

Duncan Kenny

December 2018

TIDE, Torbay, Devon, UK

Version 1.4

## **Grey seals: Reducing negative human impact factors in coastal areas affected by tourism**

### **Executive Summary**

Grey seals are a globally rare species, our most reliably sighted marine mammal and protected by UK law. This report provides analysis concerning the negative human impact factors on Grey seals, how to reduce risks to seal welfare and the relevance to four coastal locations in Torbay, South Devon.

The research draws attention to the risks impacting on Grey seal welfare rising from human activity around Torbay. The risk of harm to both marine mammals and humans will rise as human activity around the coastline increases. It would be prudent to address the issue now with an applied management strategy to minimize the associated risks and promote responsible coastal living to both residents and visitors. Torbay's natural coastal environment is of great importance and hosts numerous designated Conservation Areas, Sites of Special Scientific Interest and a Marine Conservation Zone. Results of observations identify four negative cumulative human impact factors that require consideration: disturbances, hand-feeding, entanglements and direct human-seal contact. Suitable monitoring and management at the four coastal locations can reduce both the negative impact on seal welfare and the risk of harm to humans. The report further identifies initial start-up funding for the project has been secured.

Recommendations discussed include:

- a sustainable field-based project to reduce risks to Grey seal and human welfare at four Torbay coastal locations,
- improvements in community engagement and participation in local conservation activity,
- provision of training and educational opportunities for volunteer community members.

### **Introduction**

Grey seals are:

- a) A globally rare iconic tourist attraction
- b) Our most reliably sighted marine wildlife attraction.
- c) A top predator essential to maintain healthy thriving ecosystem balance
- d) A sentinel species alerting us to changes in the marine environment likely to affect us
- e) A positive stimulus on social health and wellbeing improvements as residents and visitors alike enjoy seeing 'their' seals

Domestic seaside tourism causes pressures on coastal ecosystems by the excessive influx of visitors. Marine life is highly susceptible to human impact factors, even small amounts of human interference have a huge impact on marine life (Lee, et al 2010). There is a growing awareness within conservation groups in Torbay, Devon, regarding land and marine based anthropogenic presence affecting wild Grey seals. The number of occurrences involving activities such as hand-feeding of wild seals, entanglements in angling detritus and disturbances in this locality are on the increase, based on author's observations at Hopes Nose, Torquay 2016-2018. Grey seals are a mobile species. It has been observed that at certain locations the Grey seals that stay all year round in the Torbay regions have shown behaviors pertaining to habituation to human presence.

It has been observed that negative human impact factors are primarily focused around four specific locations in the Torbay area. It is the intention of this document to discuss methods in which to mitigate these activities and maintain a sustainable community support system for the welfare of Grey seals at these sites.

The four most vulnerable locations potentially affecting seal welfare (disturbance, hand-feeding, direct human-seal contact, entanglement) are:

1. Babbacombe Pier, Torquay (figure 1, figure 2)
2. Hopes Nose, Torquay (figure 3)
3. Brixham Breakwater
4. Churston Cove, Brixham

Grey seals at the four Torbay vulnerable sites are exposed to continuous anthropogenic presence throughout the year. Visitors are able to access the sites without restriction. Activity is increased during the peak tourism season (May-Sept). English Riviera Destination Management Plan 2016-2021, states English Riviera attracted 4.6m visitor trips in 2015, spending £436m in the resort with a plan for a 12% increase in UK visitors with an 8% increase in spend.

**Subject species: Grey Seal (*Halichoerus grypus*)**

Mammal - suborder Pinnipedia

North Atlantic Grey seals are regularly observed in Torbay and for this we are very fortunate. The Sea Mammal Research Unit reports on the status of Grey seals in the UK. Their 2017 Special Committee on Seals (SCOS) report modelled the average estimate of the total UK Grey seal population at 141K (SCOS 2017), around the same number of Grey seals as Red squirrels (161K) in the UK (Mammal Society 2018). Grey seals are an important aspect of Torbay's biodiversity because:

- They are a globally rare species
- The UK coastline is home to 34% of the entire world's population of Grey seals based on pup production (SCOS 2017)
- Grey seals are our most reliably sighted marine mammal
- Unlike all other mobile marine megafauna species, seals appear in predictable locations at predictable times, so they underpin the marine tourism economy (CSGRT 2016)

### **Seals and UK law**

As a protected marine mammal, seals are listed in the Bern Convention (1979) of protected fauna species (Annex III), enacted through the Conservation of Habitats and Species Regulations 2017, the International Union for the Conservation of Nature (IUCN) Red List of species, and the EU Habitats Directive (Annex II and V species), which aims to conserve wild flora and fauna and their natural habitats. Special Areas of Conservation (for example the Isles of Scilly and Lundy in the southwest) have been set up to protect seals under this legislation which has been incorporated into UK law. In the UK seals are additionally protected by the Conservation of Seals Act. Where seals are listed in Special Sites of Scientific Interest (SSSI) citations it is a criminal offence to damage, destroy or disturb them above the mean low water mark.

