

Inspecting Zoos

A study of the official zoo inspection system in England from 2005 to 2011

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Commissioned by The Captive Animals' Protection Society

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EXECUTIVE SUMMARY

In the UK, zoological collections are regulated under the Zoo Licensing Act 1981 (ZLA), which was amended in January 2003 to incorporate the requirements of the EC Zoos Directive; setting up some new standards that moved the concept of zoos from merely entertainment parks to conservation, education and research institutions.

The Captive Animals' Protection Society (CAPS) has been concerned for quite some time about the efficacy of the zoo licensing system in the UK and, consequently, commissioned the Animal Protection Consultancy to carry out an independent study on the zoo inspection system in England based on zoo inspections reports. The study did not involve visits to any zoological collection, and, instead, information was sourced only from official documents provided by the local authorities and the Department of Environment, Food and Rural Affairs (DEFRA).

The main question to answer was whether or not the zoo inspection system in England works, and whether it can guarantee the protection of animals kept in zoos. In order to answer this question the performance of the key players of the system, as well as the system architecture, were studied both synchronically and diachronically and took into consideration a period of over six years, from the beginning of 2005 to the first quarter of 2011.

A sufficiently large random sample of zoological collections (75%, giving a standard error below 4% and a level of confidence above 95%), was drawn from DEFRA's official list of zoos in England. Using the Freedom of Information Act 2000, each local authority responsible for licensing one or more the selected collections was contacted and licensing and inspection information for the relevant collection(s) was requested for the six years period.

The results show that the performance of each of the key players in the zoo inspection system (local authorities, DEFRA/Animal Health/Zoos Forum, inspectors, and zoos) is disappointing:

The majority of the local authorities have missed inspections of the zoos under their jurisdiction, local authority inspectors show worse performance than the DEFRA inspectors in most areas and zoos operated by local authorities show poorer standards than those that are privately owned (despite the councils' role in enforcing the system). Direction orders designed to ensure zoos reach recognised standards are hardly ever used, sub-standard zoos are not closed down and apparent offenders are not prosecuted under the Zoo Licensing Act 1981, despite there being significant opportunity, and indeed obligation, to do so.

DEFRA/Animal Health granted the wrong dispensation status to almost half of the zoological collections, causing a situation where the minority of zoos have a full licence, and more of a third of the animals kept in zoos in England are already under-inspected by design from the

start; they also allowed the zoo industry to excessively influence the system through the *Zoos Forum* and the Zoos Inspectorate in what in essence approximates a state of self-regulation.

When writing zoo inspection reports the majority of inspectors failed to address identified unsatisfactory issues in their recommendations or additional licence conditions, showed inconsistencies in their inspection reports, and made apparent errors of judgement” in most of them. At the same time about a quarter of the inspectors failed to recommend refusing a licence in the cases where they themselves had recognised that the existing licence conditions had not been met.

The majority of the zoological collections can be classed as sub-standard regarding recognised standards of modern zoo practice. Inspectors found persistent failure to meet the conditions set out by the EC Zoos Directive on animal welfare matters in the majority of inspections with recurrence of such issues over subsequent years. More than a third of the inspections reported breaches of licence conditions set out by the EC Zoos Directive on Conservation, Education and Research matters.

This weak performance is not the product of a “bedding in period” whereby zoos are gradually adapting to the new concept of “modern zoo”, and it is improving its performance slowly. On the contrary, the current state is worse than the average situation since 2005, and we see a continuous increase over time of frequency of breaches of mandatory licence conditions derived from the EC Zoos Directive. Currently, 90% of inspection reports show unsatisfactory issues not added as additional licence conditions compared with 68% for the whole six years; 95% of the inspectors currently make errors of judgement when writing reports compared with 61% for the six years; 73% of the current zoos are considered sub-standard compared with 54% for the six years; 89% of current inspection reports show breaches of the licence conditions defined by the EC Zoos Directive compared with 64% for the six years.

Regarding the design of the zoo inspection system, we identified 26 issues of concern, which range from the legislation that frames the system to the cost of implementing it, as well as policy and interpretation of the executives and the practicalities and applications of the executors. The combination of all of these factors taking effect over the 30 years since the ZLA was implemented can easily explain why the percentage of poor performance we have found now often passes the 90% threshold.

The most striking example of intrinsic failure is the inspectors’ culture of “YES, but” answers during inspections. An inspection design that does not allow to answer questions accurately with a simple YES or a NO, is bound to produce many “YES, but” and “NO, but” answers. The original ZLA broadly stated that “all zoos should be licensed”; the EC Zoos Directive broadly states: “bad zoos should be closed, and only good zoos should be licensed”. Inspectors are placed in the middle of this mismatched design, so their way out is their “YES, but” answers. “Is this zoo good enough to avoid closure?” ... “YES, but”. Over the years the “YES, but” answer has become so routine that does not arouse any reaction to licensing officials or DEFRA. It has become the culture of zoo inspectors, which has the effect of inhibiting any enforcement action on the part of the authorities. The end result is a high percentage of sub-standard collections, which is the opposite result of a zoo inspection system that works.

The UK zoo inspection system is not only flawed from an “approach” point of view, but also on a more fundamental level. Under this system it is impossible to effectively assess conditions for each animal, and the system does not favour the differentiation between standards of care for different species or groups of animals. It treats the animals in the zoo as “collections” and although, according to the letter of the law, the system should consider all individual animals, in practice it does not.

It is not surprising that we find so many inconsistencies and errors of judgement in inspectors’ reports, because, in fact, the system asks them to do the impossible given the sheer number of animals that inspectors are charged with assessing in such a short period of time. In fact, our data shows that for only 10% of the zoos in England would an inspection team have time to give sufficient attention to all the animals in the allocated time for inspection in order to effectively assess their health. This clashing between the inspectors’ capabilities and what the system asks them to do may be what drives its supervisors to minimise inspections. Not only is it that case that little seems to be done to prevent the high percentage of missed inspections, but the local authorities and DEFRA are granting more and more dispensations to collections that do not meet the criteria to warrant them; effectively reducing the number of inspections and the number of inspectors for those zoos. The system therefore operates under a culture of exceptions (84% of zoos have dispensations) rather than norms (only 16 % of zoos have full licences), which would not be the case had DEFRA correctly applied its own criteria for granting dispensations.

A failing inspection system has serious consequences on the welfare of animals kept in zoos. Currently, 86% of the inspections show failure to comply with the EC Zoos Directive animal welfare conditions that should be attached in all licences. Inspectors cannot possibly inspect all of the animals in big zoos and, on average they spend less than a minute assessing each animal that is seen. This makes the system meaningless for those animals that are not inspected. Some of the animals may be completely forgotten if they are not easily identifiable, or if they belong to collections for which the system allows diminished inspection. Some of the animal welfare issues that may be caused by captivity cannot be properly assessed within the short timeframe given over for inspections to be carried out (usually a maximum of two working days but usually less) –or with any number of inspections for that matter– particularly considering that zoo operators would always have the option of covering up poor practice, as inspections are announced well in advance.

One of the most important consequences of this situation is that it has created unlawfulness. Currently, 89% of the inspections show that EC Zoos Directive conditions have been breached, which could invalidate the zoo licences they are attached to, and could mean that the zoos are operating illegally if they remain open to the public. From 2005 to today, the UK Government has been failing to enforce the EC Zoos Directive properly – at least in England – by allowing the majority of zoological collections to breach licence conditions that were defined by the Directive to prevent sub-standard zoo practice. It can thus be concluded that animals are not sufficiently protected in zoos in England. The UK zoo licensing system allows zoos not to be licensed, or be under-inspected, because their size and types of animals they keep, allows zoos to keep animals in an unsatisfactory manner for a considerable time without any effective enforcement action against zoo operators, and it does not close down sub-standard zoos.

The zoo licensing system in England does not work and, in its present form, is both unreliable and unworkable; therefore rendering the effective guarantee of protection of all animals held in zoos impossible

1. INTRODUCTION

In the UK zoological collections are regulated by the Zoo Licensing Act 1981 (ZLA) as amended (see Appendix B), which states that all zoological collections should be licensed by the responsible local authority, and should follow some rules and standards. The most important aspects of this regulation is the existence of a zoo inspection system which is the basis for the granting of licences and provided the legal framework for sanctions and possible prosecutions of those zoo operators not complying with the conditions attached to them, and the existence of the Secretary of State's Standards of Modern Zoo Practice, which help inspectors to identify what are sub-standard practices (see Appendix A and C).

In January 2003 the ZLA was amended to fulfil the requirements of the EC Zoos Directive which, in 1999, set out new standards that moved the concept of zoos from merely entertainment parks to conservation, education and research institutions. Each EU country had to adapt their own legislation to meet the Directive, but since the ZLA already covered some of the points it demanded, a simple amendment seemed sufficient at the time (see Appendix B).

The Captive Animals' Protection Society (CAPS) has been concerned for quite some time about the efficacy of the zoo licensing system in the UK, and in particular the ability of the its inspection system to protect animals held in zoos. Now that sufficient years have passed since the last amendments to the legislation concerning zoos were applied – to allow both the zoos and the authorities to adjust to them – CAPS decided to address these concerns by commissioning some independent research on this issue. Consequently it commissioned to the Animal Protection Consultancy (APC) to carry out a study on the Zoo Inspection System in England based on the zoo inspections reports already in CAPS' possession, or which otherwise could be requested from each local authority using the provisions of the Freedom of Information Act 2000. The study is limited to zoos in England as this is the only UK country for which there exists an official list of licensed zoos, produced by DEFRA, from which the random sample was drawn.

The study did not involve visits to any zoological collection, and, instead, information was sourced only from official documents provided by the local authorities and the Department of Environment, Food and Rural Affairs (DEFRA). In some instances, supplementary information of clarification of information was obtained from the collection's websites. Therefore, the term "inspection" in this study does not refer to any visit made investigators commissioned by an animal protection organisation, but only to recognised inspections carried out by official inspectors authorised to inspect zoos by Local Authorities or DEFRA. Contrary to other studies on similar subjects (Greenwood et al., 2001, ADAS, 2011) this study does not include information from questionnaires filled by the stakeholders of the zoo inspection system since we believe this does not give an accurate picture of whether the system works, but rather a misleading picture of how it is perceived to be working from a position of poor perspective. The main question to answer in this study was whether or not the zoo inspection system in England works, and whether it can guarantee the protection of animals kept in zoos. In order to answer this question the performance of the key players of the system, as well as the system architecture, were studied both synchronically and

diachronically with regard to a period of over six years, from the beginning of 2005 to the first quarter of 2011.

This report shows the methods, results, discussion and conclusions¹ of this study. The actual names of the zoological collections randomly selected for the study have been substituted by codes to preserve their identity in case that any proceedings are to be taken against them, but they remain at the disposal to the relevant authorities upon request.

¹ The discussions and conclusions of this report do not necessarily reflect the views and opinions of CAPS, but only of the report's author.

2. METHODS

There are a number of recognised and professionally acceptable methods of data collection to evaluate the performance of a regulatory system on a particular activity. Some of the best-known methods are by questionnaire, interview, focus group, observation, documentation search, and many varieties or combinations of each (Greenwood et al., 2003). Such a wide choice recognises that different methods are appropriate for different situations (Patton 1986), and a pragmatic approach allows for the integration of a variety of methods in a single evaluation study (Clarke 1999). In this study we used “documentation search” as the main method of data collection.

Official information on zoo inspections was obtained from the relevant authorities, and then analysed it in detail in order to assess efficiency, poor practice, irregularities, and inconsistencies. The objective was to treat the individual information of particular zoos or authorities as a source to inform on the system as a whole, and therefore some sort of representative sampling was needed, from which information was to be recorded in a standard form, and simple statistical calculations were to be performed to arrive to representative conclusions.

Due to the fact that there is an official list of zoological collections in England kept and updated by DEFRA, we considered that this would be the population from which we would draw our sample. Knowing the population size in advance, an appropriate sample size was determined, and the selection was made randomly. Local authorities in charge of licensing the randomly selected zoological collections were approached with a request for specific information on zoo inspections for said collections for the period of the last six years. Once the information was obtained it was recorded in a *Microsoft Excel* file in a standard form looking for several variables that had been defined during the design phase of the study. If selected collections happened to be closed down or the local authorities failed to provide us any information for them, provisions for substituting such collections were in place in order to prevent reducing the initially designed sample size. Once all the information from the local authorities had been appropriately recorded across the designed variables, general statistical calculations were made, for the whole sample of zoological collections, or for several sub-sets such as types of collections according to their dispensation status, year of inspection, type of ownership (private or local authority), etc. When appropriate, statistical test were performed, or more detailed calculations were made in an attempt to prove hypothesis that the discussion of the data would suggest. Once general trends had been identified, specific examples were sought among the information collected to illustrate them, and explanations were explored.

The sampling of Zoological collections

CAPS obtained the latest updated list of zoological collections in England from DEFRA in February 2011. This contained 280 zoological collections classified by type of collection, dispensation status, and local authority in charge of licensing them. Because this classification was already set in the list, and the dispensation status has a bearing on the type of zoo inspection regime the collection will undergo (14.1.a dispensations minimise the

number of inspections while other dispensations reduce the number of inspectors) it was decided that it would be more informative to deal with the collections with different types of dispensations separately. In order to do this and, at the same time, to be able to make calculations with all the collections together when appropriate, the method of **proportionate stratified sampling**² was used, in which the same proportional random sample was obtained from each dispensation status sub-group (or “strata”). Since the strata were mutually exclusive with every element in the population already assigned to only one stratum, and the strata were also collectively exhaustive with no population element excluded, this method could be applied. Since random sampling was applied within each stratum this improved the representativeness of the sample by reducing sampling error (which can produce a weighted mean that has less variability than the arithmetic mean of a simple random sample of the population).

Since we chose proportionate instead of non-proportionate stratified sampling, the sample size of each stratum was proportionate to the population size of the stratum. This means that each stratum had the same sampling fraction. Proportionate stratification provides equal or better precision than a simple random sample of the same size, and gains in precision accrue to all survey measures.³ It was decided that the sample fraction would be 75%, above the minimum sample size to obtain significant results with a level of confidence of 95% and a margin of error of 5%. In a population size of 280, such sample would be of 211 zoological collections.

Since the DEFRA list of 280 zoological collections only showed 3 zoos with 14.1.b dispensations, all of these were selected since only two would represent less than 75% of their stratum. Therefore, four strata regarding dispensation were chosen (“no dispensation”, “14.1.a dispensation”, “14.1.b dispensation”, and “14.2 dispensation”), and the same proportional random sample of 75% of the collections per stratum was chosen in each, except for 14.1.b which had to be 100%.

The random selection was made ordering the collections within each stratum in alphabetical order, assigning an ordinal number to each collection, and then using the random number function of the *Microsoft Excel* worksheet to generate numbers between 1 and the respective stratum size, as many times as the value of 75% of each stratum size. When the *Microsoft Excel* function showed the number of a collection already selected during the process, the next consecutive collection not yet selected within the same stratum was selected instead (starting at the beginning of the stratum list if this process reached the end of the stratum list). This method produced truly random samples in each stratum of the appropriate size for a proportionate stratified sampling.

Once we had selected all of the collections we started to request information from the local authorities on them. However, in doing so it transpired that DEFRA’s list was not completely up-to-date, since, according the local authorities, 6 of the selected collections appeared to be now closed. These were *North Cornwall Aviaries*, *Leonardslee Lakes and Gardens*, *Lloyd Park Aviary*, *Hesketh Park Aviaries*, *Thorpe Park Farm* and *Isle of Wight Coastal Information Centre* (one of these had a 14.2 dispensation and the remaining five had 14.1.a dispensations). Therefore, the population size was down to 274 collections, and the sample

² http://en.wikipedia.org/wiki/Stratified_sampling

³ <http://stattrek.com/lesson6/str.aspx>

size to maintain the same sample fraction would therefore be 207 collections. Four of the closed collections that had been randomly selected were therefore not substituted by new selections, since their loss did not affect the sample fraction due to the fact that they also reduced their respective stratum size, but the last two of the initially selected 14.1.a collections had to be de-selected to accommodate the new strata size. Table 1 shows the actual designed and actual sample size for each stratum:

TABLE 1: Designed and actual sample size per stratum used in this study

Zoos per dispensation status	Initial Population size	Designed sample	Actual Population size	Actual sample	Sample fraction
Zoos with full licences	44	33	44	33	75.00%
Zoos with 14.1.a dispensations	63	47	58	44	75.85%
Zoos with 14.1.b dispensations	3	3	3	3	100.00%
Zoos with 14.2 dispensations	170	128	169	127	75.15%
TOTALS	280	211	274	207	75.55%

The actual sample size chosen would give results with a **level of confidence of 95% and a margin of error of 3.37%**

For consistency with the source list, the stratum for 14.1.b dispensation was considered in the design as a separated stratum but due to its small size the data of the three collections were merged with the 14.1.a stratum, in effect creating a merged stratum called “14.1 dispensations”. These three collections contributed very little data to the study because not many inspections occurred in them, so there would not be significant differences in the results had they been kept separated in different strata.

Appendix G shows the list of 207 zoological collections randomly selected for this study. The collections names have been replaced by unique alphanumeric codes (four to six characters long). The table also shows the types of collection as marked in DEFRA's list (which does not define each category), the dispensation status (which creates the four strata), and the licensing authority of each collection. In total, the selection of collections has involved zoos from 135 different local authorities, which represent 87% of the local authorities in England that have recognised zoological collections within their jurisdiction. Although the list of selected local authorities has not been drawn at random (the authorities with more collections had a higher probability to appear in our selection), the fact they represent such a high percentage of the populations of authorities with zoos will allow us to draw some conclusions relative to local authorities.

Figure 1, Figure 2, and Figure 3 show the profile of the sample of zoological collections studied per type of collection and dispensation status, which closely matches the profile of the population as can be seen in the chapter about types of zoological collections in Appendix A:

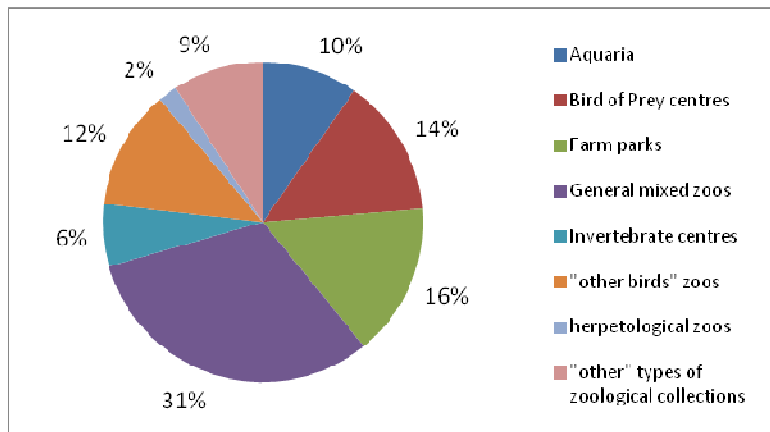


FIGURE 1: Relative frequency of types of zoological collections studied.

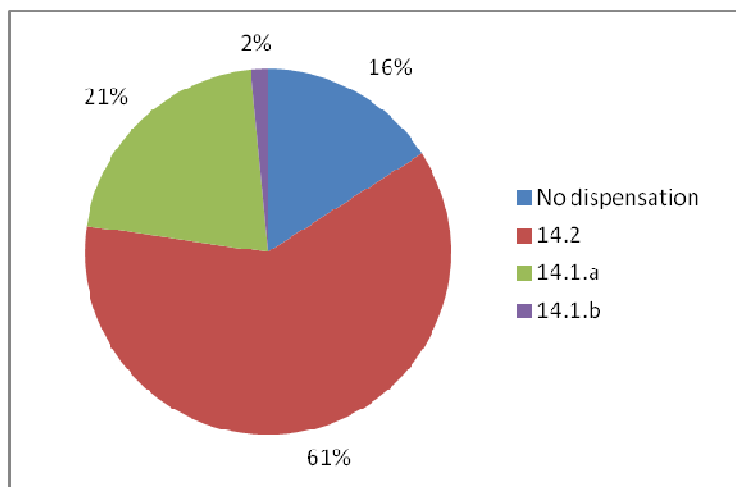


FIGURE 2: Relative frequency of dispensation status in the zoological collections studied.

