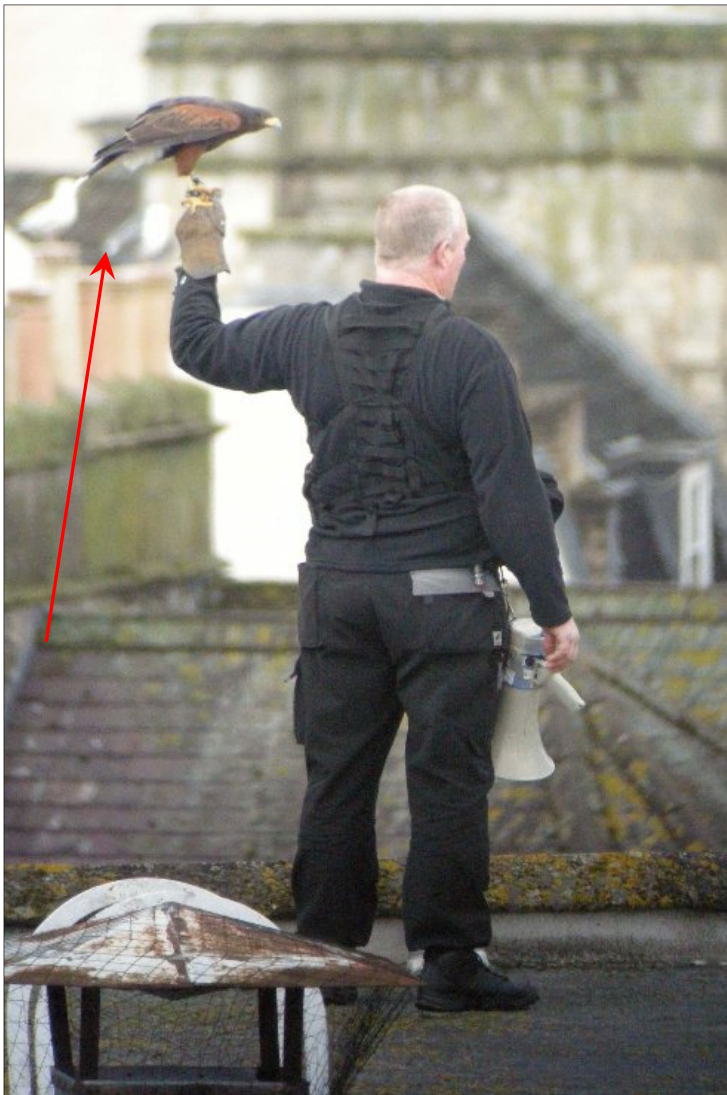
CONCLUSION

As stated above, Liskeard, with a population of 149 pairs of Herring Gulls and two pairs of Lesser Black-backed Gulls, is considered to be a small colony in national terms. It is unlikely that it will ever become a large colony (i.e. >1,000 pairs) because there are insufficient suitable roofs to support a population of this size. However, increases in each of the 7 sectors should be expected in the coming years.

Understanding what kind of increase could be expected is problematic due to a lack of confidence in the historical figures. The 2018 survey has provided a base-line. A repeat survey in a couple of years' time would provide a far more accurate projection than has so far been possible.

Deterrence, as shown, is possible, but difficult because of the gulls' longevity on the one hand and quality of installation and/or associated collateral issues on the other. For particularly troublesome nesters, homeowners are entitled to defend their roofs provided nothing they do proves to be cruel or illegal. They may also remove nests and eggs, but this will need to be done at the beginning of incubation: once chicks start pipping their way out of eggs they become fully protected by Law. For several days before that happens, though, chicks are communicating with parents from within the unbroken egg and it could be argued that this is the point at which Herring Gulls should be protected.

Falconry



I have saved this form of deterrence until last because it is ineffective – and expensive.

Yes, when a falconer releases his bird all of the gulls in the area will get up into the air amid a great deal of noise. It looks impressive. When confronted with an unknown bird of prey, the safest place for a gull is up high where it can look down on the threat and, if necessary, attack. In town, many birds of prey fly over (Buzzard, Sparrowhawk, Peregrine, Red Kite, etc.) every day and mostly without undue attention being paid to them by the gulls. This is very likely because the gulls are familiar with the local birds of prey. This falconer is flying a Harris' Hawk – an American bird and is, therefore, unfamiliar.

What is often overlooked (or deliberately not mentioned?) is that the gulls' urge to incubate is tenacious. Once they realise (usually quite quickly) that falconry birds pose no real threat, they will land again. Note the two gulls on chimney pots at about 20 metres away (arrowed)...

Falconry birds can be flown only for short periods before being rested and once the gulls have realised that the threat is minimal, further flights become largely redundant.