### **Location: Torbay, South Devon, UK**

Torbay presents a 22 mile stretch of coastline spanning the towns of Torquay, Paignton and Brixham, located around an east-facing natural harbour on the English Channel. A popular tourist destination with a tight conurbation of resort towns, Torbay's sandy beaches, mild

climate, recreational and leisure attractions have given rise to the name of the English Riviera. Brixham is the largest fishing port in Southern England. Tourism related sectors account for around a third of employment. In 2007, Torbay was endorsed by UNESCO as a Global Geopark in recognition of its rich geological, historical and cultural heritage. Torbay also hosts 24 designated conservation areas, six SSSI's and a marine conservation zone (UKMCZ0019). Torbay's natural environment is of great importance for its own sake, but also of considerable value as a tourist attraction (Torbay Council 2016).

### **TIDE**

TIDE is a community led organisation set up to assist in the maintenance of safer communities in social and natural environments. Its aim is to help protect Torbay's coastal habitats and encourage environmental educational activity for the community. At the heart of all TIDE projects there is an ecological/community need. TIDE works with residents, local business, groups, clubs, schools and the Local Authority to find the best solutions to ecological community challenges.

### **Discussion**

Entanglement and hand-feeding of Grey seals in Torbay has been observed predominantly in areas frequented by visiting anglers and seasonal tourists. Anglers at these locations regularly target migratory North-East Atlantic mackerel with multiple hook, rod and line techniques (feathering). Grey seals will frequent these areas often remaining for long periods within 2-10 metres from the angler, awaiting the next opportunity for a feed as the angler's reel in the fish. Predation by seals on angling line-caught fish could be reduced by implementing codes of conduct at specific locations. As seals wait close to the rocky shoreline visitors are

captivated, thus numbers of humans in close proximity to the seals grows exponentially. This increases the risk of humans being injured and falling off harbour structures and the risk of the seal associating humans with a food source (not something local fishers welcome).

Hand-feeding is known to alter natural behaviour patterns of wild marine mammals, interferes with their ability to hunt but also puts the animals at increased risk of injury by conditioning them to approach people and vessels for food. Marine mammals are wild animals that normally feed on benthic live fish that they hunt and catch on their own. In the North Sea they eat more tonnes of sandeels than any other single species and on the East Coast and South West Wales they eat more Dragonets. Feeding wild marine mammals can cause them to lose their natural wariness of humans or boats and condition them to beg for handouts instead of foraging for their normal prey. They can become sick if they eat food that is spoiled or food that is not part of their normal diet, or they can get injured if they are too close to boats (NOAA [n.d.]) <https://www.cornwallsealgroup.co.uk/2017/09/where-is-box-desk/>. In Torbay, Grey seals regularly take bait and catch from angling gear, risking injury or death by entanglement in or ingestion of the gear. There is also a risk of humans being bitten by a seal that misjudges the distance between its mouth and the fish held in a human hand – accidents can happen. This can also potentially disrupt their usual pecking order leading to increased aggression between seals not being fed in the right order or whilst being teased to rise further out of the water to take the fish or for a selfie.

Vulnerable sites could benefit from a management strategy to promote sustainably reduced anthropogenic impact. Continued escalation of the problem is probable in the absence of managed action. Despite the volume and increase in human-seal contact in the South West UK, there are few recorded cases of injury/harm to humans but numerous recorded cases of injury/harm to marine mammals. The risk of harm to both humans and marine mammals will rise

as human activity around the coastline increases. Any council, operator or person condoning or encouraging the feeding of wild seals opens themselves up to potential litigation should an accident happen. It would be prudent to address the issue now with an applied management strategy to minimize the associated risks and promote responsible coastal living to both residents and visitors. The Council seek to improve the net biodiversity and geodiversity value of Torbay, including increasing the number and proportion of Confirmed Wildlife Sites in 'positive management'. This could include enhancing the status of Proposed and Unconfirmed Wildlife Sites (Torbay Council 2016).