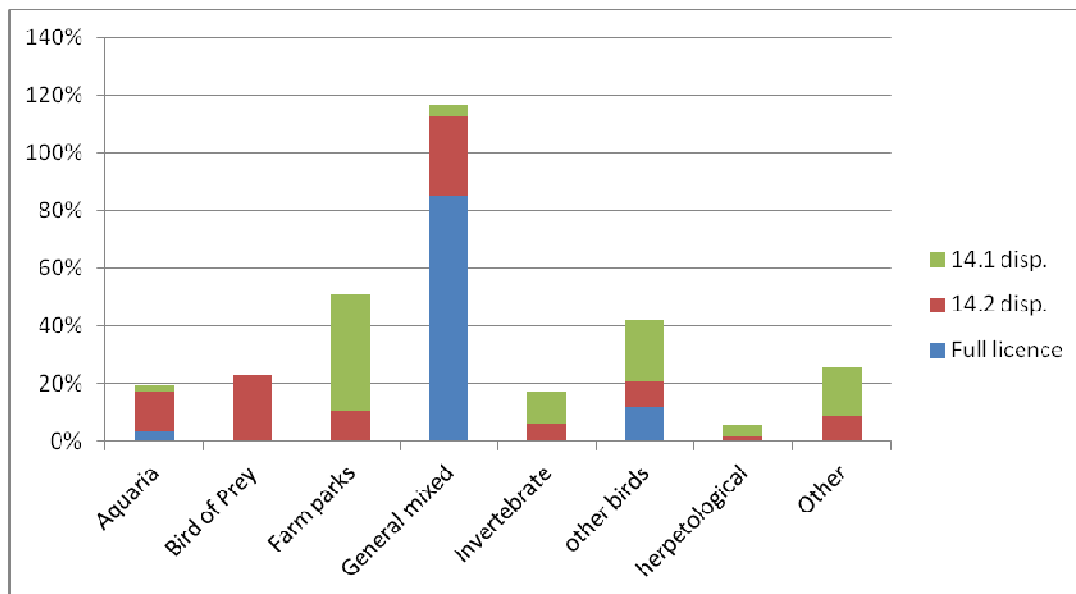


FIGURE 3: Relative frequency of dispensation status in zoological collections studied per type of zoo.

Freedom of Information requests

In March 2011 each local authority that had within its jurisdiction, one (or more) of the random selection of zoological collections was contacted via email by a member of staff of CAPS to request information about the specific zoological collection(s) using a *Freedom of Information* (Fol) request (Freedom of Information Act 2000⁴). According to section 10 of the Act each local authority must produce the information promptly and in any event not later than the twentieth working day following the date of receipt of the request.

The information requested for each collection was:

1. Copies of all reports relating to zoo inspections (including Informal and Special Inspections) carried out under the Zoo Licensing Act since January 2005.
2. A copy of the zoo's current stocklist.
3. Copies of any correspondence between the zoo and the council since January 2005.
4. A copy of the current zoo's licence, plus its attached conditions.
5. For the cases with collections with any dispensation, a copy of the inspection carried out under the Zoo Licensing Act which originally led to a dispensation being granted to the zoo under section 14 (if this inspection took place prior to January 2005).

By requesting this, we would expect to have, for each collection, at least six inspection reports (since there should be at least one inspection a year), a stocklist (or a similar account of the species held and the number of specimens) dated 2010 or 2011, correspondence of arrangements for inspections (since most inspection are not unannounced the date must be agreed by the zoo operators in advance), a zoo licence (with conditions dated) dated not earlier than March 2005, and a pre-2005 inspection report if the collection was given a dispensation prior 2005.

If the local authority replied requesting clarification of any detail of the request, further explanation was provided until the Fol officer at the council understood it fully. For instance, on some occasions the local authority replied that the collection was not a zoo because it had a 14.1.a dispensation, and therefore there was no information to send. In such cases CAPS staff explained that the collection was in DEFRA's list of zoos, and having a dispensation did not mean that it was not a zoological collection, which usually prompted the officer to release the available information.

When the local authorities sent the information requested (either by email or by post), they often redacted parts that they considered should not be provided in order to protect the privacy of individuals involved (normally, private addresses of the zoo operator, but very often the actual names of the zoo inspectors). This did not affect the investigation.

More often than not the local authority sent only part of the information requested at the first instance. In such cases CAPS' staff kept insisting and explaining what was missing until the Council send the outstanding information or confirmed that they did not hold it. In the cases when the local authority simply stated they did not have a particular inspection they should have (i.e., they stated they did not have any inspection reports for a particular year), CAPS'

⁴ <http://www.legislation.gov.uk/ukpga/2000/36/contents>

staff replied asking for a clarification about whether the inspection did not take place or whether it did take place but the reports were no longer in the possession of the Council. If they replied the latter, then the date, type of inspection and the name of the inspector who undertook it was requested from them, which either led the Council to admit that, having checked again, the inspection had not occurred, or to produce this information (which sometimes also involved finding documents that they initially informed us that they did not hold).

When CAPS' staff had all of the necessary information, it was sent to the researcher (the author of this report) to be checked for completeness. This involved reading the correspondence between the zoo and the collection to see if there was any mention of an inspection report of which had not been sent by the Council, or otherwise any information that suggested that the information was incomplete (for instance, missing pages in the report forms). The researcher also tried to piece together, with the available information, the inspection history of the zoo, to see if there was any reasonable explanation for any information missing (such as the fact the zoo had been opened recently, or that an inspection had to be cancelled or postponed). If something was found to be missing or some clarification or confirmation from the council was needed, the researcher informed CAPS' staff, who went back to the council to request the relevant clarification or information. In general, statements from council's FoI officers were not taken at face value and evidence was requested to confirm such statements. . For or instance, if the council claimed that a zoo did not hold any animal that would made them require a particular type of dispensation and quick glance to the zoological collection's website contradicted such statement. In essence, this "insistence" was designed to be able to minimise cases of "overlooked" or "displaced" information and to deduce an absence of an event (such as an inspection) if no documental information could be found about it after a thorough search. This "insistence" lasted until 17/09/2011, so if there was still any outstanding information that was needed from the local authorities at that point, it was considered that they would not send it to us.

In a couple of cases the FoI officer replied that he/she would not send any of the requested information they actually held claiming an exemption under a specific section of the FoI Act, but after insisting and asking to talk to his/her supervisor the information was eventually released. Just in a few cases the local authority refused to send the correspondence requested, or asked for payment stating that it would require an extraordinary amount of work to produce. In such cases, if the inspection history could be deduced without the need of the correspondence, it was not requested again.

This phase of the study turned out to be far more time consuming and complex than initially designed. What it was supposed to be a 1.5 months of work (considering the legal obligation of the local authorities to produce all the information within 20 working days) lasted more than six months. Local authorities only sent the requested information within the legal deadline for 39% of the selected collections. 93 local authorities (69% of those indirectly selected in our study) sent us information up to a month or more late (and 38% up to two months or more late).

We also made two *Freedom of Information* requests to AHVLA to assess the level of transparency on zoo matters. The first one was asking for the list of AHVLA nominated zoo inspectors, and the second about the list of zoological collections that had been closed down

by the authorities or their licences had been refused. This second request was worded in the following two questions:

1. *The lists of zoological collections in England whose zoo licence was refused under section 4 of the Zoo Licensing Act 1981 (as amended), for the years 2005, 2006, 2007, 2008, 2009, and 2010?*
2. *The lists of zoological collections in England which received a zoo closure direction under section 16 of the Zoo Licensing Act 1981 (as amended), for the years 2005, 2006, 2007, 2008, 2009, and 2010?*

Once AHVLA replied without providing the information requested, the following question was added:

Are any of these following scenarios correct?

1. *LAs never communicate refusals or close orders to DEFRA*
2. *LAs do communicate them but DEFRA does not keep track so annual values are not calculated and recorded*
3. *LAs do communicate them to DEFRA and this or any other department produces reports that indicate how many annually take place, even if not actual list are compiled*

Processing of information

The information sent by the local authorities came in several forms. Most of it came in the form of documents (electronic files attached to an email or printed documents sent by post), while some of it came in the body of the emails from the Council's Fol officers. In total, we received 2105 documents (an average of 10.17 documents per zoological collection), which included 1499 pieces of correspondence (an average of 7.24 per zoo), which could be in letter or email form, and 738 inspection reports, 64% of which were in electronic form.

From the 738 inspections reports we received, 10% were in "note" form, 15% in "letter" form, 20% in "report" form and 54% in an actual "form" (85% of which in DEFRA's ZOO2 forms, 6% in DEFRA's ZOO3 forms, 3% in DEFRA's old forms, and 3% in any other forms). The earliest inspection report received was dated 10/01/2005, and the latest 14/04/2011.

Table 2 shows the distribution of inspection reports received per type of zoological collection:

TABLE 2: Frequency of inspection reports received from the local authorities per type of zoo

# of reports of Aquaria	76	10%
# of reports of Bird of Prey Centres	117	16%
# of reports of Farm Parks	75	10%
# of reports of General Mixed Zoos	326	44%
# of reports of Invertebrate Centres	26	4%
# of reports of "other birds" zoological collections	64	9%
# of reports of Herpetological collections	7	1%
# of reports of "other" types of zoological collections	47	6%

Table 3 shows the distribution of inspection reports received per type of dispensation status:

TABLE 3: Frequency of inspection reports received from the local authorities per dispensation status.

# of reports of zoos without dispensation	182	25%
# of reports of zoos with any dispensation	556	75%
# of reports of zoos with 14.2 dispensations	526	71%
# of reports of zoos with 14.1 dispensations	30	4%
# of reports of zoos with 14.1.a disp.	24	3%
# of reports of zoos with 14.1.b disp.	6	1%

The average number of inspection reports received per zoo was 3 (STD=1.899), with a maximum of 11. As expected, the majority of these reports were “informal” reports, which should have accounted for two thirds of the inspections. However, as Table 4 indicates, they felt short of this expected percentage:

TABLE 4: Frequency of inspection reports received from the local authorities per type of inspections.

# of "first/fresh" inspection reports	28	3%
# of "renewal" inspection reports	151	21%
# of "periodical" inspection reports	137	19%
# of "informal" inspection reports	349	47%
# of "special" inspection reports	73	10%

Regarding the years of inspections we received information from, we should have received at least one inspection per year per zoo (so, around 200 reports per year). However, Figure 4 shows that this is not the case (the year 2011 should not be considered here since it only represents its first quarter), already suggesting that fewer inspections than needed were undertaken, and that somehow there was a change since 2008 in the inspection regime:

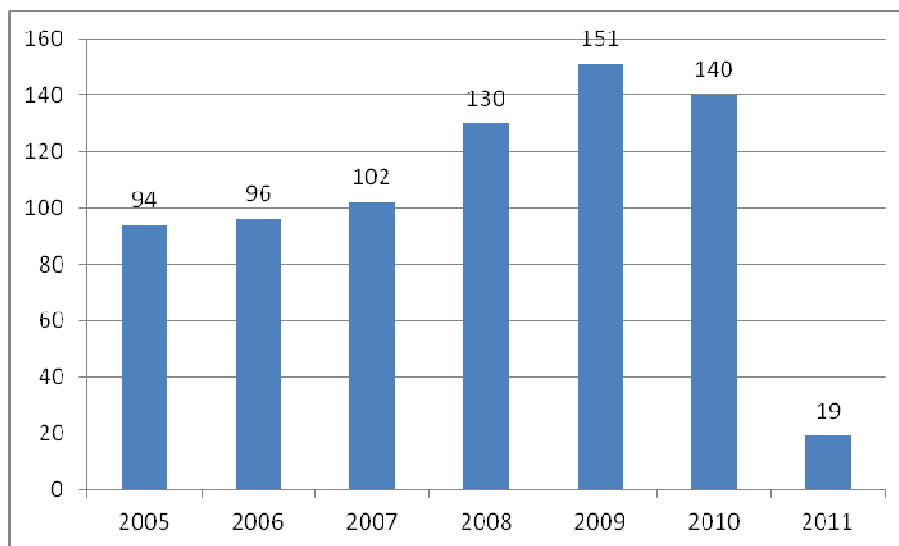


FIGURE 4: Frequency of inspection reports received from the local authorities per year of completion.

The information contained in the reports and any other document received was processed by recording it in two *Microsoft Excel* databases, the first one containing information on zoological collections, and the second on inspection reports. The “zoos database” contained 35 variables that were recorded upon revising the documentation received from the councils on each zoo. These included date of receipt of the information, number of inspection reports, year of the stocklist, numbers of specimens on the stocklist, date of each item of correspondence, year of issue of the current licence, number of inspections missed, types of inspections missed, number of inspection reports not completed, date the zoo received a dispensation, ownership by licensing authority, zoos having received a wrong dispensation, etc. The “reports database” contained 75 variables that had to be filled in upon reading each report. These included type of inspection, number of inspectors, number of items ticked as “NO” in forms, number of comments that contradicted items ticked as “YES” in forms, number of conditions recommended by inspectors, number of recommendations made by inspectors, numbers of “negative” issues identified by inspectors relating to conservation or animal welfare matters, number of recurrent issues from previous inspections, number of licence conditions breached, type of inspection conclusions, etc.

Recording data from inspections in ZOO2 or ZOO3 forms was relatively easily since the structure of the form allowed for easy identification of the variables. However, when the inspector reports were in the form of notes, letters or written reports (not following any specific format) it became more difficult since everything had to be read carefully and then it had to be decided how a standard inspection form would have been filled with the information of that report. For instance, if a written report stated that no post mortem were made after animal deaths, it would be considered as if question 3.16 of the ZOO2 form (“Are post mortem examination arrangements satisfactory?”) had been ticked “NO”. Some written reports or letters did not pose much of a difficulty since they were clearly written in a language and style akin to the inspection forms or they directly referred to issues that had been flagged up in previous reports written in such forms. However, in other cases, the reports were more ambiguous, which would prompt the researcher to check in the correspondence between the zoo and the council (or in other reports on the same collection) for further information that would help to identify properly the value of each variable that had to be recorded for such reports. After this process, most variables could be entered successfully in the database regardless the type of inspection report, while in some cases some variables could only be entered when the reports were in standard DEFRA forms.

The last type of data processing performed while entering the information in the database involved an assessment of the standards of the collections based on several of the variables already entered (see below), or a more general overview of all the information obtained from each collection.

Calculations and grouping of data

Once the data from the available documentation of all selected zoological collections had already been entered in the databases, some further process was made to facilitate the “synchronic” analysis. The databases were filtered and divided in different strata according to the dispensation status of the collections, so separate calculations could be made in each stratum. The “reports database” was also divided between formal inspections with DEFRA inspectors (first licence inspections, fresh licence inspections, renewal inspections, and periodical inspections), inspections performed by local authority inspectors only (informal

inspections and special inspections), and current formal inspections, to aid the discussions and to see if there would be any significant difference between them. The “zoo database” was also divided in zoos belonging to the local authorities and the rest. All this grouping of data allowed for the testing of hypotheses that arose when analysing the data and provided more informative conclusions.

Another type of data grouping allowed for “diachronic” analysis. In addition to using data from separate years, it was also divided in four periods of time (2005-2006, 2007-2008, 2009-2010, and 2011) to be able to detect any difference or trends over the years.

In both synchronic and diachronic analysis statistics were calculated from the recorded data. Frequencies, averages, percentages and similar descriptive statistics were calculated for those variables that could be quantified in this way, while more elaborate calculations were sought in specific cases (such as using numbers of specimens inspected per inspector, number of issues assessed per inspector, etc.). If the testing conditions were met, appropriate parametrical or non-parametrical statistical tests were used to attempt to find statistical significance in some of the results.

Some more complex data was calculated by the creation of scoring systems that used several variables together. For instance, the standards of modern zoo practice of zoological collections were assessed by scoring zoos on a scale from +3 to -3. The criteria used for such scoring was based on four variables which are explained below.

All the calculations made for the whole six-year period were repeated again, this time only using the last formal inspection available for each collection, effectively creating a “snapshot” of the current situation. A dedicated chapter on these results was created.

To illustrate better the effect that the different sources of information have had on this study, most results shown have been expressed in tables with the three strata results place against three data sources: all the inspections, only formal inspections, and only current formal inspections. It was hoped that this would help the reader to judge the strength of each conclusion with more certainty.

Evaluating dispensation status

The specific criteria to grant a dispensation has been set up by DEFRA and was published in its 2003 Government circular⁵ and posterior updates. It can be summarised in Figure 5, showing the decision flowchart:

⁵ DEFRA (2003). Circular 02/2003. Zoo Licensing Act 1981 (as amended by the Zoo Licensing Act 1981(Amendment)(England and Wales) Regulations 2002)(“the 2002 Regulations”). Department of Environment, Food and Rural Affairs. London

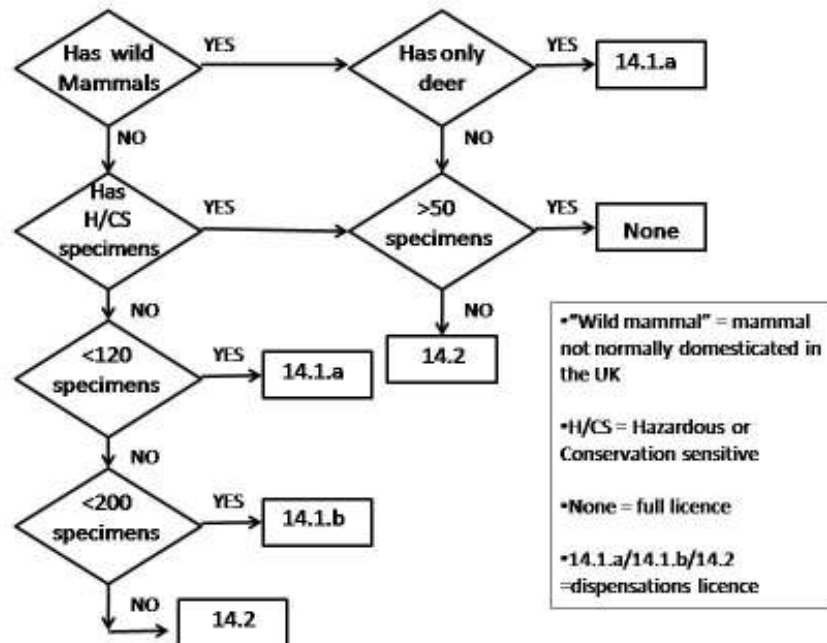


FIGURE 5: Flowchart to allocate a dispensation status to a zoological collection in England.

The key variable to assess is the presence of hazardous and conservation sensitive species (both well defined in the two lists DEFRA/AH uses), and count their numbers. This can be done with the information present in the stocklists, and since we know the animals kept in 198 of the collections either because we have the stocklists (193 cases), we could deduce it with information from the collections' websites or correspondence (four cases), or we could assess it considering the stocklist of similar collections when belonging to a chain of zoos (one case), we can easily assess the dispensation status that each collection studied should have. Although DEFRA states that each case will be dealt with on its merits, considering the criteria set up by DEFRA (the only one the local authorities have as reference) and the dispensation status the collection has (which can be seen in DEFRA's list of zoological collections), we can count how many collections have been granted the wrong dispensation.

Assessing Zoos' standards of modern zoo practice⁶

We created a scoring method to evaluate the performance of the zoo regarding standards of modern zoo practice. From each inspection report we rated the zoo considering several variables together, and then we calculated averages of such scores for the period of time studied. When making final conclusions about the collection as a whole, we used the average of all inspections since 2005 (which would show the average standard of the collections during this period).

⁶ It should be noted that this assessment was carried out in order to gauge the level of compliance with the standards laid out in the relevant legislation and guidance only. As such, a score of "Excellent" might indicate exemplary compliance with the provisions of the ZLA, but this study does not seek to offer a view on the efficacy or relevance of the legislation or guidance itself.

In order to be as fair as possible with all collections, we devised a method to express a degree of standardisation, so we have the scaled categories of “general standards” of Table 5:

TABLE 5: Scoring system to assess the standard of modern zoo practice of zoological collections.

Zoo		Up to standard			Sub-standard		
Standards	Unknown	Excellent	Good	Minimum	Poor	Bad	Very Bad
Score	0	3	2	1	-1	-2	-3

The numbers under the categories were used as substitute of the names when we calculated averages per collection or per period of time. Since the categories are on a scale with equal categories in the positive and negative side, the resulting averages will be meaningful.

When making general comparisons between positive and negative categories, we considered “Up to standard” the collections having Excellent, Good or Minimal standards, while “sub-standard” the collections having Poor, Bad or Very Bad standards. Numerically, these two categories correspond to positive and negative scores respectively. Therefore, the “middle” point between negative and positive (value “0”) belongs to the positive side (“minimum standards”). However, when scoring a particular inspection report alone for future calculation of averages, we considered that we should only quantify it as showing that the collections was above or below standards, so in this case we did not include the category “minimal” for considering it “just standard” (but continued to add a value of +2 to the first positive category and only -1 to the first negative, to ensure fairness). However, this “minimal” 0 score category could appear when the averages of the scores of the inspections were calculated, and those below and above the standards would cancel each other out.

In cases where we did not have enough information to judge (mainly for lack of inspection reports) we classed the standards of the collection as “unknown” (which would score “0” in the averages and therefore would not affect the general judgement).

The criteria to qualify/score each inspection report within these categories follows:

Excellent standards (value +3)

- **No** unsatisfactory issues identified from standard issues assessed

Good standards (value +2)

- **Between 1 and 5 unsatisfactory issues** identified from standard issues assessed, AND...
- Not failing to pass conservation requirements, AND...
- No recognised breaches of licence conditions identified, AND...
- No more than 1 long term unresolved issue identified

If there is no information about unresolved long term issues (for lack of inspections), and there are not recognised breaches of licence conditions and no failure of conservation requirements, less long term unresolved issues can be used instead in the following manner:

No more than 2 medium term unresolved issues identified qualifies the collection as having “good standards” and 3 or more as “poor standards”

If there is no information on medium term unresolved issues either, then more than 3 unresolved short term issues identified qualifies the collection as having “poor standards”, while 3 or less as having “good standards”.