The usual pattern, as recommended by falconers, is to fly birds two or three times per week. Why? Nice, though, that this falconer looks the part, dressed as a SWAT team member with the added armament of a megaphone to play distress calls. Oh dear... And would a falconer fly his bird when nestlings are on rooftops? The answer is, invariably, no – it may be seriously damaged by the gulls at this time of year.

I take this opportunity of congratulating Liskeard Town Council and David Ambler and the seagull working group members in particular for preparing such a detailed draft report on the issue. Most of the recommendations are to be applauded.

- 1) Limit waste and litter.
- 2) Create a good education programme with local schools to limit litter and improve the understanding of local wildlife issues.
- 3) Provide information to residents about suitable rubbish management.
- 4) Contact any land fill tip owners to reduce gull food sources.
- 5) Install notices reminding people to 'feed the bins, not the gulls'.
- 6) Provide bins for recycling and, which prevent gulls accessing the contents.
- 7) Encourage residents to have vermin proof bins.
- 8) Identify cost effective solution to reduce gull population, this may include nest clearance, egg oiling, false eggs and raptors.
- 9) Record gull numbers on a local map and reporting sheet so the scale of the problem can be analysed.

The question prompted by item 8 is: how necessary is it to reduce the gull population?

There are several points to consider:

Expense – pest control is not cheap and whilst there is no requirement for local authorities to undertake such measures, residents often feel that local authorities should. Some local authorities have done or do provide free or chargeable services.

Misinformation – the 'seagull' issue is a contentious one and it is, therefore, to be expected that mis- and disinformation will abound. With regard to pest control, this is a sensitive area because it concerns employment. Some practitioners know something about the large gulls, but many know very little. Additionally, there are those with strong opinions about what should be done, regardless of the facts...

Public Perception – as one council environmental officer stated, "we can't just do nothing, we have to do something". Assuaging public perception by 'doing something' has been a driver in several local authorities.

Biodiversity Action Plan – Herring Gull, since its removal from the WCA pest species list was placed on the BAP list in 2010 (<http://jncc.defra.gov.uk/page-5163>) as a consequence of declines cited above. These declines, however, relate to rural populations. In urban colonies, there is very little information (apart from my work) on the status of Herring Gull. What is clear (P.Rock unpubl.data), is that in several studied colonies Herring Gulls are, in fact, increasing in numbers. It appears that RSPB regards towns as refugia for Herring Gulls.

Alternatively, the residents of Liskeard could be informed and, perhaps, encouraged to learn to live with their gulls. The list, above, drawn up by the Seagull Working Group makes it clear that education is key.



Feeding the gulls? It happens everywhere and not just in UK. This picture is from Trieste and these are Yellow-legged Gulls which breed on rooftops in the city. One thing remains constant, though, and it is that this is someone's granny... Prosecute? It might induce repercussions...

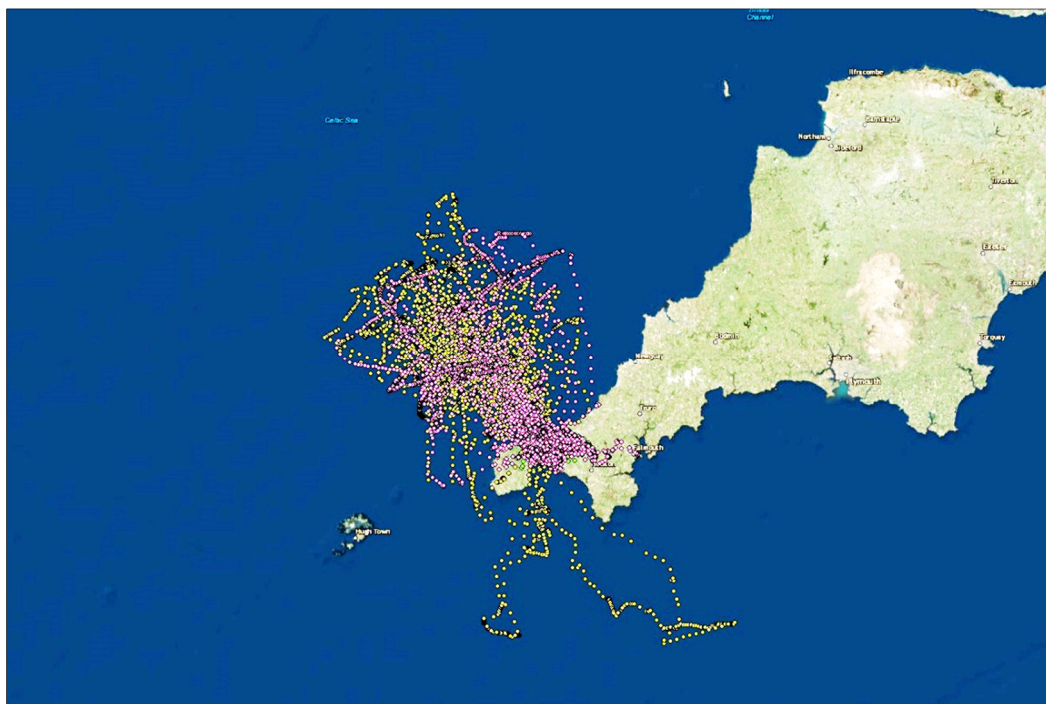
The fact is that this kind of feeding cannot make any difference to the population, but is often denounced by others, including neighbours (see Appendix 2)