Observations at Hopes Nose, Torquay, illustrate that an increase in human activity (by anglers) leads to an increase of direct human-seal contact. This was observed during the implementation and delivery of the Hopes Nose Public Space Protection Order Antisocial Behavior Management Plan during 2016 and 2018 (a collaborative project between Torbay Council, Torbay Coast & Countryside Trust and TIDE). Observations were made that during low tide periods where there were low numbers of anglers at the site (1- 10), seals would use the shallows and rocks on the Eastern side to both haul-out over low tide and rest in the water (bottling) (figure 4). This was not observed whilst mid (11-20) or high (21-50) numbers of anglers were present on site. During the same tidal phase, when mid to high angler numbers were present, seals would remain alert and loiter nearby the anglers in search of an opportunity to benefit from the anglers catch. Seals observed having a lack of natural vigilance or alert behaviours directed towards humans may be due to habituation at this site. Like humans' seals need to rest. This is more effective on land where they routinely haul out over low tide cycles to rest, digest their food (in an oxygen rich environment) and replenish oxygen supplies in red blood cells for future dives.

Seals are quick learners and just one feed can develop habituated behaviour for life. In their minds, food becomes linked with people and boats. This reduces their natural fear of humans (CSGRT 2018) (figure 5). Not all human activity leads to negative impact. Positive impact factors can be realized through experiential learning when wildlife observations are considered and respectful to all associated parties. An upsurge in community awareness for promoting seal welfare has create increased opportunity for community volunteers, such as actively participation in conservation projects involving seal photo identification and site activity monitoring. Deeper public engagement through the use of photo identification informs local evidence-based conservation and wins hearts and minds through direct personal association of individual people with individual seals (Sayer 2018).

Careful development of wildlife tourism including educational seal-watching trips (possibly also participating in research projects), could help to sustain coastal economies without destroying their essential character. Nature-based tourism is currently a major growth industry (Wilson [n.d.]) although its impact needs to be monitored and regulated to minimize any negative impact on habitats and wildlife species.

“There are at least 117 seal watch organisations in the UK and Ireland. In 1996, the number of visitors watching seals in the UK and Ireland was estimated to be around 0.5 million and the total gross revenue of the industry was estimated at more than £36 million per annum. Employment created by the seal watch industry was extrapolated to be 193 full-time, 322 part-time/seasonal and 152 voluntary posts” (Young 1998).

Current figures are not available as to the known value of wildlife tourism in South Devon. Based on Youngs statistics above from 1996, the current national gross revenue of the industry will be significantly higher. The Torbay Development Agency states in its Marine Economy Action Plan: Final Report 2012, that Torbay has established a strong pleasure boat/cruises market, with operators providing fishing trips, wildlife watching and other boat excursions. In the same report The Torbay Development Agency's SWOT analysis identifies the following;

Strength: Strong marine tourism and a strong pleasure boat/cruises market

Weakness: No marine science educational infrastructure

Opportunity: Unique bio-diversity and marine environment

Threat: Marine Conservation Zones.

The paradox is that, most often, tourism will disturb and threaten local areas of wildlife and their habitats, which attracted them to the area in the first instance. (Ducrotoy 2018). Current management of the Donna Nook colony – Lincolnshire, restricts any direct human-seal contact, and the continual (seal) population growth at Donna Nook suggests that at present, there appear to be no adverse effects on individual fitness or on population growth (Bishop, et al 2015). With careful management the Torbay area could benefit from tourism whilst maintaining the welfare of the seal, and that with some sort of committee and regular monitoring any adverse effects could be identified and managed early.

Grey seals sleep on land and in the water. In the water they sleep at the surface and often assume a posture known as bottling - their entire bodies remain submerged with just their heads exposed. This enables them to breathe when necessary. On land they haul out. Hauling out is a

critical aspect of seal ethology. In Torbay seal haul-out sites are predominantly areas of the intertidal zone exposed during the low tide period. Torbay observes a tidal range of around 5 metres. One exception to this is the wave break platform at Brixham Breakwater which is accessible during all tidal phases. Surprisingly picky about their chosen haul-out, most (Grey seal) adults will choose only historically established sites, not even using apparently suitable adjacent habitat at busy times. This creates hot spots of seal activity along our shores (CSGRT 2018).

Torbay hosts a number of regular haul-out areas, one of which is an established and monitored seal pupping site. This pupping site is subject to regular wildlife tourism visits from a local commercial operator throughout the year (figure 6) including during the critical pupping season. This represents a potential and possibly recurring threat to the pup and mother if the operator gets too close so as to disturb or publicizes the tours resulting in increases numbers of visitors to the site. One missed feed is an issue, 1% of total body weight lost to the pup. Underweight pups will have a slow death after weaning. Across Torbay there has been an increase in the number of observed disturbance occurrences outside of pupping period, which involve wildlife tourism activity, domestic seaside tourism and domestic dogs under poor control (figure 7). It has been observed that seals are also experiencing disturbance whilst they are in the water and are therefore altering their behaviour as a result. This may have a detrimental effect in lifelong behavioural shifts due to reduced rest periods, affected feeding, breeding patterns and increased stress to general health and welfare in adult seals. Where individuals affected by senescence, the consequences of stress from anthropogenic factors will predictably increase.