If there is no information on short term unresolved issues either, then 3 or less unsatisfactory issues identified from standard issues assessed qualifies the collection as having “good standards”, while 4 or 5 unsatisfactory issues qualifies them as “unknown”.

Poor standards (value -1)

- Less than 13 unsatisfactory issues identified from standard issues assessed, AND...

- **Between 1 and 2 recognised licence conditions breaches** identified

OR

- Less than 13 unsatisfactory issues identified from standard issues assessed, AND...

- No recognised breaches of licence conditions identified, AND...

- **Failing to pass conservation requirements** (unless holding a 14.1.a dispensation)

OR

- **Between 6 and 12 unsatisfactory issues** identified from standard issues assessed, AND...

- Not failing to pass conservation requirements, AND...

- No recognised breaches of licence conditions identified

OR

- **Between 1 and 5 unsatisfactory issues** identified from standard issues assessed, AND...

- Not failing to pass conservation requirements, AND...

- No recognised breaches of licence conditions identified, AND...

- **More than 1 long term** unresolved issues identified

If there is no information about unresolved long term issues (for lack of inspections), and there are not recognised breaches of licence conditions and no failure of conservation requirements, less long term unresolved issues can be used instead in the following manner:

More than 2 medium term unresolved issues identified qualifies the collection as having “poor standards” and 2 or less as “good standards”

If there is no information on medium term unresolved issues either, then more than 3 unresolved short term issues identified qualifies the collection as having “poor standards”, while 3 or less as having “good standards”.

If there is no information on short term unresolved issues either, then 3 or less unsatisfactory issues identified from standard issues assessed qualifies the collection as having “good standards”, from 4 to 8 unsatisfactory issues qualifies them as “unknown”, and between 10 and 12 unsatisfactory issues qualifies them as having “poor standards”

Bad standards (value -2)

- **Between 13 and 30 unsatisfactory issues** identified from standard issues assessed, AND...
- No more than 6 recognised breaches of licence conditions identified

OR

- Less than 31 unsatisfactory issues identified from standard issues assessed, AND...
- **Between 2 and 6 recognised breaches** of licence conditions identified

Very bad standards (value -3)

- **More than 30 unsatisfactory issues** identified from standard issues assessed

OR

- **More than 6 recognised breaches** of licence conditions identified

In these definitions we meant by short term issue if it was also flagged up in the previous inspection, medium term issue if it was flagged up in the inspection second to last, and long term issue if it was flagged up in the inspection third to last or earlier (which basically means in most cases an unsatisfactory issue that has lasted a year, two years or three or more unresolved, respectively). In all the cases where “False YES” type of answers could have been given in the reports, we included them in the assessment, and so considering the “real NO” cases for each issue (see chapter about inspectors’ inconsistencies).

As the definitions show, when scoring each inspection we did not give equal value to all the variables. We considered recognised breaches of licence conditions the most serious “low scoring” variable, since in effect any uncorrected breach could mean an offence under the ZLA. We cannot consider any zoological collections to be up to standard if it is engaged, by action or omission, in practices that amount to prosecutable offences. This variable was followed by not passing the conservation requirements, which even if it did not involve a specific breach of licence condition for those local authorities that failed to add all mandatory conditions to the zoo’s licence, it nevertheless means a breach of section 1A of the ZLA which incorporates the conditions set out by the EC Zoo Directive. This variable was followed by the occurrence of unsatisfactory issues (and the more of these found, the lower the standard score). This variable was finally followed by the long-term recurrence of unsatisfactory issues, which generally indicates lack of compliance. This “hierarchical” relationship between the variables used can be more easily seen in the following decision

flowchart, Figure 6, to be used to score a particular zoo, based on the above definitions⁷:

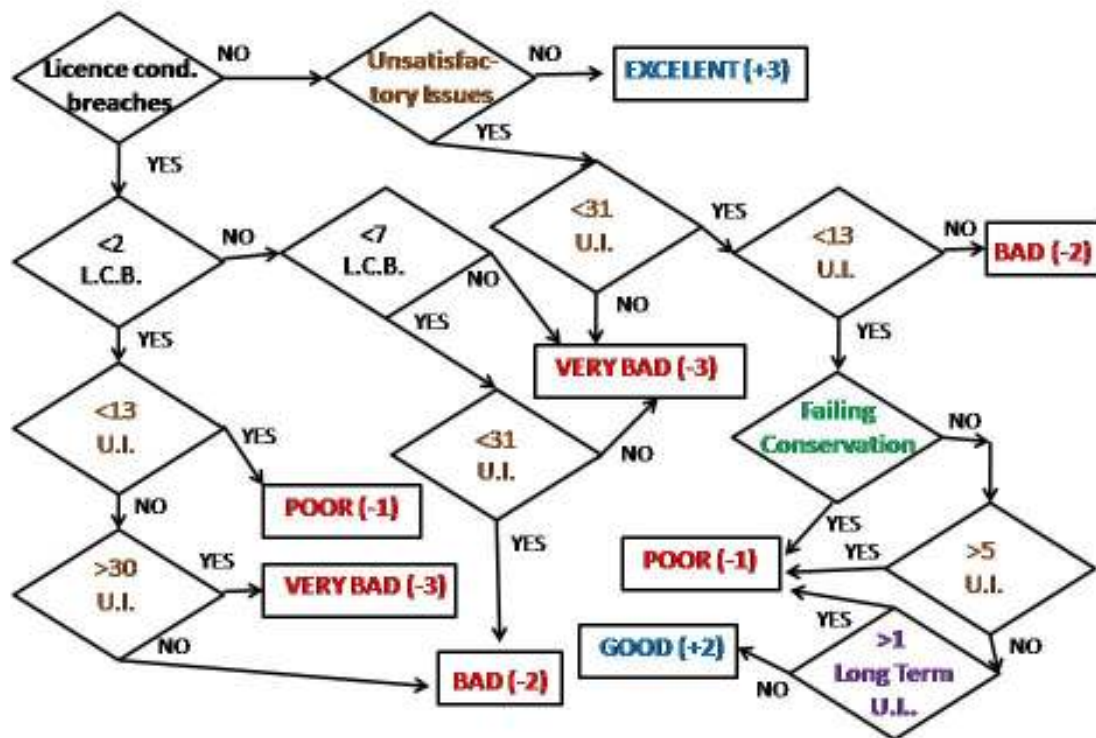


FIGURE 6: Flowchart to assign a score of standards of modern zoo practice to a zoological collection.

As can be seen in the definitions and the flowchart, we did not use a particularly draconian method in our classification, and we believe that we were fair because we were relatively generous in our scoring on the side of the zoo operators. We allowed zoos that had up to five unsatisfactory issues found in the inspections still to be considered having good standards, and the fact that one of these may be long term would not necessarily deprive them of such categorisation. Also, despite the fact that one single breach of licence conditions could mean that the zoo is breaking the law, we did not automatically classify those that break one or two conditions as having “bad standards”, since we created the category of “poor standards” for such cases if the zoo did not score too badly on other variables (even disregarding the actual gravity of the specific condition breached). Our method also gives a slight advantage to the new zoos that started since 2005 since their first inspection would not show recognised breaches of licence conditions (and the possibility of long term recurrent issues is reduced too) increasing the chance of having higher scores (which would increase the overall average score for the collection). We very much doubt that anyone would object of labelling as having “very poor standards” any collections with an average of more than 6 recognised breaches of licence conditions, or more than 30 unsatisfactory issues detected by official inspectors in their inspections.

⁷ In this figure all breaches of licence conditions mentioned refer to “recognised” breaches by the inspectors.

3. RESULTS

Performance of Local Authorities

Missing inspections

Our study shows that 63% (n=207) of the zoological collections in England missed at least one inspection due since January 2005, and 14% missed a formal inspection in the same period. Figure 7 and Table 6 show these percentages per stratum.

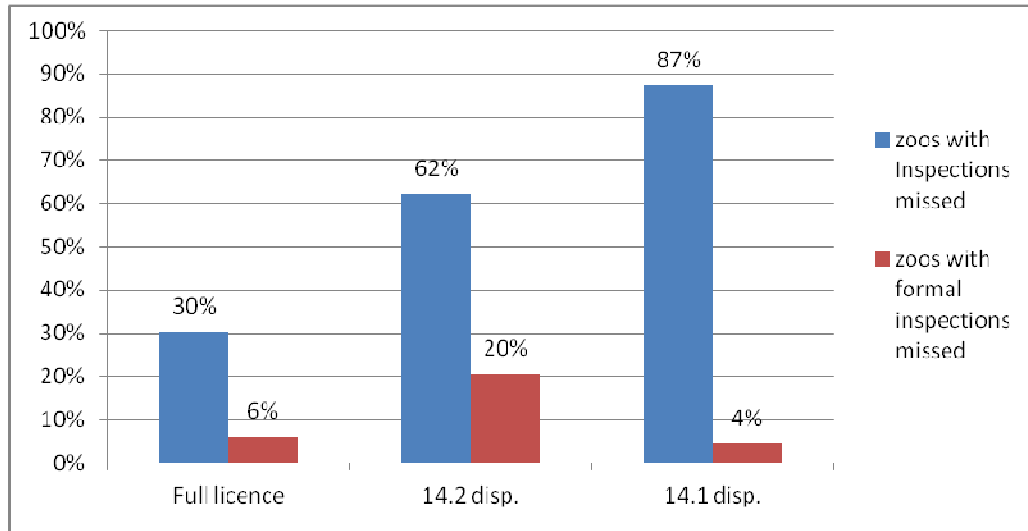


FIGURE 7: Relative frequency of zoological collections in England that missed at least one inspection done to them since 2005, per stratum

TABLE 6: Relative frequencies of zoological collections in England that had inspections missed since 2005, per stratum and type of inspection reports used in the assessment.

	All Inspections	Formal inspections
All zoos	63%	14%
Full licence zoos	30%	6%
14.2 dispensations	62%	20%
14.1 dispensations	87%	4%

The majority of the local authorities with zoos selected in this study (at least 70%, n=135) have missed at least one inspection to any collection within their jurisdiction since 2005, a majority that is maintained if we look at all English local authorities with zoos (at least 61%, n=155).

In total, at least 380 inspections have been missed since 2005 in the collections studied. More than a third (37%, n=155) of the local authorities that are responsible for the regulation of zoos in England missed half or more of the minimum inspections required in the period from 2005 to 2010 for any of the collections in their jurisdiction.

Regarding zoological collections with a 14.1 dispensation, our study shows that 87% (n=47) of the zoological collections in England with a 14.1 dispensation missed at least one inspection done to them since January 2005, and 4% missed a formal inspection in the same period (these were collections with 14.1.b dispensations). The immense majority of the local authorities responsible for zoos with 14.1 dispensations selected in this study (at least 90%, n=40) have missed at least one inspection to any of their 14.1 collections since 2005, a majority that is maintained if we look at all English local authorities with this type of zoo (at least 65%, n=55). More than three quarters (88%, n=40) of the local authorities that are responsible for zoos with 14.1 dispensations in England missed half or more of the minimum inspections required in the period from 2005 to 2010 for any of the collections in their jurisdiction.

To illustrate the phenomenon of missing inspections, following are some of the local authorities Fol officers' comments on missing inspections from our Fol enquiries, which suggest poor practice in their zoo inspection duties:

Bedford Borough Council: "it appears that inspections in question have not taken place."

Bolton Metropolitan Borough Council: "I can confirm that there were no XXX inspections in 2010, neither has there been one this year so far."

Doncaster Metropolitan Borough Council: "No formal inspection was undertaken in 2007 and 2008, this is because there was a formal transfer of ownership on 23 May 2008."

Gloucester City Council: "Gloucester City Council did not perform any formal, periodical, informal or special inspection to the XXX in 2010... The Council received an e-mail from DEFRA in November 2010 bringing our attention to a news article in October 2010 that indicated the XXX was no longer open to the public. However, this was proven to be a misunderstanding, where Gloucester City Council misunderstood the email from DEFRA as having advised the Council that the XXX was no longer operating as a Zoo. A further investigation has now been carried out and revealed that they remain to be a Zoo but are open by pre-bookings only. In light of this, the Council has updated our electronic database to ensure periodic visits are flagged up when they are due."

Hinckley and Bosworth Borough Council: "Informal inspections did not take place during 2005, 2007, 2008."

Huntingdonshire District Council: "informal inspections were not carried out in 2005 or 2006."

Isle of Wight Council: "I believe that the 2008 visit was done late (in Feb 2009) . I do not know the reason why 2005 and 2006 were not done"... There is no record of an informal inspection having been carried out in 2006. The informal inspection for 2008 was carried out on 26/2/09 (late – don't know the reason). The periodical inspection was not carried out in 2010 due to the premises being subject to a request for dispensation under Section 14(1)(a)."

Portsmouth City Council: *"The only record of inspections on file are 2008, 2009 and 2010. It would appear that with the exception of complaint visits, no inspections were carried out since 2002."*

Shropshire Council: *"The initial inspection and subsequent enforcement exercises would have been undertaken by former Oswestry Borough Council officers. No records currently exist to state when this was undertaken. No check has been undertaken of the premises since April 2009 when the former authorities of Shropshire merged to form Shropshire Council. " ... "However I have spoken with the Licensing Team Leader and in light of the concerns you have raised, licensing officers will inspect the property within the month." ... "Following the concerns you raised in your request with relation to XXX, licensing officers inspected the property and are satisfied that there are no animals on the site that require an (sic) Zoo Licence. No formal report has been written and therefore the information you originally requested is still not held."*

Sunderland City Council: *"With regard to the other years that you identified, i.e. 2006, 2008 and 2009 I can advise that no formal inspections were carried out, however, an officer did visit the XXX in 2009 in relation to another matter and no issues were noted."*

Teignbridge District Council: *"There is no record on file of an informal inspection in 2005 or 2006. The 2007 informal inspection was not carried out until May 2008. 2009 informal inspection carried out on 15 Jan 2010."*

Torbay Council: *"There was no formal inspection in 2006. Interim inspection was due to take place in the of Autumn 2010 but has been delayed due to unforeseen circumstance and has been re-arranged for Spring 2011."*

Weymouth and Portland Borough Council: *"I can confirm that informal inspections took place at the XXX on 24/12/2008 and 15/12/2010. No letter was sent following the visit in 2008 as conditions were found to be satisfactory." ... "At the end of 2006 we were actively trying to arrange the formal inspection with the DEFRA's inspector. It transpired that she could not attend until the New Year, but as we were expecting to visit in December or early January, which we were eventually not able to do, no informal visit was carried out at the end of 2006."*

Keeping reports

Our study shows that local authorities as a whole have misplaced or no longer keep one or more inspection reports of 37% (n=207) of the zoological collections in England since January 2005. 43% (n=135) of the local authorities studied had missing reports of zoo inspections made since January 2005.

Figure 8 shows the percentages of zoos with missing inspection reports per stratum, showing the difference when we do not count the year 2005.

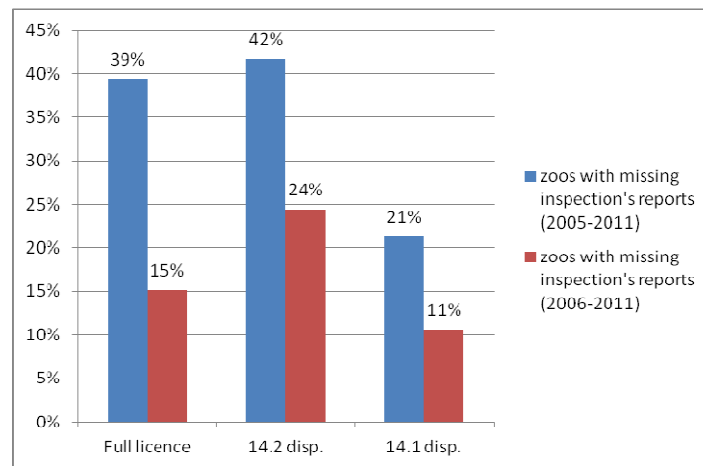


FIGURE 8: Relative frequency of zoological collections in England with missing inspection reports by the local authority since 2005, per stratum.

However, if it is not accepted that the requirement of producing reports from inspections extends to all types of inspections (including informal inspections), it must be said that only 7% (n=207) of the zoological collections have missing inspections reports by the local authorities.

As examples to illustrate missing inspections, following are some of the local authorities Fol officers' comments on missing reports from our Fol enquiries:

Allerdale Borough Council: *"As regards 2007, there was a site visit made to the premises on 11th July however there are no accompanying notes ... For informal inspections we do not complete a report on an inspection proforma."*

Bassetlaw District Council: *"The Council does not have informal inspections for 2005. The inspection for 2008 was carried out in August 2008 and the Council does not have a copy of that inspection."*

Calderdale Metropolitan Borough Council: *"There are no inspection reports, but there are invoices for the vet visits as proof that inspections do take place in 2007,2008,2009, 2010".*

Canterbury City Council: *"we do not have copies of any inspection reports for XXX for 2005/2006, or any records of dates these were carried out or outcomes. These would have been informal inspections and carried out by the previous Principal Health Officer who retired in July 2008 and who did not store any notes."*

Central Bedfordshire Council: *"A licensing inspector carried out informal inspections at those dates (2005, 2006) but no documents were produced as the officer felt that there were no significant issues identified to warrant a written report being sent."*

Eden District Council: *"I can confirm that inspections took place on the following dates: 14 September 2010 and 21 May 2009. As no licensing issues were raised, inspection reports were not generated."*

Hastings Borough Council: *"we are unable to trace the report for 24/02/2005."*

Horsham District Council: *"The officer who carried out the inspections has since left Horsham District Council, so I cannot supply you with the informal inspection dates."*

Lancaster City Council: *"I can confirm that an inspection of the zoo has been carried out every year, but written reports may not have been compiled and dates will not now be available. Written records of every inspection are now kept."*

London Borough of Lewisham: *"I have checked with our Licensing Team and have been advised that all inspections were carried out in accordance with the legislation, however unfortunately no further paperwork is available."*

Plymouth City Council: *"Until 2008, Plymouth City Council did not keep records of any inspection where it was not a requirement to keep a record. Therefore, although annual inspections were undertaken, records have not been kept."*

Wyre Forest District Council: *"Unfortunately the officer who was dealing with this area of work has left the authority. The file has been checked and there are no documents relating to a 2007 informal inspection, this does not mean that it was not carried out."*

Stocklists

From the 207 selected zoological collections, we could not get the stocklist from 14 collections (7%), 10 of which were for collections with 14.1 dispensations for which the authority had not obtained the list, and the rest (3 for collections with 14.2 dispensations and one without dispensation) for collections of which the authorities told us that had destroyed their lists (in our opinion without a legitimate reason). However, not all the stocklists that the local authorities managed to send us were "current" according to our definition. From local authorities as a whole, 25% failed to provide the current stocklist in any form (n=207). From those cases where the authority had a stocklist but it was not current, 77% of the collections had 2009 stocklists, 16% 2008 stocklists, 8% 2007 stocklists and 14% 2006 or earlier (n=41). Figure 9 and Table 7 show the percentage of zoos without stocklists in the local authorities possession, or without current stocklists in their possession, from each stratum.

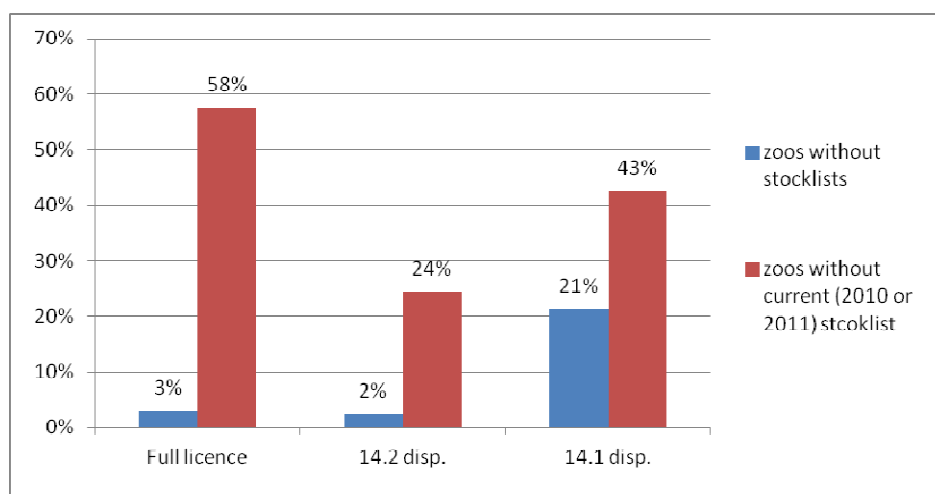


FIGURE 9: Relative frequency of zoological collections in England with missing current stocklist by the local authority since 2005, per stratum.

TABLE 7: Relative frequencies of zoological collections in England that had their current stocklists missing in their licensing authority, per stratum and type of inspection reports used in the assessment.