The St Ives BID runs an annual campaign to educate visitors about Herring Gulls (<http://stivesbid.co.uk/portfolio/dont-be-gull-ible/>) on how to avoid having their food snatched. All good, save for the old chestnut about gulls spreading disease. Food snatching is very common in St Ives, but does it occur at all in Liskeard?



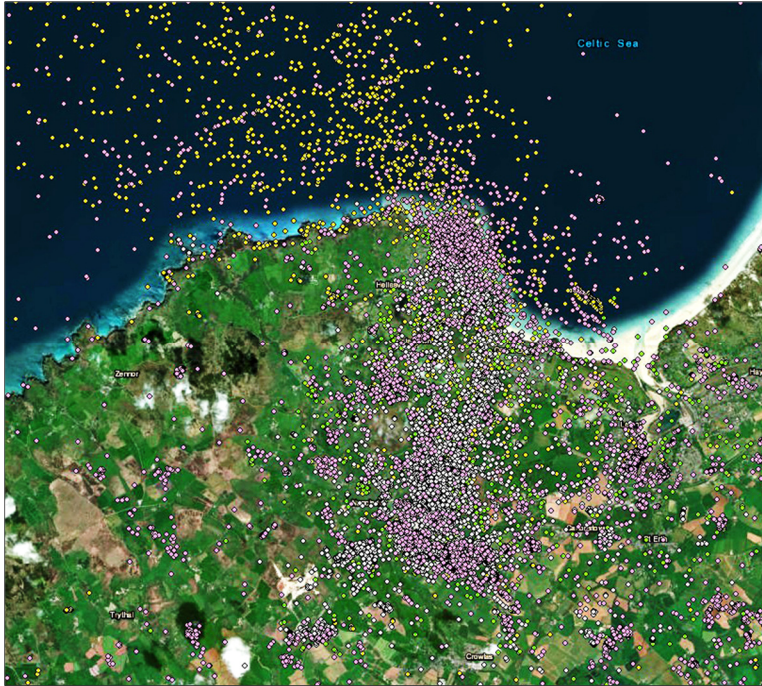
More radical is this mural from South Bristol celebrating the area's rooftop neighbours!

APPENDIX 1.



St Ives Herring Gulls. In 2014 four Herring Gulls were tracked for the whole breeding season using GPS units supplied by the University of Amsterdam (Rock et al 2016).

The tracks of all four (these are GPS fixes at 5-minute intervals) revealed that two of the birds regularly went to sea, but that the other two never went to sea.



Closing in, it is clear that all of the birds were taking advantage of agricultural practices in the hinterland (5-minute fixes)



And, right, 5-second fixes show three of the Herring Gulls following ploughed furrows – an expected destination. Other activities were concentrated on as feeding opportunities presented themselves. Interestingly, whilst each of the birds spent considerable time at their nests, they spent very little time at street level, suggesting that the streets of St Ives were relatively food-free. It is likely that the streets of Liskeard might be similarly food-free...

APPENDIX 2.

In Bristol in 2016 and 2017 a total of 11 Lesser Black-backed Gulls were fitted with the same type of GPS tags. They are accurate to less than 1 metre. The GPS tag can be easily seen between the wings of the bird on the right.

A part of suburban Bristol is shown below. There are several green spaces, but the majority of area is made up of housing with back gardens. The exact same picture is repeated below overlain with the GPS fixes of two birds.





By zooming in further, clusters of GPS fixes can be seen on particular houses and gardens where gulls are finding food. This does not, necessarily, mean that occupants are deliberately feeding the gulls, but for the sake of propriety these clusters are not shown. It must be assumed, therefore, that wherever urban gulls breed, suburban gardens will be investigated by both species.



In Bristol, the Bristol University Lesser Black-backed Gulls have very frequently been tracked foraging over suburbia in many parts of the city to a point where discussion has arisen about whether or not these birds are suburban gulls rather than urban gulls!

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