Unlike specific seal sites in Cornwall which observe numbers exceeding 150 seals at a single location, Torbay's haul-out areas often consist three or four seals. These sites are vitally important as Torbay's coastline has limited areas suitable for consistently safe haul-outs. The

maximum number of Grey seals recorded at an individual Torbay haul-out site was at Brixham Breakwater where 24 Grey seals were observed on 30th December 2018 (Brixham Marina 2018). Similarly, 18 Grey seals were observed at the same location on 18th January 2018 (figure 8). This is uncommon but illustrative of a highly mobile migratory species. Further research is needed to confirm whether these are mating adults or juveniles. Seals are highly mobile and these are likely to be individuals stopping off as they are passing through. The majority of seals at all sites in Cornwall are migrants and the number of seals in all South Devon catalogues suggests this is the case with just a very small handful of semi resident seals who hang around for around 6 months or more of the year.

In normal circumstances, seals spend most of the time on haul-outs lying prone and moving only a small amount. If disturbed the more alert seals will raise their heads and look towards the source of disturbance. The distance at which seals show such signs of agitation varies tremendously, depending on their location, how they are approached, whether the animals are used to the presence of humans and the time of year; in particular, whether or not they have pups with them. The sensitivity of seals on haul-outs can be site specific – a relatively close approach may be tolerated at one site while at an adjacent site it might not be tolerated at all (Marine Scotland 2018).

In the South West UK, there has been an increase in awareness generated through effective management of seal conservation projects. The Cornwall Seal Group Research Trust (CSGRT) works across the region to develop sustainable practices that both protect wild seals and educate communities in conservation practices. The work of CSGRT enables members of coastal communities to embrace seal conservation and become active participants in research projects. The success of creating sustainable conservation projects resides within a network of

community volunteers and improved public awareness. This can lead to increased funding opportunities for conservation projects.

St Ives harbour, Cornwall has experienced success with this approach. The number of people swimming with seals in St Ives has risen over the past few years, according to harbour master Steve Bassett (BBC 2016). St Ives is a busy harbour affected by both domestic seaside tourism and commercial fishing activity. These numbers increased to a point where he felt he needed to put out the warning signs around the harbour to minimize risk of harm to both seals and humans (figure 9). CSGRT created a promotional video based around St Ives and Newquay harbours to support the project in reducing the direct contact between humans and seals and raise awareness of the need for effective conservation initiatives. Prior to the implementation of the project, both harbours observed increases in hand-feeding between humans and seals. This was largely due to increases in tourism related activity notably by commercial boat operators. The Council were concerned about potential litigation arising.

In 2018, there has been an abundance of social media posts promoting the act of hand-feeding seals in Torbay. There is a strong support for this as pockets of the community and visiting tourists seek these intimate wildlife encounters. These posts often appear on Facebook photography and videography and social interest pages such as 'Devon and Brixham Photos' and 'Fish Town Brixham' (figure 10). When promoted on social media the act of feeding seals increases in frequency risks becoming commonplace. Fortunately, a significant number of social media posts of this nature receive advice from proactive members of the community who are aware of the associated dangers of hand-feeding seals. This advice has been received with mixed responses, but has been supported by local organisations such as MDL Marinas who manage both Brixham and Torquay marina facilities which are key in reaching recreational boat users in these towns.

The topic of hand-feeding seals is a contentious one which reemerges with regularity with often emotive responses from both viewpoints. Regularly hand-feeding occurs to get close up views for people to the potential detriment of the seal. It is clear that feeding seals needs to reduce for the benefit of a sustainable relationship in areas observing high anthropogenic impact on seal welfare. Gill Bell, head of conservation at the Marine Conservation Society in Wales, said “Wild creatures should not be interfered with”. She continues; “You would not allow a child to approach a wild dog with food, so why allow them to approach a seal?” (BBC 2016)

Seals were initially attracted to harbour locations through fishers discarding fish scraps into the water whilst prepping their catch – something that is no longer allowed. Seals return to locations which provide a reliable food source. This is one of the reasons the four vulnerable sites in Torbay are regularly frequented by seals. Seals are intelligent creatures and once they learn of an easy food source, their habituation makes it is very difficult to allow them to revert back to their normal wild behaviours. This leads them into a lifetime of stressed, anxious behaviour loops, constantly rushing between numerous boats begging for yet another fish (CSGRT 2016). The variety of different foraging habitats used by individual seals may be an indication of individual specialization for particular prey or foraging techniques. Alternatively, the tendency to use one particular area repeatedly may be related to previous successful experience (Tollit, et al 1998).

The associated risks are twofold;

1. towards the seals through habituated feeding behaviors leading to increase opportunities for direct human-seal contact.
2. towards humans through risk of accidental injury from bite and/or a risk of exposure from a variety of pathogens with proven zoonotic potential.