	Without current stocklists	Without any stocklist
All zoos	25%	7%
Full licence zoos	58%	3%
14.2 dispensations	24%	2%
14.1 dispensations	43%	21%

A third (33%, n=135) of the local authorities involved in this study had failed to obtain a current stocklist from any of the zoological collection within their jurisdiction. It appears that three of the local authorities studied had a policy of regularly destroying stocklists immediately after using them for inspections (Birmingham City Council, Brighton & Hove City Council, and Canterbury City Council). The reason given to us for doing so was to preserve commercially information secrecy.

To illustrate explanations for the lack of stocklists, below are some of the local authorities Fol officers' comments on missing stocklists from our Fol enquiries:

Birmingham City Council (NAT93, BIR20): *"I can confirm that we do not hold a copy of the Stock List produced by the XXX. I would also confirm that there is no correspondence held concerning inspection and enforcement activities between ourselves and the XXX."..." The Council has received Copies of the stocklist prior to the first of April each year. However, these are not kept on file... but then destroyed".*

Brighton & Hove City Council (SEA118): *"We do not hold any stocking information. If held it is likely we would treat this as commercially sensitive information and not for release under the Freedom of Information Act. Stocking lists are looked during each inspection."*

Canterbury City Council (WIL160, HOW256): *"We do not keep any records of the zoo stock lists. Any stock lists we ever have sight of are used for inspection purposes only and then destroyed"*.

Oxford City Council (CUT184): *"The Council does not have a record of the numbers of animals at the collection before and after the dispensation was granted."*

Shepway District Council (THE235): *"A current stock list is not held by the authority however Environmental Health have been advised that the centre is not operating at present and therefore no stock is currently held there"*.

Cheshire East Borough Council (STO131, PEC105, GAU62, STA130, REA114): *"despite a number of reminders for a stock list, that pertaining to those collections remains outstanding"*

In 12% of the zoological collections from which we have any inspection report (n=182) the issue of stocklist was raised by the inspectors, either because they were not properly compiled or because they were not sent to the local authority.

Applying for dispensations

Our study shows that 49% (n=198) of the zoological collections in England have been assigned the wrong dispensation according DEFRA's own criteria. From these, 68% (n=97) are collections that should not have had any dispensation at all, 29% (n=97) that should have had a 14.2 dispensation instead of 14.1 dispensation, and 3% (n=97) that should have had a 14.1.b dispensation instead of 14.1.a. We could not find any case where a collection was not given a dispensation when it deserved one, or it was given a 14.2 dispensation when it deserved only a 14.1. If we look only at collections where a dispensation has been given (so, collections where at some point the operator requested a dispensation and one was granted by DEFRA in the end), we find 42% (n=166) of the collections having been given the wrong dispensation, which is a very high percentage. Appendix H shows all the collections assessed in this study to have a wrong dispensation.

In most occasions these wrong dispensations are not a case of a zoo holding just a few more specimens over the threshold value, which is normally 50 hazardous (H) and/or conservation sensitive (CS) specimens. For example, BRI32 keeps 129 H/CS specimens, WIN162 keeps 115 H/CS specimens, NEW96 keeps 175 H/CS specimens, and TRO148 keeps 130 H/CS specimens, but yet all hold 14.2 dispensations; COO182 has wild mammals (wallabies), and so has WAL226 (red squirrels), FAR190 (water buffalo, reindeer) and MON209 (wallabies), but yet they all hold 14.1 dispensations.

Regarding type of collection, Table 8 shows frequencies of wrong dispensations given, indicating that errors on dispensation status occur in all types of zoos, but relatively more in Bird of Prey Centres, Aquaria and Farm Parks where most collections have wrong dispensations.

TABLE 8: Frequency of zoological collections in England with the wrong dispensation status since 2005, per type of zoo.

	Absolute	Relative
Aquaria	13	65%
Bird of Prey centres	20	69%
Farm parks	17	53%
General mixed zoos	20	31%
Invertebrate centres	6	46%
"other birds" zoos	11	44%
Herpetological zoos	1	25%
"other" types of zoological collections	9	47%

Looking at different strata, 76% (n=41) of the zoos with 14.1 dispensations and 53% (n=124) of those with a 14.2 dispensations had the wrong dispensation granted to them.

The majority (55%, n=135) of the local authorities involved in this study have collections with the wrong dispensation. DEFRA's part on this error can explain this.

Sometimes zoo inspectors do point out in their reports that the dispensation assigned to the zoo appears to be wrong, when they do use DEFRA's criteria and count the actual number of specimens of hazardous and conservation sensitive species either by sight or by checking

the stocklist. Although DEFRA may not have read such reports, the local authorities should. Following are some examples, none of which led to a correction in the dispensation:

OCE100 (14/10/2009): *"During the inspection, we discussed the current status of the zoo and its 14(2) dispensation. Despite its small size and relatively limited number of exhibits, it has approximately 150 specimens that appear in Appendix 12 of the Secretary of State's Standards of Modern Zoo Practice. The dispensation may need to be reviewed in the future."*

SEA118(15/07/2008): *"The 2007 stocklist indicates that there are over 100 Appendix 12 species, which include 26 sharks, 80 foxface rabbitfish, 4 moray eels, 14 long spine sea urchins, 12 piranhas, 8 dwarf lionfish... The 14.2 dispensation should be reviewed when the licence is renewed"*. In the inspection of 04/03/2010 the inspector notices again the wrong, dispensation, but only recommends a correction made (and therefore informing DEFRA) for the following formal inspection, with the statement *"The 14.2 dispensation should be reviewed when the licence is renewed in 2013"*. With the explicit knowledge of the local authority, this collection has had the wrong dispensation for at least five years.

EXM55 (12/12/2006): *"it should be noted, however, that a small increase in the numbers of animals of hazardous and/or conservations species, would require this dispensation to be re-examined as these already number around 50 in the collection"*

TRO145 (26/04/2007): *"The collection is expanding and now consists of over 50 [over 70 in fact] species that are conservation sensitive. The LA may wish to consult with DEFRA before the licence renewal as the collection may no longer qualify for at 14(2) dispensation."*

On very few occasions did the inspector's comments lead to a change in dispensation, but when they did sometimes the change did not go far enough (as in the case of TRO147 and TIG140 that were "upgraded" from 14.1.a to 14.2 dispensation but they should have been given full licences, or the case of CRY234 that was upgraded from 14.1.a to 14.1.b, but it should have been 14.2 because of their keeping of wild mammals).

Local authorities, or their inspectors, sometimes seem to very involved with the zoo operators in trying to find ways to reduce the number of inspections or inspectors. In the case of the collection coded MON209, the local authority's inspector in 2007 advised the zoo operator to remove certain animals since their 14.1.a dispensation did not longer fit. In 2009 the local authority even advised them that culling particular animals would allow them to avoid changing of dispensation status. In the case of the collection code HOL68, the zoo inspectors (from DEFRA and the local authority) discussed in 2010 with the zoo operator what to do to "demote" this 14.2 collection to 14.1.a, since it appears that it was struggling to meet the minimum standards.

Enforcing the Zoo Licensing Act

Granting and refusing licences

We found that 4% (9, n=207) of the collections are borderline cases regarding the zoo definition because in addition to being zoos, they are also something else. Following are the nine cases:

WHI230: This Pet shop that had some exotic animals on display not for sale. Racoons and fruit bats were removed from display in 2007 to be able to get a 14.1.a dispensation. In the end the pet shop operators did not apply for a zoo licence when they removed them, but the local authority gave them the exemption anyway. We are not sure what the arrangements are, and whether the animals on display are separate from the other animals so the division between pet shop and zoo is valid.

HOR199: This collection seems to have guinea pigs on display separate from the pet shop, but we are not sure about the arrangements. It holds a 14.1.a dispensation.

FIN192: This is a pet shop and an open farm with some wild animals, for which it holds a 14.1.a dispensation. This establishment began as a farm in 2004 but also received a pet shop licence in 2007, possibly because the local authority learnt that they were selling animals, which they could not sell if they were a zoo.

AVI9: This is an avian zoo with a 14.2 dispensation, although we believe it should have a full licence because the numbers and types of animals it keeps. Inspectors in 11/09/2008 noted that surplus animals were sold without a pet shop licence. The advice they should have given was to stop selling animals or apply for a pet shop licence, but the lack of further inspections does not allow us to know if eventually they got a pet shop licence.

THE220: This collection held a 14.1.a dispensation because in theory in 2007 it took the animals that would make it require a 14.2 dispensation and kept them off display under a DWA licence. The arrangement was accepted by the local authority and DEFRA after agreement that it would be a complete separation and the DWA animals would not be visible to the public. However, when we looked at their website we noted photos of some of the DWA animals in the zoo. We warned the local authority, which responded *"the following animals are included in a Dangerous Wild Animal Act 1976 (DWA) licence: Wild boar, Otters, Mouflon, Lynx, Asian short clawed otters. Other animals at the premises include; meerkats, raccoon, wallabies, deer and emus, as far as we are aware neither these animals or those subject to a DWA are on general display to the public and are in effect a private collection of the operator. The operator voluntarily advises us when they are going to display the animals; we also check local advertisements and websites for details of such events. As far as we are aware this is never more than 7 days per year.* When looking at its website again we noted that he zoo had closed down to the public soon after this reply from the Council. We contacted the authority again asking for more details, and they replied *"The premises closed voluntarily in June. The Council found out indirectly having been notified by Trading Standards and, following this notification, had a conversation with the operator that day. There is no paperwork relating to this closure and so the Council does not know the exact reason but presume it to be lack of funds."*

RAR113: This collection holds a 14.2 dispensation despite almost all its animals being hazardous or conservation sensitive (for what we believe it should have a full license). The zoo operator had a DWA licence before, and then decided to open to the public. Their licence was first issued in 2005, but a fresh licence was issued in 2006 and 2007. It changed ownership in 2007 so DEFRA had to revisit. The local

authority states *"The owner used to hold a Dangerous Wild Animal Licence and kept them in his home grounds. When the Licence was finally granted the owner travelled around the world to increase the rainforest species. The owner of the XXX developed half of his garden/fish centre (XXX) into the zoo area."*

WIL159: This is part of another zoo. Started out with a DWA licence when taking some surplus animals out of the zoo and keeping them off display (together with rescue animals belonging to another organisation that was running the site), but then it acquired a zoo licence in 2005. A 14.2 dispensation was granted in 2008 despite the inspector stating that it is not open to general public, but only to members. However, it appears that they planned to open to the general public, so they kept the licence.

BRO34: This general mixed zoo has a 14.2 dispensation, but also has a separate reptile rescue rehabilitation centre. The DEFRA's inspector (22/06/2008) states in his report *"Reptile rescue organisation on site, but sanctuary customers do not have access to zoo"*.

BRI33: This is a mix of wildlife rescue and rehabilitation centre and a zoo, holding a 14.2 dispensation. It is not clear which are the special arrangements to accommodate both functions.

We then have the cases of farms that, by adding exotic animals in their collections are gradually becoming zoos. The archetypical example of this type of gradual transformation is TRO148. In 2005 inspectors detected breaches of licence conditions since this was still a farm with a few exotics that was operating under farming standards rather than zoo standards. In 2006 the inspector noticed the changes towards becoming a zoo due to the acquisition of more exotic animals; this was allowed and during the following years the zoo failed on issues such as conservation or animal escapes (some boar escaped); in 2010 the farm had become a zoo proper with almost 400 animals, including cats and primates –with more than 50 hazardous and/or conservation sensitive specimens (although erroneously continued to have a 14.2 dispensation).

Sometimes we have cases where it is the local authority that suggests the creation of a mixed collection. In the inspection made the 10/01/2005 at WOO165, the inspector detected that visitors were allowed to fish some of the animals on display. Instead of prohibiting the practice, he suggested that the part of the zoo where the fishing was happening should be separated from the actual licensed zoo.

The only case of refusal of a licence that we could detect was a possible case of an inspector apparently recommending the refusal of a licence, in the case of the collection coded WES153, in a special inspection undertaken on 04/09/2007 a few months after a renewal licence inspection. Leeds City Council did not send us the inspection report with the "explicit" recommendation of refusal, but a posterior letter stating that the zoo closed temporarily for "redevelopment" after this special inspection took place, which seems to have found breaches in licence conditions set up a few months earlier, suggesting that a "refusal" may have been the option the inspector took. Later the zoo opened again since it passed a new DEFRA inspection in 2010. However, there is no evidence that the Council issued any direction order, among other things because this collection happens to belong to the Council

itself. We have no evidence of DEFRA having issued one either, or having refused the renewal of the licence, since in this case it has the power to do so. In fact, the DEFRA inspection made on 13/03/2010 should have been a fresh licence inspection due to the fact the zoo had previously closed and significant changes had been made, yet it was just classed as a periodical inspection, as if nothing had happened.

Special inspections

Our study shows that 10% (n=738) of the inspections performed are “special inspections” under section 11 of the ZLA. These are ideal for investigating “complaints” from the public, and in fact 23% (n=73) of these inspections are indeed made as a response of such complaints (the rest are made to investigate escapes, new enclosures, redevelopment, new arrivals, specific licence conditions, to check the zoo needs a licence, to investigate unusual deaths, to check for provisions on special health issues such as E-coli, etc.). In the 17 special inspection reports made from public complaints, a total of 71 specific complaints have been identified, from which only 24% were upheld by the local authority’s inspectors. However, 71% of the special inspections with any complaint had some of their complaints upheld.

Some cases in our study do help to give an idea of the type of situations involved in this sort of inspections. For example...

FLA253: Informal special inspection on 04/04/2005 with only local authority’s inspectors from a complaint about an enclosure, but inspectors do not uphold it and state that complainants do not accept the council’s view on this issue. No further inspections are made despite the non-satisfaction of the complainant.

ENG52: Informal special inspection made on 13/12/2006 with only local authority’s inspectors, from a public safety complaint (upheld) from members of the public. Additional conditions were added in the licence as a consequence.

COL247: Informal special inspection on 27/05/2008 with only local authority’s inspectors about a complaint of exotic invertebrates having escaped and running free in the zoo, not upheld by inspectors that could not see them; Informal special inspection on 02/06/2008 on the same issue since complainant unsatisfied asking to make an announced visit, not upheld either; Informal special inspection on 16/06/2008 on the same issue because complainant still unsatisfied, but this time inspector does find the animals and the complaint was finally upheld.

WHI279: Announced formal special inspection on 01/09/2009 with four inspectors (one DEFRA’s) not written in a ZOO2 form, but in a report. All issues in the complaint found to have been being addressed satisfactorily.

FAL58 (10/12/2009): The inspector upholds all the complaints after this special inspection that has detected breaches of licence conditions. As a response he issues four recommendations, but no additional licence conditions to address them, so the problems are not recorded on the licence and future DEFRA inspectors may not be aware of them.

WOB280: Announced formal special inspection on 27/01/2010 with three inspectors (one DEFRA’s) not written in a ZOO2 form, but in two reports. Relative to complaints

originally coming from an ex-employee all upheld. Previous inspections (three years or more) completely missed the indoor quarters of an enclosure, which were the basis of some of the complaints (inspectors accepted they did not see them before), because previously inspectors visited the zoo in the summer, when conditions were very different.

KNO258: Announced formal special inspection on 12/02/2011 with four inspectors (one DEFRA) written in a ZOO2 form. From 20 complaints, only one was upheld, but ten lead to some recommendations. New conditions in the licence were added as a consequence, which related to previous conditions not met. Inspector tended to dismiss complains on the basis of "Not having seen evidence".

Figure 10 shows the average number of issues addressed per type of inspection, and we can see that special inspections only have an average of 12.27 issues compared with the average of the routine periodical inspection that would cover 101.12 issues. This difference is statistically very significant (Kolmogorov-Smirnov, $D=0.9421$, $p<0.0001$).

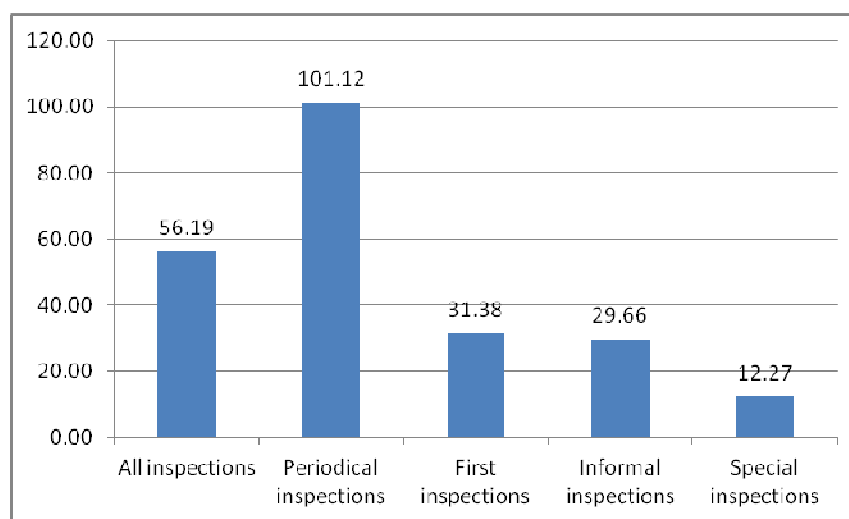


FIGURE 10: Average number of issues addressed in zoological collections in England, per type of inspections.

Giving recommendations

67% (n=738) of the inspection reports contain specific recommendations from the inspectors, separate from licence conditions. Some of these recommendations (14%, n=2628) are also added in a different form in the conditions, making a distinction between advice to "improve" something on an issue and obligation to "comply" with something on the same issue, but most of the recommendations are not present in any form in the additional conditions also written in the reports (an average of 3.14 recommendations not in conditions per inspection) and these are in 59% (n=738) of the inspections. There is an average of 3.47 recommendations per inspection (STD=4.079) compared with 2.03 additional licence conditions per inspection (STD=4.541). In the case of formal inspections the values increase, with 4.98 recommendations per inspection (STD=4.153) and 4.35 additional conditions per inspection (STD=6.011). Most zoos have received recommendations in at least one of their inspections: 80% (n=207) of all zoos, or 93% (n=179) of zoos with any inspection report sent to us.

Regarding the different strata of this study we have similar results: 66% (n=182) of the inspections from zoos with a full licence, 68% (n=526) of those from zoos with 14.2 dispensations, and 52% (n=31) of those from zoos with 14.1 dispensations, contained specific recommendations from the inspectors. 100% of all the zoos with a full licence, 98% of the zoos with 14.2 dispensations, and 40% of the zoos with 14.1 dispensations received recommendations in any of their inspections.

Issuing licence conditions

The average number of licence conditions found attached to zoo licences at the time of the inspections for which we have reports is 16.40 (STD=11.847, n=738) –which equates to an average of 5.4 additional inspectors' conditions per licence. In the case of zoos with full licences this value is 15.50 (STD=7.311), in the case of zoos with 14.2 dispensations is 16.72 (STD=13.042), and for those with 14.1 dispensations is 14.80 (STD=10.521). Sometimes some licences do have many conditions attached, like in the case of the collection coded SHA125 which had 106 licence conditions attached to its zoo licence in 2008, or the collection coded TUR149 that had 128 conditions attached in 2009, but these cases are exceptional. 4% (n=2628) of the inspectors' additional licence conditions were not eventually attached in the zoo licences.

34% (n=738) of the inspection reports contained additional licence conditions suggested by the inspectors, but if we only look at formal inspections, this percentage rises to 67% (n=316). Most zoos have had additional licence conditions added to their licence: 68% (n=207) of all the zoos, or 78% (n=179) of zoos with any inspection report sent to us. Table 9 shows relative frequencies per spectrum.

TABLE 9: Relative frequencies of inspection reports with additional conditions to be attached to the licence of zoological collections in England since 2005, per stratum and type of inspection reports used in the assessment.

	All Inspections	Formal inspections	Current formal inspections
All zoos	34%	67%	62%
Full licence zoos	32%	69%	70%
14.2 dispensations	34%	67%	80%
14.1 dispensations	58%	100%	100%

In the cases of zoos with a full licence we find 32% (n=182) of the reports containing additional licence conditions and 88% (n=33) of the zoos, for those zoos with 14.2 dispensations 34% (n=526) of the reports and 86% (n=127) of the zoos, and for those zoos with 14.1 dispensations 58% (n=31) of the reports and 10% of the zoos from which we have reports (n=20).

74% (n=738) of the inspection reports show that “unsatisfactory issues” have been detected by the inspectors; an average of 8.9 unsatisfactory issues per inspection (n=548). This represents an average of 12% (n=41410) of unsatisfactory issues from all issues addressed by inspectors in all the inspections (or 13% if we only count formal inspections, n=30191).

68% (n=738) of the inspection reports had unsatisfactory issues not addressed by inspectors in their additional licence conditions, and 40% not addressed in either the licence conditions or the specific written recommendations. If we look only at formal inspection reports then these percentages increase to 88% and 75% respectively (n=316). The majority (62%, n=4893) of the unsatisfactory issues were not addressed in the licence conditions suggested by the inspector, and 25% were not addressed at all in either the conditions or the recommendations. If we only look at formal inspection reports then these percentages are 54% and 27% respectively (n=3790). We can see some of these percentages per stratum in Figure 11, Table 10 and Table 11:

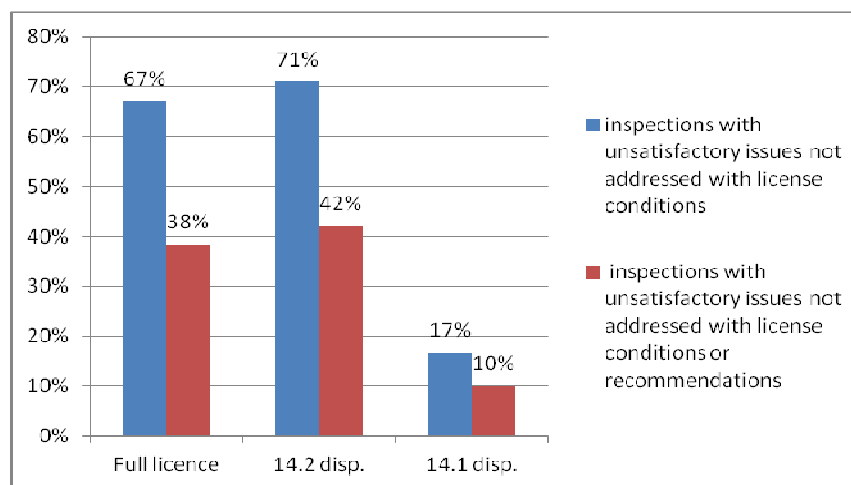


FIGURE 11: Relative frequency of inspection reports with unsatisfactory issues not addressed in licence conditions or recommendations, per stratum.

TABLE 10: Relative frequencies of inspection reports with unsatisfactory issues according to the inspectors not added as additional conditions to be attached to the licence of zoological collections in England since 2005, per stratum and type of inspection reports used in the assessment.

	Reports with issues not addressed in conditions in all inspections	Reports with issues not addressed in conditions in <u>formal</u> inspections	Reports with issues not addressed in conditions in <u>Current formal</u> inspections
All zoos	68%	88%	90%
Full licence zoos	67%	94%	91%
14.2 dispensations	71%	87%	90%
14.1 dispensations	17%	67%	50%

TABLE 11: Relative frequencies of inspection reports with unsatisfactory issues according to the inspectors not added as written recommendations or additional conditions to be attached to the licence of zoological collections in England since 2005, per stratum and type of inspection reports used in the assessment.

	Reports with issues not addressed in conditions or recommendations in all inspections	Reports with issues not addressed in conditions or recommendations in <u>formal</u> inspections	Reports with issues not addressed in conditions or recommendations in <u>Current formal</u> inspections

All zoos	40%	75%	75%
Full licence zoos	38%	81%	79%
14.2 dispensations	42%	73%	75%
14.1 dispensations	10%	67%	50%

79% (n=207) of the zoos had at least one inspection where unsatisfactory issues were not addressed in licence conditions, and 72% with any inspection where such type of issues were nor addressed at all in either the recommendations or the conditions.

Although in general the licence conditions that tend to be attached to the licences by the local authorities are the ones suggested by DEFRA zoo inspectors from formal inspections, on occasion local authority inspectors have suggested additional conditions in special or informal inspections. For example, the informal routine inspection dated 13/12/2006 for the collection coded ENG52, the case of an informal special inspection for EAG49 on 22/09/2010 (both of which led to adding four additional conditions to their licences), or the two informal inspections made at DRU251 the 10/02/2005 and 23/02/2006, with three and four conditions added respectively.

In some cases the local authorities failed to attach the mandatory licence conditions that ought to be attached to all zoo licences issued. Following are the cases we found (the dates are the inspections where this oversight became apparent, which tended to lead to a correction in later years): BLU24 (27/04/2008), LIV87 (07/10/2010), THE235 (09/06/2009), OWL102 (04/03/2005), SHA125 (21/05/2008), BEA15 (07/07/2008). In other cases, the conditions that were not attached were the additional ones suggested by the inspector, as in the case of the inspection on 03/10/2006 at TRO143 where the 20 additional licence conditions were not attached to the licence (as the following DEFRA's inspector in 2009 noticed), or the similar case of FAL57 (20/08/2007). In other cases the attachment was made years later, as in the case of the conditions suggested by the inspector of the special inspection made on 30/10/2006 to CHE245, which were only added to the licence after the following formal inspection.

On the other hand, some inspectors did add many licensing conditions, as in the case of the inspection on 11/02/2009 at TUR149 where 126 conditions were added (essentially the SSSMZIP in its entirety), or cases when many unsatisfactory issues were addressed only with additional licence conditions but not recommendations (as in the inspection on 26/09/06 at BIR20 where 25 conditions were added, or the one on 26/02/2009 at KIN77 where 34 conditions were added, none of which followed any recommendation).

Issuing "Direction Orders"

We could study the performance of local authorities regarding issuing Direction Orders since any of these would have been sent by post to the zoo (and the zoo would have replied), and therefore would be part of the correspondence we requested from the authorities with our FoI request. We only found two direction orders under the ZLA issued during period of our study, which were a 2005 direction order to the previous owners of the collection coded DAR249 regarding a condition of rat infestation, and a 2010 direction order for WOB280 regarding elephant husbandry; in addition to these, a 2009 "prohibition order" under Health & Safety legislation on public safety matters was issued to the collection coded OLD101, and a

“notice of intention to issue” a closing order was sent to DAR249, which was eventually withdrawn since the zoo closed down voluntarily.

Closing down zoos

From the information contained in the inspections reports, we know that during the six years of this study three collections closed down (and re-opened later) which may have done so because of the local authority enforcement work:

DAR249 closed down to the public voluntarily in 2006 after an “intention to issue” a closure order was sent by the Council (the zoo re-opened to the public a few years later under new ownership).

WES153 is a Council own zoo that in 2007 voluntarily closed down “for redevelopment” which, as seen above, might have been forced because of the recommendations of an inspector who identified failures in compliance with licence conditions. The zoo re-opened a few years later.

THE220 voluntarily closed down permanently in 2011, after we already had started this study.

Looking at information about zoo closures in the internet, we could not find any case of a licensed zoo closed down by a local authority in England since 2005. However there have been other “closures” not of licensed zoos, but of zoological collections not yet licensed. In 2010 the Three Owls Bird Sanctuary was forced to close after Rochdale council rightly said it needed a zoo licence. The Council wrote to the zoo operators giving to them 28 days to apply for a licence, but trustees decided to close the sanctuary because they felt it would be impossible to meet the requirements of the ZLA.⁸ A similar case was the Tortoise Garden, which had been operating without a licence for a long time despite being open to the public, and eventually Cornwall Council in 2011 served them a notice to close to the public, yet to be fully enforced.⁹

Regarding the rate of creation of new zoos, our study shows the results in Table 12:

TABLE 12: Frequency of creation of new zoological collections in England since 2005, per year.

Licensed zoos already in operation in January 2005	191	92%
Zoos which were first licensed since January 2005	19	9%
Zoos first licensed in 2005	3	1%
Zoos first licensed in 2006	3	1%
Zoos first licensed in 2007	1	0%
Zoos first licensed in 2008	4	2%
Zoos first licensed in 2009	5	2%
Zoos first licensed in 2010 or 2011(first quarter)	3	1%
Average number of new zoos licensed per year	3.17	2%
STD	1.329	

⁸ http://menmedia.co.uk/manchestereveningnews/news/s/1191944_council_forces_bird

⁹ <http://www.thisiscornwall.co.uk/War-words-threat-close-tortoise-zoo/story-13296604-detail/story.html>

If we have a population of 273 zoos and every year an average of 3.17 new zoos are added, today we should have 292 zoos, but since we have 274, we know that 18 licensed zoos have closed down since 2005, which represents a rate of 3 zoo closures per year. Therefore, in essence, since 2005 every year there are as many new zoos being licensed as licensed zoos closing down, and these do not represent more than 1% of the zoological collections each year.

Prosecuting

The only prosecution we could find under the ZLA took place against Ellis Daw, the former owner of Dartmoor Wildlife Park, in 2002. That year CAPS raised questions about the welfare of the animals and the conditions in which they were kept, including the lack of safety barriers, calling for the zoo's licence to be revoked¹⁰. South Hams District Council was reluctant to revoke the zoo's licence, due to concerns over the future of the animals, but after an investigation, charged the former zoo operator with 16 offences. All but one of these charges were dropped, but he was found guilty of breeding Siberian tigers outside of an organised breeding programme, and of keeping them in poor conditions. For this, he received a £200 fine and a conditional discharge, and the tigers were sent to a wildlife centre in Holland¹¹. The zoo was closed in April 2006, and it was sold to new owners who, after a long process of getting a new licence, opened it to the public again in 2007.

We could not find any case of a prosecution of a zoo operator made under the Animal Welfare Act 2006.

Transparency

As can be seen in the chapter about FoI in the Methods chapter, local authorities only sent the requested information within the legal deadline for 39% of the selected collections. We received the complete available information of more than one third of the collections two or more months after of the maximum allowed by the Freedom of Information Act 2000. In total, 93 local authorities (69% of those indirectly selected in our study) sent us information up to a month or more late (and 38% up to two months or more late).

We found cases of local authorities not wanting to send to us zoo stocklists after requesting them, (see chapter above on stocklists). For instance, Canterbury City Council claimed that they destroyed stocklist after any inspection, and Brighton & Hove City Council stated *"We do not hold any stocking information. If held it is likely we would treat this as commercially sensitive information and not for release under the Freedom of Information Act. Stocking lists are looked at during each inspection"*.

In other occasions some local authorities (such as Stroud District Council or Sevenoaks District Council) stated that they had no time to collect and send information such as the correspondence or the original inspection that granted a dispensation. Others stated that they had to charge for part of the information requested (such as Hinckley and Bosworth Borough Council or Westminster City Council).

¹⁰ <http://news.bbc.co.uk/1/hi/england/1643201.stm>

¹¹ <http://news.bbc.co.uk/1/hi/england/devon/4271371.stm>

Regarding not being able to send information for bad record keeping, extreme examples of local authorities missing many reports of inspections that had actually been done (because the authority could provide information of the date of the inspections) are Breckland District Council missing 10 reports for the collection MEL88, or Breckland District Council missing 13 reports of the collection BAN239. As an example of the type of reasons for absent reports, following is the last reply (more than five months after the FoI request) of Staffordshire Moorlands District Council regarding the collection coded BLA241, from which we only received one inspection report for a 2007 inspection:

- *No informal inspection in 2005 due to death a bereavement.*
- *Informal inspection done in 2006 but not formally recorded.*
- *Informal inspection done in 2008 – referred to in letter dated 30/04/2008*
- *2009 informal inspection carried out 27/01/09 – no record of report on file – this confirmed that all licence conditions from 08 were complied with so no need to send correspondence.*
- *Informal inspection carried out in 2010 – copy sent to XXX– office copy made available to vets during periodical inspection in 2011 – not yet been returned.*

Local Authorities as zoo operators

It appears that only 14% (n=207) of the zoological collections are owned by the local authorities, but as far as types of collections are concerned they do not follow the same profile as all of the collections. Most of them are in aviaries in public parks, and a very few are aquaria or birds of prey centres. Most of these collections have dispensations (54% have 14.1.a dispensations, n=28), but some collections are very big, with close to 2000 specimens (i.e. BOL28). Figure 12 shows such profile:

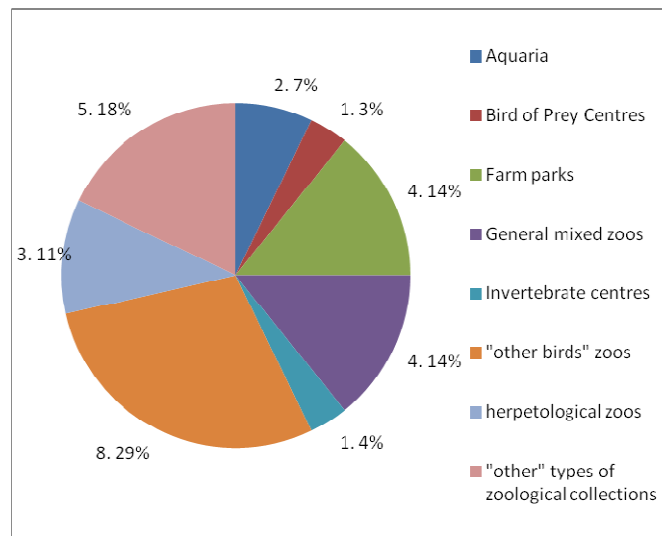


FIGURE 12: Relative frequency of zoological collections owned by local authorities in England, per type of zoo.

Their average score of standards of modern zoo practice of zoological collections owned by a local authority (using the method developed in this study¹²) is -0.38 when using all inspections and -1.14 if we only look at formal inspections.

We find several examples of poor performance of zoological collections owned by local authorities. For instance...

TRO146: This collection scored -2.50 with the scoring method used in this study (which has a maximum of bad performance of -3.00), regarding the average of formal inspections alone. The formal inspection made the 27/12/2006 found 34 unsatisfactory issues, failed on the conservation requirements and had two breaches of licence conditions.

ANI7: This collection scored -2.00 with the method used in this study, regarding the average of formal inspections alone. During the inspection carried out on the 21/03/2007 this collection failed the conservation requirements.

SEW124: This collection scored -2.00 with the method used in this study, regarding the average of formal inspections alone. The DEFRA inspector found ten breaches of licence conditions on the 31/03/2008. The local authority did not provide us any informal reports stating that none were compiled during informal inspections.

WES153: This collection scored -2.00 with the method used in this study, regarding the average of formal inspections alone. This collection even closed temporarily to the public "for refurbishment" after an inspector in 2007 found many unsatisfactory issues (27). Prior to that inspection the inspector of the informal inspection made on 27/09/2005 stated prior to that inspections "*I visited XXX on the 27th September and whilst there were a few issues raised with Mr XXX, I have not formalised details of the visit in a written format as I am confident that matters raised will be attended to*".

LOT263: DEFRA's inspector of the renewal inspection made on 01/02/2007 failed this zoo on the conservation requirements.

GOL64: The inspection made the 15/07/2007 found two breaches of licence conditions.

Performance of DEFRA/AH and ZEC

Zoo inspection forms

During the period of our study, DEFRA's ZOO2 report form was used in only 46% of the inspections. Its usage has increased over time, from 35% in 2005 to 58% in 2011, but it declined from 2008 to 2009 when it went from 57% to 41%.

¹² In this score system explained in the methods chapter, 0 means a standard zoo, +3 an excellent zoo regarding standards of modern zoo practice, and -3 a very bad zoo regarding such standards.

From an average of 93.14 (STD=23.579) issues to tick in inspections' forms, we find an average of 83.63 (STD= 23.689) ticks on YES, 4.61 (STD=6.934) ticks on NO, and 4.43 (STD=5.617) ticks on N/A.

Only in 20% (n=340) of the reports in ZOO2 forms did the inspector used the YES grade system, and only in 11% it was used in the majority of the questions.

Conditions vs. Recommendations

In all the inspection reports studied we found 4,100 pieces of advice of which 64% were recommendations and 36% were licence conditions. We also found 37% of inspections reports with recommendations only and 4% with only conditions but no recommendations (n=738).

Examples of different uses and interpretations of "recommendations" or similar concepts in inspections' reports follow:

WIL160 (17/02/2011): Renewal inspection in which instead of two types of advice the inspector issued three types: advice given at the beginning of the notes, advice given under the title "Recommendations" in the same notes, and licence conditions in the last page. It is not clear how binding the inspector intended the various levels of advice to be on the zoo.

COL247 (24/07/2010): The inspectors wrote all advice on page 9 (not designed for licence conditions) in two parts, one under "recommendations" and another without title headed with the following: "*The inspectors would encourage the zoo to consider the following comments as additions and enhancements to what are already sound working practices and plans*". There was nothing written in the licence conditions section of page 10. Are the points under "recommendations" actually mandatory licence conditions (i.e. *all dry food should be stored in suitable rodent proof areas*)?

RAR113 (11/12/2009): The inspector of this informal inspection stated in his report "*There are a number of recommendations and conditions from the last inspection that have not been addressed*", which could be explained by the fact that the licence conditions, although separated from the recommendations, were not marked as additional licence conditions, which may have confused the zoo operator into thinking they were "optional" recommendations.

HOR70 (28/02/2008): This renewal inspection has 11 "False YES" answers, which did lead to 16 recommendations but not a single licence condition.

CAN41 (02/07/2010): The inspector of this periodical inspection states that it is up to the local authority to decide if his recommendations should be conditions (he had three recommendations and two conditions). The authority decided to keep them as recommendations.

PAI269 (17/02/2005): From this inspection the local authority added 10 "statutory requirements" and two licence conditions to the licence, from all the recommendations of the inspector. It is not clear what the difference between the two is. In 27/07/2007 the local authority added all recommendations as licence conditions.

SEA118 (03/05/2007): In this report the recommendations are called “notes”, and no licence conditions were added.

WOR166 (29/10/2008): There is no clear distinction between recommendations and conditions. The inspector uses the terms “conditions not met” and “policies and reports not met or only partially met” to differentiate two types of advice, all written in an additional page.

WOO165 (10/01/2005): The inspector titles the licence conditions in last page of the report as “recommendations”.

STR132 (20/04/2007): Local authority converted all the inspector’s recommendations in licence conditions.

LAK81 (25/04/10): In this renewal inspection four unsatisfactory issues were identified but 10 recommendations and no licence condition were suggested, in an example of gratuitous “improvement advice” having priority over resolving problems.

Granting dispensations

As could be seen in the chapter of “Applying for dispensations” above, our study shows that DEFRA has wrongly granted dispensations to 49% (n=198) of the zoological collections in England, and has granted the wrong dispensation to 42% (n=166) of the English collections that had requested one. Appendix H shows all the collections assessed which have an incorrect dispensation in this study.

16% of the collections have a full licence, and 36% (n=143380) of the animals kept in zoos in England are in zoos without a full licence.

If DEFRA’s guidance had been applied to the letter and correct dispensations granted, 48% of the collections would have to have a full licence. Figure 13 illustrates this, showing the current profile and the “corrected” profile if all of the dispensations were corrected:

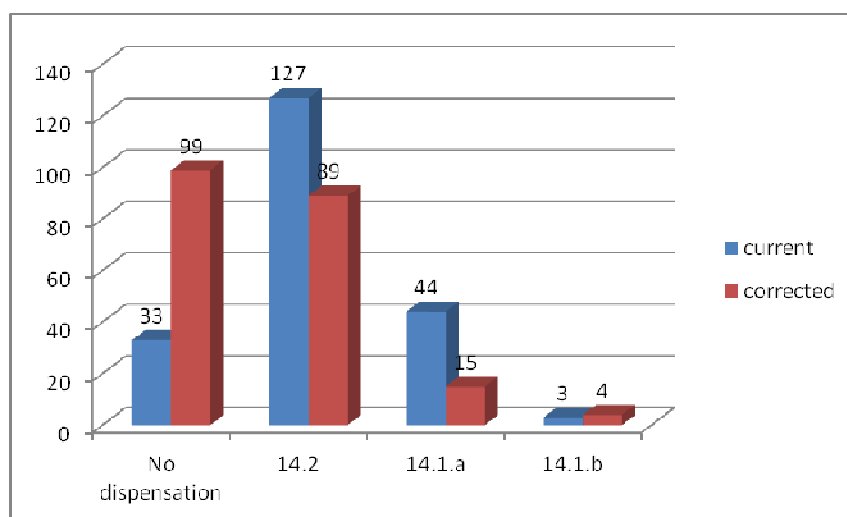


FIGURE 13: Frequency of different dispensation status in zoological collections in England for the current scenario (with wrong dispensations) and a corrected scenario.

Guidance

DEFRA publishes their guidance to zoos and local authorities in its current general website¹³, in the form of the following documents: *Government circular 02/2003*; *guidance; Zoo*; *Guidance on the Licensing and Inspection of Zoos in England under the Zoo Licensing Act 1981*; *Zoo Licensing Act Guidance Flow Charts*; *Zoo Licence Template and Guidance*; *Section 1 – Application form for a renewal*; *Section 2 – Form for notice of intention to apply for a zoo licence (notice to the press)*; *Section 3 – Form for notice of intention to apply for a zoo licence (notice to the local authority)*; *Section 4 – Application form for a zoo licence (new zoos)*; *Appendix A – Mandatory conditions (see section 1A of the Zoo Licensing Act 1981 (as amended))*; *Appendix B – Suggested model condition*; *Appendix C – Discretionary conditions*; *Feedback form on Zoos Inspectorate*; *Model direction to comply with zoo licence conditions*; *Model direction to close a licensed zoo*; *Model direction to close a unlicensed zoo*; *Model direction to ensure the welfare*; *Guidance intended to assist with decisions on whether establishments fall within the Zoo Licensing Act 1981's*; *Advice and recommendation*; *Guidance on the requirements for education in the Zoo licensing act with respect to 'Animal Presentations'*; *Possible overlap between CITES Article 60 (formerly Article 30) Inspections and Zoo Licensing inspections*; *GN12: Additional guidance*; *Managing health*.