Such pathogens include; Brucella, Salmonella species and papular lesions. If untreated, the lesions can develop into cellulitis, tenosynovitis and septic arthritis. In majority of cases, a course of specific antibiotics is required such as Tetracycline (BDMLR 2018). Information regarding the potential for zoonosis has been published in poster format by the British Divers Marine Life Rescue (BDMRL) and is available for download on their website.

One of the key factors in managing protection and conservation of wildlife in areas of high human activity is the management and observation of those activities. In some UK Coastal areas there are codes of conduct, bylaws, access restrictions and Public Space Protection Orders. In addition, there are limit catches with quotas and landowners limit the time (seasonal) fishers are allowed to fish. At these sites, negative human impact factors such as litter (land & marine), recreational boat activity, direct human-seal contact, multi hook angling and hand-feeding seals are present but reduced through site management. The real objective of a management plan in these areas is not really to reduce the opportunity for valuable wildlife observations and experiences but rather to ensure that activities by humans have a positive impact for the seals and are sustainable. This can be achieved through education, maintaining safe distances, reductions in potential habituation in feeding behaviours and reduction in direct human-seal contact.

Since 2004 CSGRT has been actively campaigning to raise awareness about these issues by providing leaflets with general information on seals in Cornwall and more specific ones about responsible seal-watching – both, including the ‘do not feed’ message. The Cornwall Marine and Coastal Code Group endorses and reinforces these messages. There are numerous areas around the UK that have successfully implemented codes of conduct (Scotland and Wales) and human behavioral restrictions at locations to protect seals.

In August 2018 the BBC reported on a disturbance of 1,000 seals at Forvie nature reserve in Aberdeenshire. The nature reserve is a protected area where signs warn people not to get too

close to the marine mammals. Wildlife Crime Officer PC Doug Darling said: "We continue to urge people to behave responsibly at protected sites and to take note of signage, particularly when they are walking their dogs. Any concerns should be reported to Marine Scotland in the first instance." The Ythan Seal Watch group described it as a "very serious disturbance" (BBC 2018).

In response to this issue the Seal Alliance was set up in 2018 with a Working Group on Disturbance, the Steering Group for which includes representatives from CSGRT, Ythan Estuary, St Marys in Tyne and Wear and N Wales.

An increase in human activity at any location will consequently lead to an increase in underwater ambient noise (auditory masking), which may act as a source of stress to marine mammals such as seals that use sound to communicate.

In 2017 and 2018 local charity Torbay Cleaner Coasts Initiative published a guidance leaflet focused on angling protocol at Hopes Nose, Torquay (figure 11). The leaflets offer angling tips to reduce loss of tackle and tips for fishing in areas frequented by Grey seals and were distributed directly to anglers on regular site visits and in all Torbay's angling shops. This leaflet is currently being adapted for use by Cornwall Marine & Coastal Code Group for distribution throughout Cornwall. It advises anglers to 'have a cuppa' when seals are around as with no angling the seals will soon lose interest and disappear enabling successful angling to recommence.

A Code of Conduct has been developed in a bid to protect special seal pupping sites along the Essex coast. The recovery of the seal population at this location follows two outbreaks of the phocine distemper virus which killed up to 50% of the UK's east coast harbour seals in 1988 and 2002 (with a further outbreak anticipated). The voluntary code of conduct has been devised by The Greater Thames Seal Working Group alongside the trust and the Zoological

Society of London (ZSL), and includes time limits on watching the seals, safe distances on land and water - and what to do if a seal is in trouble (BBC 2018). Within these sites observing codes of conduct, activities that could negatively impact the protected features, such as disturbance of seals by human activity, may be an offence (MMO 2016).

Historically local resistance to seal conservation has been a controversial issue in a number of regions around the UK and Ireland, such as the high-profile case regarding Seal Rescue Ireland in Dingle in 2012 as referred to in the article; *Bloodied heads of young seals nailed to entrance of sanctuary*. Irish Examiner 2012. Empirical evidence suggests Grey seals congregated around fishing operations in Brixham in an attempt to feed on the fish that are caught in the net, or the fish discards from fishing boats. When this occurs outside of a harbour environment and during operational trawl periods, seals may become trapped in the net and be caught as by-catch or become injured in fishing gear.

It is also possible that seals may be killed by ‘ghost nets,’ which are nets that have been lost whilst fishing. The fishing capacity of ghost net varies depending on net type. However, it has been shown that gill nets catch fish up to 70 days after deployment (Kaiser et al., 1996).

Torbay’s commercial fishing industry is largely reliant on vast numbers of fish sourced outside of the Torbay boundary such as the North Sea (Atlantic Ocean). This minimises potential controversy between commercial fishing operations and alleged fish stock levels in relation to a sustainable seal presence in Torbay. There are established successful commercial scallop and mussel beds within the Torbay boundary. Grey seals pose no threat to stock levels at these fishery sites.

### **Community support for sustained projects**

Resident community members currently support sustained projects reducing negative human impact factors effecting Grey seals in Torbay. Community interest in the area of applied research is increasing as more volunteers are offering time to learn and spend time on ecology based local projects as observed by the increases in Marine Mammal Medics training for BDMLR and identification training by CSGRT. This has resulted in the development of a highly motivated special interest group of volunteers collaborating on seal research in the area, although structured activity in South Devon in such projects is relatively small compared to similar projects in Cornwall.

As coastal human activities increase, so does the need to protect marine mammals, raise awareness and create conservation projects that engage the communities. In the absence of external funding, the sustainability of such projects is reliant on continued voluntary labour. This is successfully illustrated by charitable organisations such as the CSGRT, BDMLR and Essex Wildlife Trust. Sustainable conservation projects require subject specialists to design and implement initiatives which progressively introduce training and support for community member activity. When a sustained conservation project can maintain a suitable volunteer support system and standardized practice/assessment, then it has potential to contribute long term to meaningful science-based research.

The Looe Island Seal Photo Identification Project (LISPIP) is a collaborative project between Cornwall Wildlife Trust (CWT), CSGRT and Looe Voluntary Marine Conservation Area (VMCA) volunteers that began in 2008 and is still going. The project enables local residents to photo ID pinnipeds in their own area engaging local people in long term, systematic and sustainable research into Grey seals. One of the project's primary aims is to enable local people to become self-sufficient and proficient seal surveyors conducting long-term, systematic research into the seal population around Looe, Cornwall. The project has been successful and the

project continues and has been expanded into in new areas. It has been proven that local people can be motivated to engage in long term environmental research (Sayer et al 2010).

Residents and visitors to coastal communities could be educated about the importance of Grey seals, coastal habitats, the threats they face and what can be done to protect them. Messages could be conveyed through sustained projects, information boards, talks, local/national media, leaflets, local business, celebrity endorsements and social media. Awareness campaigns are key to getting the right message out to coastal communities. This could provide an effective opportunity to recruit and motivate considerably more potential volunteers. Torbay currently benefits from a small effective team of volunteers including BDMLR Marine Mammal Medics whom contribute to CSGRT projects and monitor the seals in the area.

Additional training for volunteers could be provided on rudimentary seal ethology, data collection (seal identification methodology), and animal welfare. The training could expand the network of volunteers with the enthusiasm and capability to act under the project management in promoting the initiative's values, support project delivery and educate visitors at the key vulnerable sites. This is a significant attribute; a self-supporting community-based initiative which not only protects a protected species but supports a sense of ownership in the preservation cherished areas. There is a sense of ownership that residents adopt with certain locations. This is, in part, due to a personal connection and a perceived intimate relationship between resident and location. This has been observed in community responses to coastal storm damage in Torbay during 2017. The impressive united community activity in assisting the repair of damage and removal of marine detritus as a result of Storm Aileen (September 2017) and Hurricane Ophelia (October 2017) exhibited the connection residents hold with these locations. 'Pass not unblest the genius of the place' (Byron 1825).

Torbay Council have pledged that the promotion and appropriate management of Torbay's special environmental qualities will be supported and will be a key element in promoting sustainable tourism and fostering pride in the area's unique environment (Torbay Council 2016). If conservation projects can utilize this personal connection to a location which promotes managed protection of both location and associated species/habitats, the potential for sustained success is increased. Equally without protection, vulnerable species under chronic pressure could disappear.

At all four named vulnerable areas listed above, there are community groups which actively contribute to conservation activity. These activities include, protection of habitats, beach clean groups, recreational and sporting marine activity, litter picking, photography, wildlife monitoring and walking. Two of the four sites are under the management of Torbay Coast & Countryside Trust (TCCT) and the remaining two sites are under the authority of Torbay Council (TC). Both TCCT & TC are currently active in collaborative conservation projects around the Torbay coastline.

### **Project concept: The Torbay Seal Project**

**Partnerships:** The Torbay Seal Project has gained both endorsement and a partnership agreement from the Cornwall Seal Group Research Trust and British Divers Marine Life Rescue.

**Aim:** To reduce negative human impact factors affecting Grey seals at key vulnerable sites in Torbay.

The negative impact factors acknowledged in this project are:

**Disturbance** – Human and human related behaviour that can directly affect the energetic and physical wellbeing of a seal. This can include disturbances by; domestic dogs under poor control, close proximity by humans to seals, frequent and close proximity of recreational and

commercial boat users to seals, excessive noise at haul-out sites and excessive human activity at haul-out sites.