The *Government circular 02/2003*¹⁴ dealt with the new measures that fall to the local authorities in their role as the zoo licensing authorities, specifically giving guidance on the following topics:

- Extent of the Act
- Conservation measures for zoos
- How to obtain a licence for a new zoo
- Grant or refusal of a licence
- Renewal of a licence
- Directing the applicant for a renewal of a zoo licence to apply for a fresh licence
- Duration of a licence
- Enforcement of licence conditions
- Transfer, transmission and surrender of a licence
- Inspections
- Licence Inspection
- Periodical inspections
- Special Inspections
- Informal inspections

¹³ <http://www.defra.gov.uk/wildlife>

¹⁴ <http://archive.defra.gov.uk/wildlife-pets/zoos/documents/zoo-gc022003.pdf>

- Local Authority Zoos
- Dispensation for particular zoos
- Fees and other charges
- Power to alter licences
- Closure of a licensed zoo
- Closure of an unlicensed zoo
- Welfare of Animals following permanent closure of a zoo
- Powers of the local authority to make their own arrangements for the welfare of animals at a permanently closed zoo
- Power of authority to dispose of animals
- Powers of Entry
- Date from which the Zoo Licensing Act ceases to apply to a closed zoo
- Appeals
- Offences and penalties
- Directions
- Temporary removal of animals from zoo premises
- Existing licences
- Transitional Arrangements for zoos without licences

It also contains annexes with mandatory and discretionary licence conditions, dispensation criteria, animals considered normally domesticated in the UK, and criteria for putting down an animal.

Another way DEFRA passes the information to the stakeholders is through training seminars; in this case training zoo inspectors. The *Zoos Inspectorate* organised biennial Zoo Licensing Training Seminars supported by the *Zoos Forum* to aid the training and development of its zoo inspectors. Previous seminars were held in Bath (2002), Lancaster (2004), Lincoln (2006) and Cheltenham (2009)¹⁵. Following are the issues raised in the last seminar:

1. The scope for Local Authority (LA) training and capacity building in zoo licensing, inspections and enforcement.
2. A separate seminar for Secretary of State zoo inspectors; perhaps to include section 14(2) dispensation inspections for example.

¹⁵ <http://animalhealth.defra.gov.uk/cites/zoos-inspectorate.html>

3. Whether establishments with a “satellite” body could rely on the education and conservation contribution made by their “parent” body to fulfil the requirements of section 1A of the Zoo Licensing Act (as amended) 1981 (the “ZLA”).
4. To what extent the provisions of the ZLA do, or should, apply to the sale of animals through pet shops based in zoos.
5. The application of the ZLA in establishments having mixed use (e.g. a farm park with exotic animals).
6. The possibility of a model template for zoo licences.
7. Liability for an inspector’s fees if an inspection is cancelled at short notice.
8. Whether LAs need to specifically authorise/appoint Secretary of State inspectors to carry out inspections.
9. The information which should be displayed to the public in respect of education/conservation where a zoo is based on a belief system/theme.
10. Accountability for inspection reports.
11. Clarification of what should be included in inspectors claims
12. The validity of a zoo licence if an application for a new/renewed licence has been made.
13. Forms for informal inspections.
14. Post mortems of zoo animals.
15. Closing a zoo in unforeseen circumstances.

In the last couple of years DEFRA has created the Voluntary Zoo Inspector Appraisal System through questionnaires that local authorities and zoo operators can fill out in order to evaluate the performance of inspectors, and therefore detect issues that can be addressed in training seminars or in guidance. In theory this could also be used to modify the list of nominated inspectors.

Transparency

Regarding our FoI request to DEFRA/AH for the list of nominated DEFRA zoo inspectors, the request was denied within 5 hours of sending it, with the following statement: *“The information you requested is personal and so is being withheld under Exemption s40(2) of the Freedom of Information Act 2000, also the exception in regulation 13(1) of the Environmental Information Act 2004 and hence the Data Protection Act 1998. Exemption s40(2) is an Absolute Exemption within the FOI Act 2000. To supply a list of names of Defra employees to a third party would breach principle one of the Data Protection Act 1998 which requires Animal Health to lawfully and fairly process personal data.”*

Regarding the FoI request to AHVLA on zoo closures and licence refusals, we had the following reply:

3. *The Zoo Licensing Act 1981 (as amended) is administered by the Local Authorities and AHVLA do not hold this information.*

4. *The Zoo Licensing Act 1981 (as amended) is administered by the Local Authorities and AHVLA do not hold this information.*

When we contacted them again asking clarification (see methods for the specific questions), AHVLA replied...

In relation to your questions below please note that on occasions AHVLA has been contacted by Local Authorities for advice on steps to take in the process of issuing a zoo closure direction. We refer them to the guidance on the Defra website (<http://www.defra.gov.uk/wildlife>). It is for the LA to advise us if they do issue a zoo closure notice and our annual reminders to LAs ask for updates on the status of zoos under their authority. Where we are advised that a zoo has closed we record it on the zoos database.

No information about licence refusals and zoo closure direction orders were ever sent to us from DEFRA/AH as we requested.

Performance of Zoo Inspectors

50% of the zoo inspections since 2005 were undertaken with only one inspector, 25% with two, 13% with three, 6% with four, and 5% with five (n=738). If we look only at formal inspections then 11% were carried out with just one inspector, 40% with two, 25% with three, 12% with four, and 11% with five (n=316). The ZLA does not allow formal inspections to be undertaken with more than five inspectors. The average number of inspectors per inspection was 1.89 (STD=1.139), and the average number of issues assessed by inspector was 28.81 (STD=27.354). If we only look at formal inspections then these values are 2.71 (STD=1.163) and 42.38 (STD=23.546) respectively. If we look at different strata these values are 2.51 (STD=1.619) inspectors per inspection and 21.74 (STD=21.095) issues per inspector in the case of zoos with a full licence, 1.71 (STD=0.842) inspectors per inspection and 33.73 (STD=28.752) issues per inspector in the case of zoos with 14.2 dispensations, and 1.30 (STD=0.7022) inspectors per inspections and 9.70 (STD=12.315) issues per inspector in the case of 14.1 dispensation zoos.

Inconsistencies

54% (n=738) of the reports we received were written in forms, with just 6% (n=400) of them not using the DEFRA form. In 97% (n=400) of the reports with forms inspectors wrote explanatory notes next to the tick boxes and, subsequently, inconsistencies were found in 82% (n=400) of these reports.

“False YES”

We found 2,192 “False YES” items in all the inspections (see discussion for meaning of “False YES”), which represent an average of 5.49 per inspection (STD=5.167), or 6.34 (STD=5.202) if we only count formal inspections. 82% (n=400) of the inspection forms had at least one “False YES” item, as in 94% (n=340) of the inspection reports written in DEFRA’s ZOO2 forms, which is equivalent to saying that most zoo inspectors showed inconsistencies in their reports.

Table 13 shows the averages for each stratum separately:

TABLE 13: Averages of “False YES” and “NO” ticks assessments in inspection reports in England since 2005, per stratum.

	Full licence	14.2 disp.	14.1 disp.
Average of <i>FALSE YES</i> tick assessments per inspection	6.44	5.18	7.25
STD	5.088	5.025	13.175
Average of <i>NO</i> tick assessments per inspection	2.48	5.31	2.00
STD	3.576	7.604	1.155

Seventeen zoological collections (8% of the zoos, n=207) had inspections with 30 or more unsatisfactory issues identified by inspectors. These are COR46, EDE51, FAL56, FAR59, HUX72, KIN77, MEL88, PET108, RAR113, REA114, SHE272, THE139, TRO143, TRO146, TRO147, WET155 and YOR169. The inspection that showed more “Real NOs” (48) was undertaken the 31/05/2006 in the collection coded KIN77. Regarding inspections that showed the highest number of “False YES” cases (and the highest number of inspector’s inconsistencies), 7 collections (3% of the zoos, n=207) showed inspections with 20 or more (which of course this is not the fault of the collection but of the inspector who inspected it). The three inspections with the highest number of “False YES” cases were the 04/03/2005 first inspection for REA114, the 15/05/2006 periodical for TRO147, and the 25/04/2006 renewal for SEA119 (all of them with 27 “False YES” cases).

Examples to illustrate cases of “False YES” are:

SEA119 (25/04/2006): In 20 tick-boxes marked as YES the note boxes next to them start with “*but see note...*” in the back, the notes referred previously show that they should not have been marked as YES. For example, Q2.13 states “*Are medicines correctly kept?*”; it is ticked as YES; the note box next to it says “*but see note 5*”; and in the back note 5 states, among other things, “*All backup areas had a messy, disorganised appearance...A check on drug storage revealed out of date ketamine anaesthetic. The arrangements in relation to this and any antidote were not clear. There is a clear need for a thorough spring-clean of pharmaceutical or chemical substances with appropriate disposal of redundant material*”.

ENG52 (25/06/2006): This inspection has 19 cases of “False YES”. One of them is Q1.2 that asks “*Is food and drink appropriate for the species/individual supplied?*” the answer is ticked as YES, and the box by it says “*But no water in secretary birds*”. Another example is Q3.3, which asks, “*Are observations on condition and health made and recorded?*” it is ticked as YES, but the note by it says “*But not in all cases*”.

WHI279 (31/10/2008): This inspection has 12 cases of “False YES”, all with a note by them simply saying “*see special note*”. In the back, the licence conditions and recommendations deal with some of these questions. For example Q2.8 is “*Is all drainage effective and safe?*” it is ticked as YES and in the back, the additional condition 7 states “*Improve the drainage to the external standing of the Indian Rhino exhibit by the next Full inspection*”.

WOB280 (10/07/2007): This inspection does not show a single item ticked as NO, and yet there are 13 “False YES” cases (such as Q8.11, which states “*Are the special safety requirements for walk-through and drive-through exhibits adequately met?*” it is ticked YES, the note says “see recommendations”, and in the back a recommendation states “*provide an additional fence at the unguarded corner of the Wallaby walk-through*”). In this case the use of the grade system in the YES boxes seems to have eliminated the option of marking an item as NO (the inspector seems to think that if the issue is considered poorly performed the grade will show that, but never to the point to “fail” the item with a NO).

DUD252 (22/03/2007): This inspection has a blanked “YES”, with not a single item ticked as NO or N/A, and yet there are nine “False YES” cases, such as Q3.2 which asks “*Do all animals displayed to the public appear to be in good health?*”, is marked as YES, the note says “*See additional notes on page 9*”, and in such page we can read “*Page 5, Item 3.2 - But lameness noted in a few barbary sheep and a few underweight specimens noted in the reptile house.*”

ILF73 (06/06/2005): In the back of the report the inspector writes “*The new life support system works well but a current problem with the system is the (sic) is creating the production of micro bubbles that can be a cause of fish mortalities and diseases*”, and yet the questions such as Q.2.1 “*Is each animal provided with an environment well adapted to meet the physical, psychological and social needs of the species to which it belongs?*” or Q3.1 “*Is each animal provided with a high standard of animal husbandry?*” are all ticked as YES.

SOU274 (16/10/2007): Q8.1 “*Are there satisfactory measures in place to prevent the escape of animals*” marked as YES, while the notes in the box by it show “*BUT escapes still occur. Enclosure and thus perimeter effectiveness may be compromised. New perimeter fence in plan*”. In 2010 inspectors continue reporting about escapes.

Over the six-year period, the annual average of percentage of “False YES” cases is 6.68% (STD=8.267%). Looking at it per stratum we find 7.78% (STD=10.982%) for collections with a full licence, 6.31% (STD=7.125%) for collections with 14.2 dispensations, and 7.94% (STD=14.080%) for collections with 14.1 dispensations. Figure 14 shows the progress of this percentage over the years, calculated with all inspections or with only formal inspections:

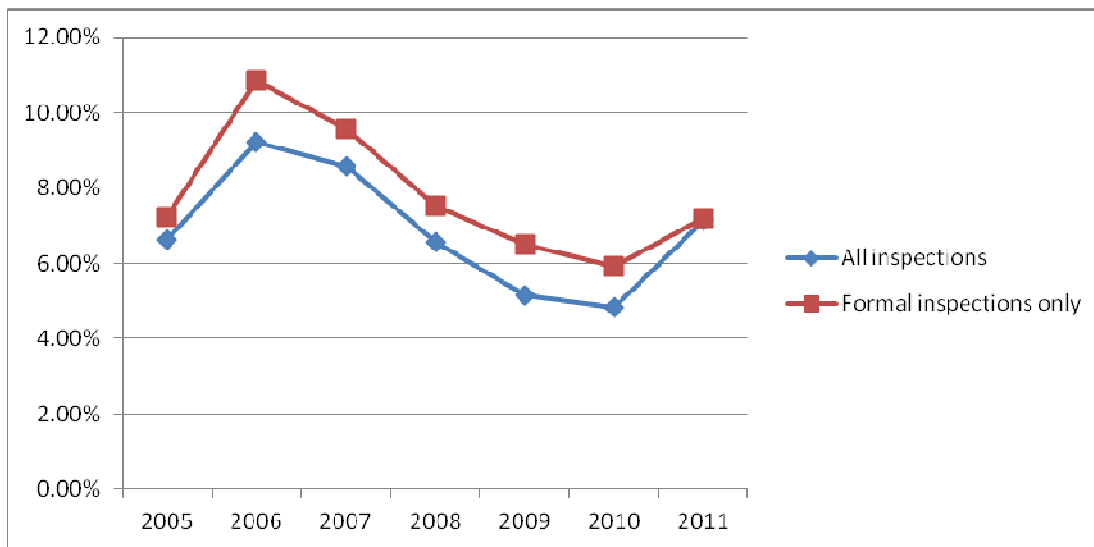


FIGURE 14: Annual average of percentages of “False YES” tick assessments in inspection reports in England since 2005, per year.

Figure 15 shows the average number of comments by tick boxes made by inspectors during the period studied.

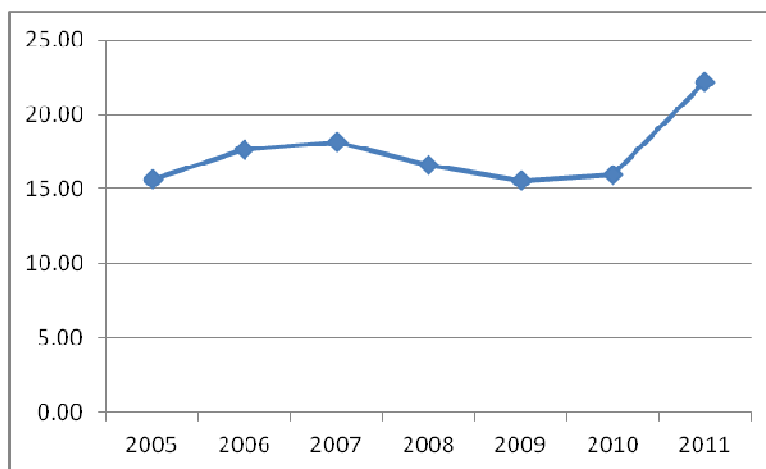


FIGURE 15: Annual average of number of comments by tick boxes in inspection reports in England since 2005, per year.

“Existing licence conditions met?”

In 34% (n=340) of the reports written in ZOO2 forms, the inspectors stated (with the Q12.3 in the form) that the existing licensing conditions were met while the information in their own reports suggested otherwise.

The worst cases of this type of inconsistency are particular inspections in the collections coded COR46, SEW124, TUR149, and WET155 which showed 5, 10, 5 and 6 breaches of licence conditions respectively despite the inspector answered YES to question 12.3. A specific example to illustrate how some of these cases look like is the inspection for SMI126 made the 26/08/2008, in which Q12.3 was marked as YES, but the adjacent note box stated “or in progress”.

There are many examples of inspectors wrongly answering Q12.3 related to existing licence conditions breaches. For example:

LON260 (05/05/2010). The inspector of this periodical inspection marks as YES the answer to Q12.3. Also, in question 7.1 about *“are the conservation efforts adequate for the resources of the collection?”* he answers it as NO, with the note *“see recommendations”*. Therefore the collection is in breach of the mandatory licence conditions regarding conservation.

SEA119 (25/04/2006): The inspector marks as “N/A” the answer to Q12.3, with the note *“No conditions on previous licences”*. The local authority seemed to have failed to attach at least the mandatory conditions to the licence, but they should be considered as included by the inspector (it will be different for the zoo operator that could use the local authority error to appeal against any action for breaching conditions). Among the mandatory conditions we have the following: *“Accommodate and keep the animals in a manner consistent with the standards set out in the Secretary of State’s Standards of Modern Zoo Practice.”*. This has been breached because according the inspector *“There was evidence of inadequate water quality control and maintenance standards in some of the systems with, for example, brown diatomaceous algae slime, probably the result of excessive nitrogenous waste in the coral reef and other tanks. The skimmer on the piper tank was not functioning. Water sterilisation UV units were missing from some tanks, including in the foyer and in the hammerhead shark area.”*

WIL160 (22/04/2008): The inspector marks as “YES” the answer to Q12.3. Question 8.4 *“Do stand-off barriers appear to be adequate?”* is answered by the inspector with a NO tick, with the note *“some need attention”*. This is a breach of the licence additional condition from previous inspection *“Immediate repair must be carried out to the insecure stand of barriers and handrails”* and possibly also *“the frog pond barrier must be made immediately and the top wires refitted to prevail climbing onto the lower slump surround within three months”*.

COR46 (06/09/2010). In this informal inspection the local authority’s inspector writes to the zoo operator stating the following *“With reference to your conditions you are generally compliant; however there are a few record issues that need addressing. I would to draw your attention to conditions 16, 17, 19, and 30 of your licence...”*

HOW256 (13/12/2010): The inspector marks as “YES” the answer to Q12.3. He answers Q3.8 *“Are on site veterinary facilities adequate?”* with a NO tick and the note *“see specific additional condition”*. In such conditions we find the following: *“The veterinary facility at XXX is considered inadequate for the size and composition of the collection. It should be brought up to a modern standard as a matter of urgency. The floor is difficult to clean and should be provided with continuous sheet floor capable of being effectively cleaned and disinfected. Storage shelving should be removed and replaced with enclosed cupboards with readily cleansable surfaces. Suitable lockable facilities are also required for the correct storage of veterinary medicines – both at room temperature and refrigerated. It is strongly advised that the zoo management discuss these changes with the collection’s veterinarian without delay”*. This issue was already brought up in the previous inspection (2007), and a series of

additional licence conditions related to veterinary facilities were issued to address it, such as *"the storage of carcasses in the veterinary room is not in line with good practice. A separate and secure storage area must be provided (3 months)"* or *"the stock of drugs stored for veterinary use must be checked and all out of date drugs properly dispose of (immediately)"*. If some issues might have been dealt with at the time, it is obvious that not all of them were addressed sufficiently in the opinion of the 2010 inspector to "pass" the zoo on this question. We consider this as a single licence condition breach on "veterinary facilities", despite there was several specific conditions involved.

YOR170 (21/01/2005): The inspector of this informal inspection marks as "YES" the answer to Q12.3. In a letter from the inspector sent to the zoo operator regarding this inspection he writes regarding prairie dogs the following: *"It does not appear that these are breeding but I feel this is just as well because their enclosure is not secured. They are digging out and will live and breed in the wild, which could lead to control issues. I am not sure what the legislative requirements are with regard to confinement but I certainly think that it would be a good practice to ensure they are completely confined. I appreciate this might be easier said than done!"*. Therefore the zoo was in breach of the mandatory licence condition *"preventing the escape of animals and putting in place measures to be taken in the event of any escape or unauthorised release of animals"*.

KIN77 (23/03/2010): The inspector marks "YES" to the answer to Q12.3, but with the note *"except conditions 18, 20 and 26"*.

Omissions

26% (n=400) of the inspection reports forms were incomplete (29% of which had missing dates, 19% because boxes were not ticked, 9% were missing final conclusions, etc.), and some inspectors (especially from the local authorities) did not create any records of their inspections (as several local authorities told us when they could not send us the reports we requested).

There are many examples of omissions in inspections, for example:

BLU24 (16/04/2009): In this periodical inspection DEFRA inspectors omit an important health problem in a fish tank which was identified five months later by vets, and that by then had become chronic. This is known because the local authority vet that joined the inspection wrote his own separate report mentioning it.

BLU23 (27/05/2009): The ZOO2 form was used for this informal inspection but none of the veterinary issues and most of the conservation issues were not assessed.

BUT38 (11/11/2008): The DEFRA inspector for this renewal inspection did not finish writing the report until months later. This report contains many "N/A" that were considered applicable in previous inspections.

INT74 (02/12/2009): The DEFRA inspector for this periodical inspection stated that it makes no sense to concentrate too much on the issues that are still works in progress. This probably produced fewer "NO" answers on the report. (08/05/2009).

The local authority inspector used his own form but he did not answer the question about whether the existing licence conditions have been met.