**Direct human-seal contact** – Any direct contact by a human to a seal which is not authorized or part of rescue/assessment by authorized parties. This does not include incidental contact by the seal on the seal's terms but may play part in further monitoring of activity in this area.

**Hand-feeding** – This includes providing food for seals by all parties with the exception of authorized parties in a rescue/welfare scenario. Throwing of food and feeding directly by hand are both considered as 'hand-feeding'. Dangling lines with attached fish also constitutes 'hand-feeding'.

**Entanglement** – Any lost commercial and recreational fishing tackle, line, rope or net attached to a seal poses a considerable threat to the seals welfare and has been shown likely to reduce that seals survivorship (Allen et al 2012).

The four vulnerable Torbay sites acknowledged in this project are;

**Babbacombe Pier, Torquay** – The pier and the immediate surrounding area up to the entrance of the carpark on Beach Road. Focus on pier end (North) and pier steps (North West side)

**Hopes Nose, Torquay** - The quarry base and main angling area (facing North West).

**Brixham Breakwater** - The end of the Breakwater (facing North West) and the wave break platform viewing area on the outer boundary of the marina (West side).

**Churston Cove, Brixham.** Both Fishcombe and Churston beaches from Battery Gardens to the Northern headland leading to Churston quarries.

This project would utilize marine mammal specialists for the development a core project team in a voluntary capacity. The project would seek further endorsement from Torbay Council,

Torbay Coast & Countryside Trust and Torbay Harbour Authority and the Marine Management Organisation. All project activity and methodology will support BDMLR & CSGRT and partners through promotion of recognised protocols in monitoring, recording & reporting all aspects of animal welfare. By means of regular review and evaluation, the project would be holistically managed by the core team and supported by community-based volunteers. Training for community-based volunteers would be developed and provided by the core team.

The project will incorporate a number of proven initiative approaches including:

**Signage** – This would be produced and placed at key areas to discourage swimming with and the feeding of seals – this is intended to be positive and friendly with a simple message. Information boards are for further discussion and may be introduced at a later phase once the project is fully operational.

**Training** - Volunteer training to covering project objectives, public interactions (This training has already been pioneered in Cornwall by the Marine and Coastal Code Group) , survey strategies, health and safety, key technical information about seals and what to do in cases of disturbances and entanglements.

**Surveys** - Regular surveys at each site to discover the number of seals visiting the sites (land and sea), including information about each seal's age, gender and individual fur pattern. Where possible nutritional and health status will be submitted. Data collected by volunteers and the project team will be supplemented by the capture of data from members of the public. The project could provide a central resource for public submissions of seal data for Torbay. In addition, the surveyors will record numbers of people on site and human activity/behaviour as well as litter and marine detritus levels. The surveyors will be able to interact with people on site and discuss the project to raise awareness of its objectives. CSGRT are currently working with other conservation charities about a human activity and wildlife standardised systematic survey-

based project. Our Torbay project would welcome involvement to ensure data is comparable across the South West.

**Local business** - Businesses that are directly connected with four project sites will be approached to request engagement. This may involve information boards or leaflets at point of sale in a café or time donated by the business to support site visits and promote the project. This will be supported by inclusion in media and promotional editorials by the project team.

**Educational** - TIDE currently works with South Devon College in offering environmental volunteer opportunities to groups from the Duke of Edinburgh Scheme and disaffected student programmes. Schools will be approached by the project team to offer presentations and classroom activities relating to project objectives.

**Sharing of data/resources** – all seal identification and behavioural data will be offered to appropriate organisations for use in supporting initiatives and promote cross agency networking. CSGRT would be approached for the submission of seal identification data and Torbay Council, Torbay Coast & Countryside Trust will be approached for site usage and behavioural data. Torbay Cleaner Coasts Initiative will be approached for litter and marine detritus data.

It is the intention of the team to observe a structured approach to project management including the following phases:

#### Planning

Phase 1 Project scope schedule and budget, roles & responsibilities of team

Phase 2 Raise finances/obtain resources

Phase 3 Development of volunteer training package

Phase 3 Communication, marketing & implementation plan, review and evaluate

## Implementation

Phase 4 Stage 1 Community engagement & site management (including onsite presence of project team and signage)

Phase 5 Recruitment & training of volunteers

Phase 6 Stage 2 Community engagement & site management, volunteer deployment, ongoing review and evaluation.

## Funding

An initial project startup funding source has been established up to a value of £400 from community conservation group TIDE. The money was raised by sales of a 2019 calendar to promote the protection of Grey seals in Torbay (£250) and donations received to carry out conservation projects in Torbay (£150).

## Figures



Figure 1. High risk hand-feeding a Grey seal at Babbacombe Pier, Torquay (BBC June 2018).



Figure 2. Grey seal in close proximity to humans at Babbacombe Pier, Torquay (Author's image August 2018).