TRO147 (15/05/2006): The inspector for this periodical inspection avoided ticking many NO boxes by leaving the boxes of unsatisfactory issues unselected and only writing on the notes next to them. However, he does tick all the boxes of satisfactory issues with YES, so at first glance the report appears to pass the zoo on most issues.

RAR113 (18/06/2007): The DEFRA inspector did not write any date, type of inspection or final conclusion in his ZOO2 inspector report form.

WES153 (26/06/2007): The DEFRA inspector marks as NO question 12.3 on account of failing conservation conditions but does not select any option in the final conclusions leaving them all blank (although he adds additional conditions).

LIN259 (07/11/2008): Because there is not vet present in this informal inspection, the inspectors stated that he would not comment on animal husbandry and welfare matters.

Inspector's final recommendations

79% (n=738) of the inspection reports ended with the inspector not recommending any change regarding the licensing situation (either granting the licence without additional conditions for first or renewal inspections, or not changing the existing licence for the rest). Table 14 shows the relative frequency of final conclusions given by inspectors regarding licensing issues respect reports written in DEFRA forms (n=363¹⁶), and therefore mostly from formal inspections:

TABLE 14: Frequency of inspection reports in England since 2005 with different final inspectors' conclusions.

Final inspector 's conclusion	Frequency	Per DEFRA's form
Granting the licence without additional licence conditions	125	34%
Granting the licence with additional licence conditions	206	57%
Granting the licence altering the current licence conditions	31	9%
Refusing granting a licence	0	0%

Figure 16 and Table 15 show these values per stratum:

¹⁶ It was necessary to eliminate from this calculation those inspections where the inspector forgot to fill the final conclusion question

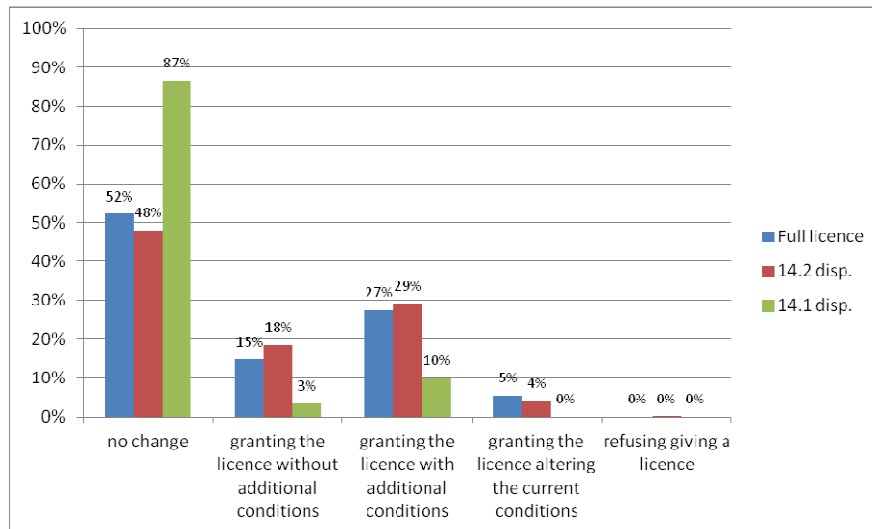


FIGURE 16: Relative frequency of inspection reports in England since 2005 with different final inspectors' conclusions, per stratum

TABLE 15: Relative frequencies of inspection reports which failed to recommend refusing to grant a licence to a zoological collection in the cases where inspectors found information that suggested that licence conditions had not been met, per stratum and type of inspection reports used in the assessment.

	All Inspections	Formal inspections	Current formal inspections
All zoos	24%	33%	30%
Full licence zoos	21%	31%	27%
14.2 dispensations	26%	33%	32%
14.1 dispensations	3%	33%	0%

There are many examples of what we consider mistakes in the inspection final conclusions. For example:

SMI126 (20/07/2010): In this renewal report the inspector spells out the "dilemma" when inspecting a farm that is gradually becoming a zoo. He recommends the option of removing all exotics so it's no longer a zoo, or suggests that the establishment bring itself up to standard and cease commercial farming. Rather than not granting the licence until one of the options is chosen, the inspector chose to leave the final conclusions blank.

SEA121 (09/03/2006): The DEFRA inspector concludes that the licence should be granted without additional conditions while failing the zoo on conservation (he ticked NO in Q7.5).

SEA118 (03/05/2007): The DEFRA inspector concludes that the licence should be granted without additional conditions having recognised that the collection had breached two licence conditions regarding the accommodation of animals and the stocklist.

LIV86 (27/06/2007): The inspector concluded that the licence should be granted with additional conditions, but failed to suggest any additional conditions.

OWL102 (04/03/2005): The DEFRA inspector concluded that the licence should be granted without additional conditions while answering NO to Q12.3 about whether existing licensing conditions have been met.

SOU274 (02/12/2010): The local authority inspector concluded that the licence should be granted without additional conditions while in the notes stating that not all the existing licensing conditions have been met.

BUT38 (11/11/2008): The DEFRA inspector concluded that the licence should be granted without additional conditions while answering NO to Q12.3 about whether existing licensing conditions have been met, and identifying two licence conditions breaches (Including conservation).

Inspectors' errors

At least 61% (n=738) of the inspection reports, and 94% (n=316) of the formal inspection reports, had any "errors of judgement" (see discussion for definition), covering 79% (n=207) of the zoological collections, or 90% (n=160) of the collections with formal inspection reports. Figure 17 and Table 16 show the values of these percentages per stratum:

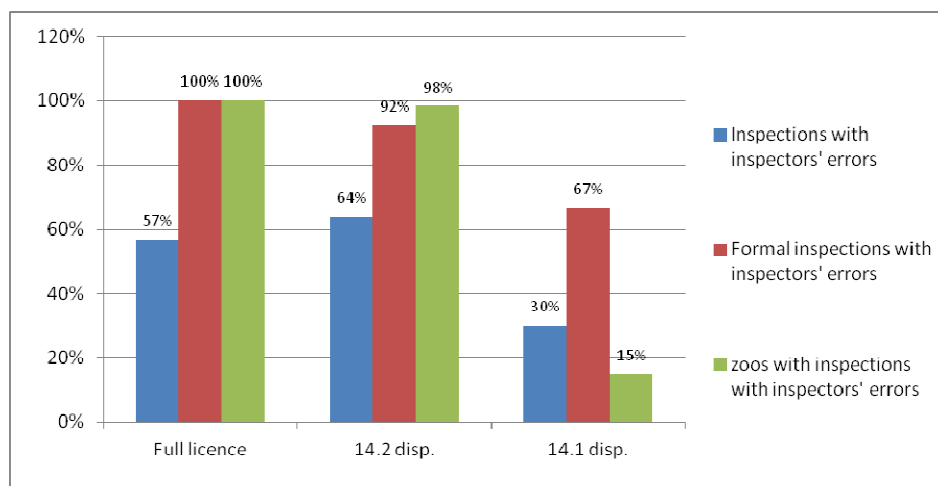


FIGURE 17: Relative frequency of inspection reports and zoos in England since 2005 with inspectors' errors, per stratum.

TABLE 16: Relative frequencies of inspection reports for zoological collections in England since 2005 where inspectors made "errors of judgments", per stratum and type of inspection reports used in the assessment.

	All Inspections	Formal inspections	Current formal inspections
All zoos	61%	94%	95%
Full licence zoos	57%	100%	100%
14.2 dispensations	64%	92%	94%
14.1 dispensations	30%	67%	50%

There are many examples of inspections where it can be argued that the inspectors' judgement could be questioned, for example:

LIB84 (14/11/2008). As stated in his report the DEFRA inspector had visited the site before as part of a police raid due wildlife offence of previous owners; in consequence, he was comparing the current standards of the establishment with those at that time, and despite identifying eight unsatisfactory issues, he did not recommend any additional licence conditions.

THE139 (08/10/2008). The DEFRA inspector did not tick many "NOs" while his own notes suggested that he should have, due to specific breaches of conditions (which he admits in the recommendation section). The zoo operator did not seem to improve on most of the issues raised by previous inspectors possibly to plans to relocate. On a particular breach of licence conditions the local authority was even more lenient than the DEFRA inspector, writing the following in a letter to the zoo operator: *"I have taken what I consider to be a more pragmatic view on the issue than Mr XXX and I have allocated you 3 years from the date of commencement of the licence to meet the requirement ..."*

COR46 (25/05/2009): In this renewal inspection where several breaches of licence conditions had been found again (as in the previous formal inspection), the DEFRA inspector wrote this remark about the future which suggests that he was not correctly valuing the current problems of the collection, and had been too lenient with the zoo operator: *"sadly, in this day and age hard work and commitment is not enough, but with relevant support and a bit of good fortune hopefully the new vision will in the fullness of time become a reality"*.

BIR240 (04/11/2009): This inspection found many unsatisfactory issues (19) including two breaches of licence conditions, and yet the inspector praises the zoo for its improvement (despite the fact it has now more unsatisfactory issues than the previous formal inspection).

WOR167 (18/10/2006): The DEFRA inspector states that conservation does not apply to this collection, clearly against the ZLA and the EU Zoo Directive provisions. In 03/11/2010 the error is repeated, and this collection, despite having breached licence conditions as in the previous formal inspections, despite having failed in conservation efforts for several years, and despite having shown 19 and 17 unsatisfactory issues in the last two formal inspections, is allowed to continue operating.

WHI279 (10/12/2007): Nine of twelve additional conditions suggested by the inspectors in this fresh licence were based on "present proposals" rather than actually making improvements. For instance *"Present proposals for the improvement of the Red Rive Hogs Exhibit by the end June 2008"*. The following year's periodical inspections showed 13 unsatisfactory issues and four breaches of licence conditions.

TRO147 (29/04/2008): The inspector of this renewal inspection appears lenient with the zoo operators despite detecting 35 unsatisfactory issues and four breaches of licence conditions because the zoo operators are relatively new owners of this zoo (licence transfer made a year earlier).

CHE245 (30/12/2010): After a few years of dealing with an issue regarding the welfare of gorillas, in this inspection the zoo operator managed to convince the inspectors that their previous suggestion to move the gorillas to a new bigger enclosure should be reviewed because it was too expensive and against the conclusions of "*our intensive consumer research*". It appears that business interests of the zoo operator eventually prevailed over the animal welfare concerns of the zoo inspectors.

Local Authority inspectors

In 26% (n=349) of the informal inspections (carried out by local authority inspectors) recognised breaches of licence condition are identified and, of those, in only 57% are these breaches explicitly stated (the rest is deduced from his/her notes).

In only one informal inspection in our study was an alteration of a licence condition found. In 18 inspections new licence conditions were suggested. In the remaining informal inspections (95%, n=349) no changes to licences or their conditions were recommended (either explicitly or tacitly) by local authority inspectors.

We found "False YES" answers to the question about breaching existing licence conditions in 16% (n=243) of informal inspections. In 46% (n=79) of informal inspection reports made on DEFRA forms, there were cases of inconsistencies in the form of the "False YES".

There are many examples of local authority inspector poor performance. For instance:

SEC123 (28/03/2007). Local authority inspectors did not seem to check the licence conditions, as the following year the DEFRA inspector detects two breaches that that this inspector completely overlooked.

THE139 (18/02/2010). The local authority inspectors seem to turn a blind eye to unsatisfactory issues detected during the inspection due to the plan to move the zoo to another location. Inspector in 2008 recommended inspecting again in 3 months after his inspection, but this did not happen until two years later. It had not been inspected in 2005 and 2006 either. The 2010 inspection should have been a renewal with DEFRA inspectors, but it was, instead, an informal.

WET155 (02/08/2007). Local authority inspectors had apparently not checked compliance with conditions as, on the next DEFRA inspection the zoo fails again on the same issues that the local authority inspector had passed them in during this inspection. The DEFRA inspectors in further inspections speculate that perhaps the zoo operator "did not understand" the licence conditions.

FAR59 (31/03/2009). The local authority inspector considered information about "rare breeds" of farm animals as conservation work in the context of the ZLA. DEFRA inspector on 28/03/2011 did not correct this mistake.

THR276 (31/08/2005): In a collection with a full licence and 345 specimens, the local authority inspector marks 50 tick-boxes of the ZOO2 form as "n/a", the highest number recorded in this study, while many of these are in fact "applicable".

WHI279 (18/10/2005): This is a fully licensed zoo but the local authority inspectors in this informal inspection ignored most of the issues in his ZOO2 report, in particular all

the questions under section 3,6 and 7. Regarding questions under section 1 he seems to focus only on elephants. This is a clear example of what appears to be an elephant-oriented special inspection made in place of the informal inspection that should have checked for compliance on all licence conditions.

TRO143 (08/12/2008): The local authority inspector in this informal inspection did not look at compliance with conditions, and marked them as “N/A”. In 14/12/2010 this local authority inspector gave the zoo full marks when the DEFRA’s inspector the previous year had added 19 additional conditions to the licence due to the many unsatisfactory issues identified (36) and several previous conditions breaches (3). The local authority did not add the DEFRA inspector’s additional conditions to the licence in either 2006 or 2010.

COR46 (16/10/2006, 05/03/2007, 08/10/2008): Local authority inspectors did not address any of the licence conditions or general zoo standards, and only concentrated on Health & Safety issues. The 2009 renewal inspection found three breaches of the licence conditions that were missed in these three informal inspections.

MEL88 (23/10/2009): In this periodical inspection the DEFRA inspector found 42 unsatisfactory issues and many unsolved problems which had already been highlighted three years earlier during the previous formal inspection. During these three years the local authority inspectors failed to address the issues, and failed to produce any reports from the many informal inspections we know took place.

HOL68 (19/04/2005): The local authority inspector criticised the previous DEFRA inspector’s opinion about the “unacceptable waste disposal”. stating that that his opinion *“is a great example of over the top ‘red tape’ for a small zoo”*. This disagreement is repeated again in the next informal inspection on 23/05/2006 and carries on in following years, while DEFRA inspections find many unsatisfactory issues in the zoo (21 in 2010), and the local authority inspector keep finding none in his informal inspections.

WIN162 (01/07/2010): In this renewal inspection, the DEFRA inspector found 27 unsatisfactory issues and two breaches of licence conditions, while the four previous local authority inspections did not find any unsatisfactory issues at all.

Performance of Zoological Collections

Unsatisfactory issues and practices

We found “unsatisfactory issues” (see definition in discussion) in 74% (n=738) of the inspections covering 80% (n=207) of zoological collections. 12% of all the issues assessed by all the inspectors turned out to be unsatisfactory (n=41410). Even if we do not count the “real NO” cases created by “False YES” answers, we still found a significant number of unsatisfactory issues (71% of the inspection reports in forms, n=400; and 72% of the zoos).

If we only count formal inspections, then we found unsatisfactory issues in 98% (n=316) of the inspections covering 77% (n=207) of zoological collections (or 100% of the collections with formal inspections reports), 13% of all the issues assessed by all the inspectors turned out to be unsatisfactory (n=30191), and if we do not count the “real NO” cases created by “False YES” answers, we still find many cases of unsatisfactory issues (76% of the inspection reports in forms, n=315; and 71% of the zoos, or 92% of the zoos with reports).

In Table 17 and Figure 18 we can see some of these percentages calculated for each separate stratum:

TABLE 17: Relative frequencies of inspection reports for zoological collections in England since 2005 where unsatisfactory issues according to the inspectors can be found, per stratum and type of inspection reports used in the assessment.

	All Inspections	Formal inspections	Current formal inspections
All zoos	74%	98%	99%
Full licence zoos	70%	100%	100%
14.2 dispensations	78%	97%	98%
14.1 dispensations	30%	100%	100%

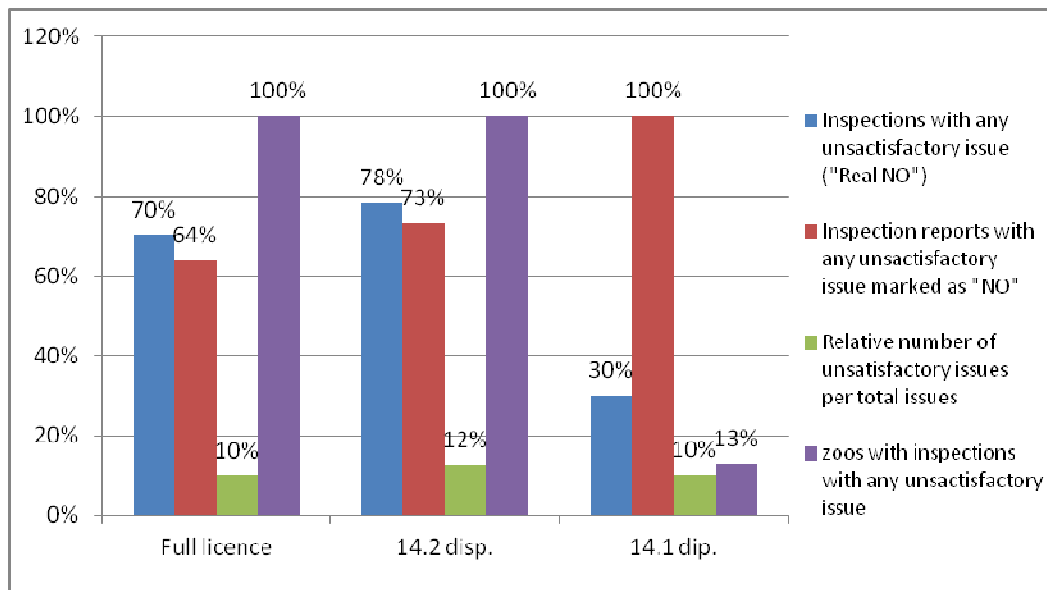


FIGURE 18: Relative frequency of inspection reports in England since 2005 with unsatisfactory issues according to inspectors, per stratum.

Figure 19 shows unsatisfactory issues found per types of zoological collection:

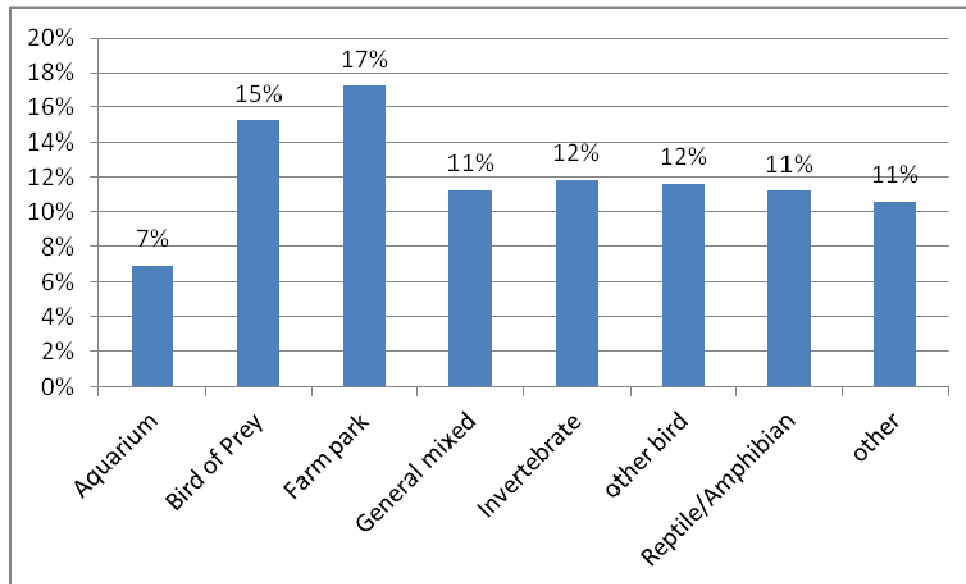


FIGURE 19: Relative frequency of inspection reports in England since 2005 with unsatisfactory issues according to inspectors, per type of zoo

Figure 20 shows the average number of unsatisfactory issues found per inspection over the years:

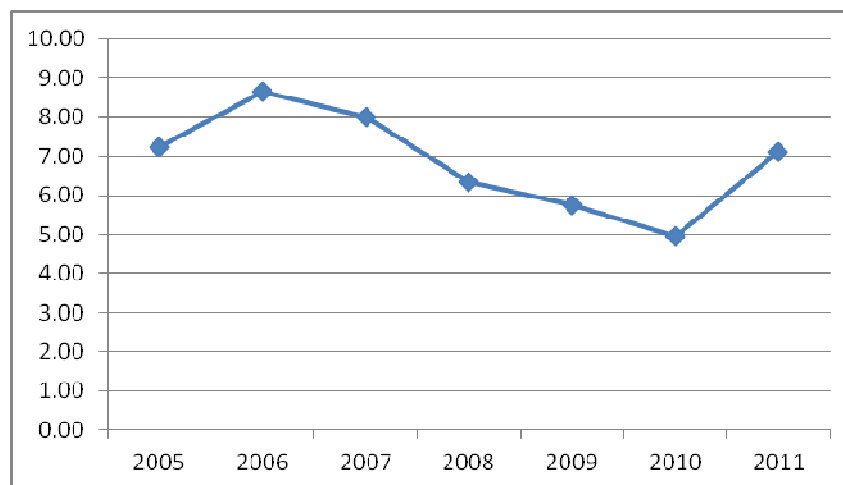


FIGURE 20: Average of unsatisfactory issues found per inspection reports in England since 2005, per year.