Figure 3. Hopes Nose Torquay (Author's image August 2018).

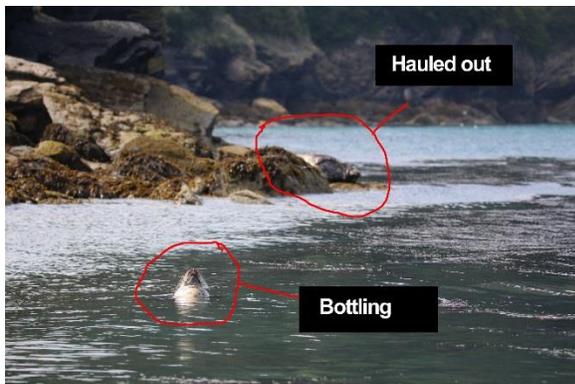


Figure 4. Grey seals resting at Hopes Nose, Torquay during low tide when low (1-10) numbers of anglers were observed (Author's image September 2018).



Figure 5. Habituated seal behavior at Hopes Nose, Torquay (Author's image July 2018).



Figure 6. Commercial 'Wildlife Tourism' operator approaching hauled-out seals at Maidencombe, Torquay (A. Shearer June 2018).



Figure 7. Domestic dog disturbance at Churston Cove, Brixham (S. Greenslade September 2018).



Figure 8. Brixham Breakwater. 10 out of the 18 seals observed at this location (Author's image January 2018).



Figure 9. St Ives, Cornwall (Author's image October 2018).

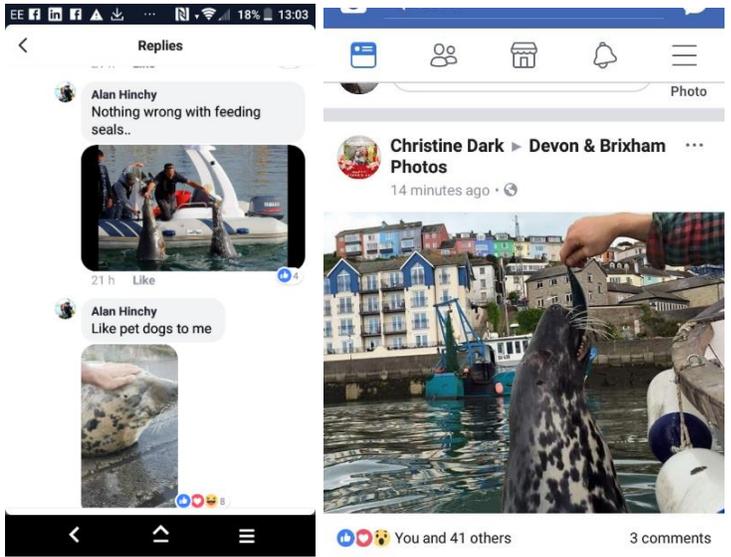


Figure 10. Screenshots of social media pages illustrating direct contact between humans and seals in Brixham, Devon (Facebook.com, Accessed 5 November 2018).



Figure 11. Guidance leaflet published by Torbay Cleaner Coasts Initiative. (Author's image June 2017).

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### **About the author**

Duncan Kenny holds BA (Hons) in Professional Communications, currently studying BA (Hons) Business Management (Leadership & Change Management).

Founding member - TIDE.

TIDE's aim is to promote and manage conservation, education and community development projects in South Devon. TIDE is currently running land management projects working with local councils, organisations, charities, schools and the police tackling challenges such as antisocial behaviour, youth engagement, environmental preservation of protected species and habitats.

Founding member - Torbay Cleaner Coast Initiative (TCCI)

TCCI was founded as a small charity to consolidate organisations and projects to manage environmental initiatives supporting environmental/ecological protection on the Torbay Coastline. Current member organisations include; Marine Management Organisation (MMO), Torbay Coast & Countryside Trust (TCCT), TIDE, British Divers Marine Life Rescue (BDMLR), Torbay Council, Torbay Harbour Authority, Marine Conservation Society (MCS), Fathoms Free, The Livings Coasts – Torquay's Zoo and Aquarium and Keep Britain Tidy.

Duncan is a Volunteer Marine Mammal Medic (Cetaceans and Pinnipeds) for British Divers Marine Life Rescue and has worked voluntarily in seal rehabilitation at RSPCA West Hatch Wildlife Rescue Centre and Seal Rescue Ireland. Duncan contributes to several conservation projects in South Devon, for protected species involving Grey seals and Peregrine falcons.

Duncan currently works voluntarily on numerous species-specific conservation projects and set up the Torbay Seal Project to focus on reducing threats to Grey seals in South Devon. Duncan believes that understanding the socio-economic factors influencing project work is key to delivering practical and effective solutions.