Recurring failures

Our study found that 74% (n=738) of inspection reports since 2005 had unsatisfactory issues that had been already flagged up in a previous inspection. We also found that 56% (n=207) of the zoological collections, or 64% (n=179) of the collections with reports, had inspections with recurrent unsatisfactory issues. If we only look at formal inspection reports, then we find 91% (n=316) of the inspection reports and 89% (n=160) of the collections with formal inspection reports.

We found 37% of the inspections showed unsatisfactory issues flagged up by inspectors in the previous inspection, 20% in the inspection before that one, and 17% in inspections before that one. 59% (n=207) of the zoos, or 69% (n=179) of the zoos with reports, had inspections that found issues already flagged up in the previous inspection, 39% or 45% in the inspection before that one, and 35% or 41% in inspections before that one. Table 18 and Figure 21 show some of these percentages per different stratum:

TABLE 18: Relative frequencies of inspection reports for zoological collections in England since 2005 where recurrent unsatisfactory issues according to the inspectors can be found, per stratum and type of inspection reports used in the assessment.

	All Inspections	Formal inspections	Current formal inspections
All zoos	74%	91%	87%
Full licence zoos	68%	88%	85%
14.2 dispensations	77%	92%	87%
14.1 dispensations	67%	100%	100%

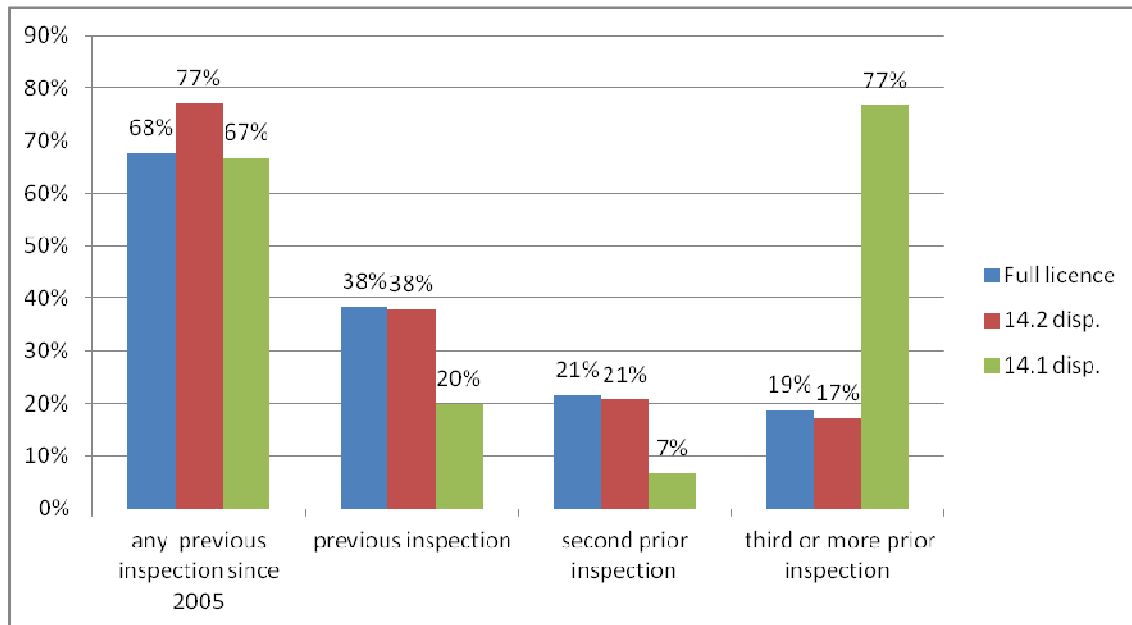


FIGURE 21: Relative frequency of inspection reports in England since 2005 with recurrence of unsatisfactory issues according to inspectors, per stratum.

Figure 22 shows the actual number of recurrent issues involved in the whole study, both for all inspections and for formal inspections alone:

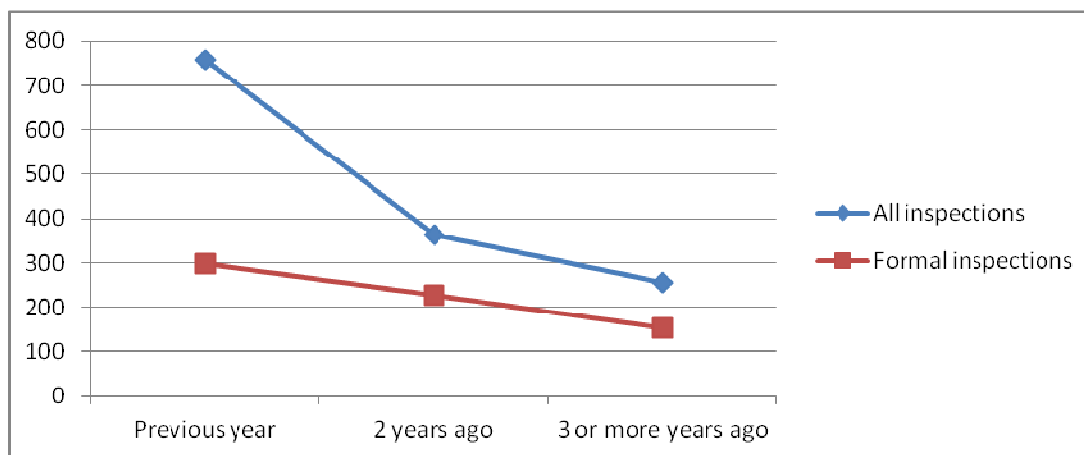


FIGURE 22: Total number of recurring unsatisfactory issues found by inspectors in inspection reports in England since 2005, per time of recurrence.

Examples of recurring failures are six years of non-compliance with a condition relating to a perimeter fence in the case of AFR237; the five-year-old issue of sub-standard off-display aviaries of LIB84; the 17 three-year or more recurrent issues on enclosures, veterinary care and records found in a 2009 inspection of COR46; and the recurrent escape of animals reported in 2011 for DRU251, when breaches on perimeter fence conditions had already been reported in 2008.

Zoo compliance

Pre-inspection audit

43% (n=738) of the all inspections, and 94% (n=340) of the formal inspections, had pre-inspection audit sent in ZOO1 forms. According to the inspectors themselves, in 53% (n=318) of the inspections where pre-inspection audits had been sent, the audit was incomplete (this percentage is 36% for zoos with a full licence, 57% for zoos with 14.2 dispensations, and 100% for zoos with 14.1 dispensations). This happened at least once in 57% (n=207) of the zoological collections.

We only found pre-inspection audits in the correspondence from local authorities for 6% (n=738) of the inspections, representing 19% (n=207) of the zoos, which is just 12% (n=340) of the pre-inspection audits we know existed.

Recognised breaches of licence conditions

Our study shows that in 35% (n=738) of inspections, breaches of licence conditions had been recognised by the inspectors. In total we identified 573 recognised breaches, which represent an average of 0.8 breaches per inspection. We found recognised breaches of conditions at least once in 54% (n=207) of the zoological collections. This percentage grows to 62% (n=179) if we only look at collections from which we have any reports.

If we only use formal inspections, then we find that that in 44% (n=316) of the inspections recognised breaches of licence conditions had occurred, we found recognised breaches of conditions in at least once in 62% (n=160) of the collections with inspection reports).

21% (n=684) of reports, and 23% (n=340) of the reports in ZOO2 forms, the inspector clearly shows that existing conditions had not been met by the way question 12.3 was answered (including adjacent notes to it).

19% (n=340) of the reports in ZOO2 forms the inspector clearly shows that existing conditions had not been met by answering NO to question 12.3 (ignoring adjacent notes to it). Using this most conservative measure we find still that 30% (n=164) of the zoological collections from which we have received at least one DEFRA inspection form had one or more breaches of licence condition explicitly and unequivocally registered by inspectors in their report forms.

Figure 23 and Table 19 show the number of recognised breaches of licence conditions found in each different stratum:

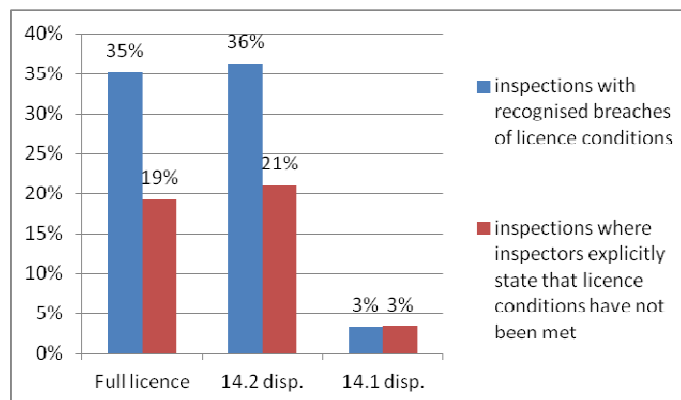


FIGURE 23: Relative frequency of inspection reports in England since 2005 with recognised breaches of licence conditions, per stratum.

TABLE 19: Relative frequencies of inspection reports for zoological collections in England since 2005 where recognised breaches of licence conditions can be found, per stratum and type of inspection reports used in the assessment.

	All Inspections	Formal inspections	Current formal inspections
All zoos	35%	44%	43%
Full licence zoos	35%	49%	48%
14.2 dispensations	36%	43%	42%
14.1 dispensations	3%	33%	0%

Figure 24 shows the average number of recognised breaches of licence conditions per inspection found throughout the years:

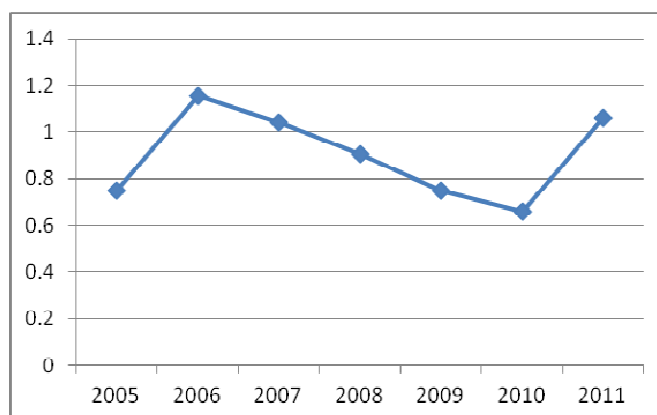


FIGURE 24: Average number of recognised breaches of licence conditions per inspection reports in England since, per year.

Appendix I below shows the list of the zoological collections in this study which had recognised breaches of their licence conditions identified in any of the inspections sent to us by their local authorities (the values shown are the averages of numbers of breaches per collection).

In 10 zoological collections (6% of the collections with reports) we found that inspectors had answered NO to question 12.3 in more than one inspection since 2005. These are COR46, WES153, HUX72, WOO165, BUT37, WOR167, THE139, TRO143, KNO79, and YOR169. In two cases it was found in three inspections (the two latter collections).

Compliance with licence conditions defined in the EC Zoos Directive

Our study shows 64% (n=738) of inspections revealed unsatisfactory issues regarding EC Zoos Directive conditions (incorporated into Section 1A of the Zoo Licensing Act 1981). We found that 77% (n=207) of the zoos have had unsatisfactory issues in relation to conditions since 2005. If we look only at formal inspections, then we find issues in relation to the EC Zoos Directive conditions in 87% (n=316) of all inspections and 95% (n=160) of the zoos with formal inspection reports. Figure 25 and Table 20 show these values per stratum, together with other variables:

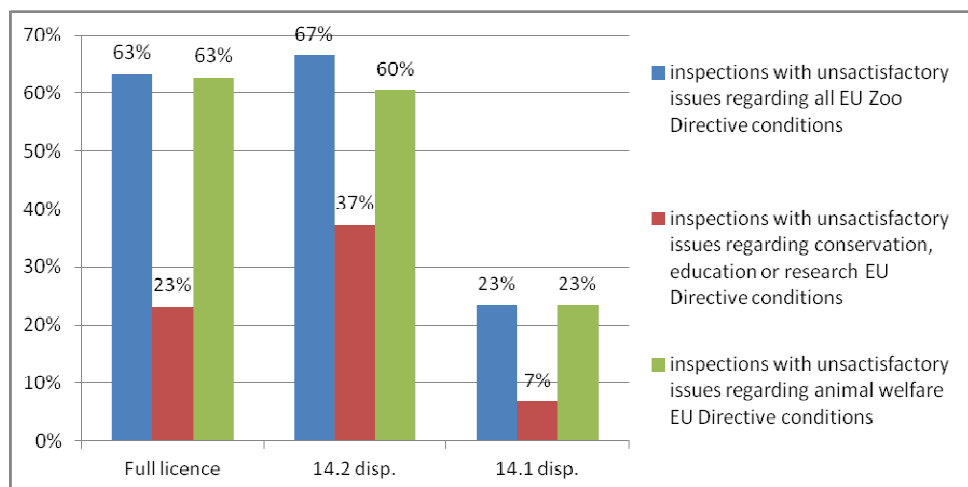


FIGURE 25: Relative frequency of inspection reports in England since 2005 with unsatisfactory issues according to inspectors regarding EC Zoos Directive conditions, per stratum.

TABLE 20: Relative frequencies of inspection reports for zoological collections in England since 2005 where unsatisfactory issues (breaches), according to the inspectors, on EC Zoos Directive conditions can be found, per stratum and type of inspection reports used in the assessment.

	All Inspections	Formal inspections	Current formal inspections
All zoos	64%	87%	89%
Full licence zoos	63%	97%	97%
14.2 dispensations	67%	84%	87%
14.1 dispensations	23%	67%	50%

Figure 26 shows the occurrence of inspections with unsatisfactory issues on EC Zoos Directive conditions through different years (both for all collections and for formal collections alone).

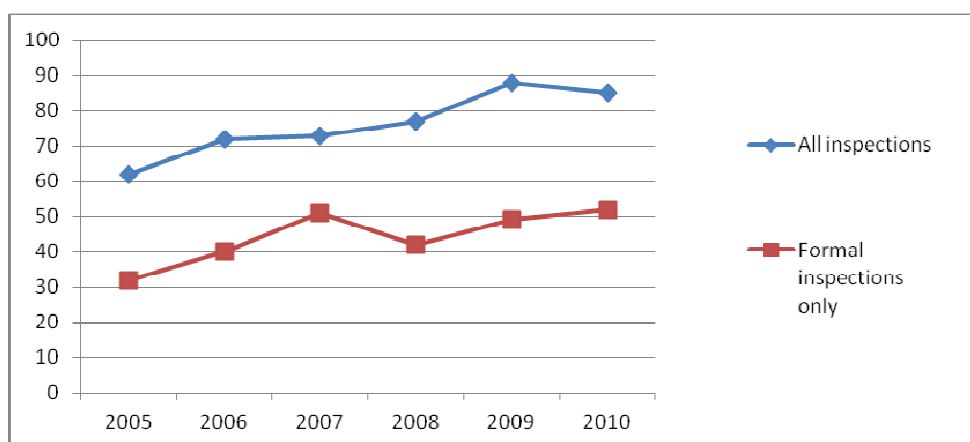


FIGURE 26: Frequency of occurrence of in inspection reports in England since 2005 of unsatisfactory issues according to inspectors regarding EC Zoos Directive conditions, per year.

Figure 27 shows frequency of occurrence, since 2005, of zoos in England with any unsatisfactory issue, according to inspectors, regarding EC Zoos Directive conditions found in their inspections, per groups of two years.

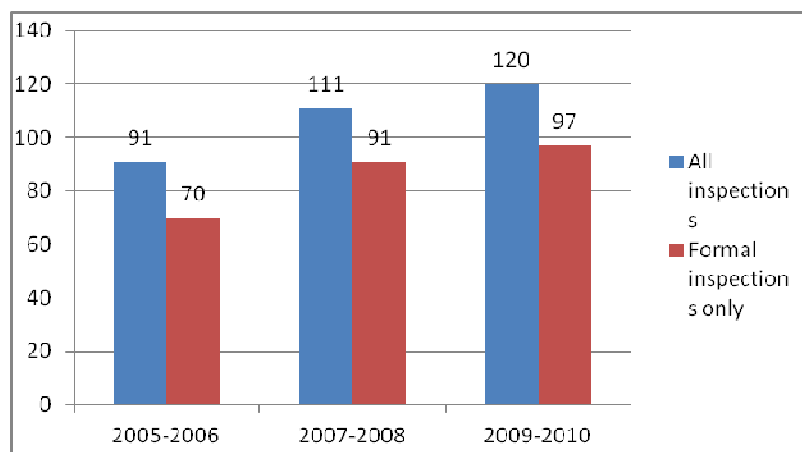


FIGURE 27: Frequency of occurrence since 2005 of zoos in England with any unsatisfactory issue according to inspectors regarding EC Zoos Directive conditions found in their inspections, per year.

Our study shows 63% (n=738) of inspections had unsatisfactory issues regarding the EU Zoo Directive conditions on animal welfare and conservation, education and research, and 75% (n=207) of the zoos have had unsatisfactory issues on these conditions since 2005. On the other hand, only 1% (n=738) of inspections had unsatisfactory issues regarding the EC Zoos Directive conditions on the environment or enforcement, but not on animal welfare or conservation, and 3% (n=207) of the zoos have had unsatisfactory issues only on these conditions since 2005. Examples of these last type of conditions are failure to prevent escapes (we have found this in, for instance, FLA253, YOR169, BIR20, WHI279, SOU274, ANI7, EDE51, TRO147, or DRU251) or failure to keep records properly (we have found this in, among others, NEW96, WOR167, EDE51, YOR169, COR46, BUT36, PRI111, THE136, SMI126, BEN17, TRO143, BEA16, WIN162, etc).

If we only look at formal inspections, our study shows 87% (n=316) of inspections had unsatisfactory issues regarding the EU Zoo Directive conditions on animal welfare and conservation, education and research, and 93% (n=160) of the zoos have had unsatisfactory issues on these conditions since 2005. On the other hand, still only 1% (n=316) of inspections had unsatisfactory issues regarding the EC Zoos Directive conditions on the environment or enforcement, but not on animal welfare or conservation, and 1% (n=160) of the zoos with formal inspection reports have had unsatisfactory issues only on these conditions since 2005.

Compliance with EU Animal Welfare licence conditions

In 59% (n=738) of the inspections reports we found unsatisfactory issues related to the EC Zoos Directive animal welfare conditions. Also, since 2005, 76% (n=207) of the zoological collections, or 88% (n=179) of the collections with reports sent, have had unsatisfactory issues related to the EC Zoos Directive conditions of animal welfare. Even if we ignore the inspectors' answers that we qualified as "False YES", we still find 41% of the inspection reports and 64% (or 74%) of the collections. Figure 25 and Table 21 show the values per stratum.

TABLE 21: Relative frequencies of inspection reports for zoological collections in England since 2005 where unsatisfactory issues (breaches), according to the inspectors, on EC Zoos Directive Animal Welfare conditions can be found, per stratum and type of inspection reports used in the assessment.

	All Inspections	Formal inspections	Current formal inspections
All zoos	59%	84%	86%
Full licence zoos	63%	97%	97%
14.2 dispensations	60%	81%	84%
14.1 dispensations	23%	67%	50%

If we only look at formal inspections, we find that in 84% (n=316) of the inspection reports unsatisfactory issues were found in relation to the EC Zoos Directive conditions relating specifically to animal welfare, which equates to 94% (n=160) of the zoological collections being found to demonstrate unsatisfactory issues in relation to these points since 2005. Even if we ignore the inspectors' answers that we qualified as "False YES", we still find 50% of the inspection reports and 69% of the collections to be non-complaint with these provisions. Figure 25 shows these values per stratum.

Following are some of the many examples we found of collections with unsatisfactory issues relating to the EC Zoos Directive animal welfare conditions:

ENG52 (26/05/2006): Inspector mentioned in his comments and recommendations, among other things: *“Ferret enclosure has little to commend it. Discussed the use of decking so that the animals do not have a concrete floor...barn owl roof needs replacing...the veterinary treatment room must have running water reconnected. Action immediate. Cages need to be cleaned and repainted...”*

BLU25 (28/10/2010): The inspector stated in his recommendations the following: *“Summer temperatures get inappropriately high in the local tanks in summer, compromising welfare of the species they contain. There are plans in place to improve ventilation in the area and this is strongly recommended, with monitoring to assess the impact of such improvements...water quality monitoring needs improving, with particular problems noted with existing equipment resulting in regular user error or inaccurate reading. New equipment is required to monitor PH in particular that is less prone to user error. Water quality protocols need reviewing and improving...the light service protocols for the fly river tank need to be reviewed...the stonefish environmental protocol is inadequate and needs review considering the high risk in envenomation occurs with this species...”*

COR46 (18/06/2006): The inspector stated the following in his licence conditions: *“Fresh fruits and vegetables to be supplied to all Psittacine birds at least 5 days a week...All birds to be supplied with an area of seclusion to be out of the public view...birds from a warmer climate may not be kept tethered through colder months without the provision of heat...if Psittacine Birds are to be kept they must be given suitable aviary space...owls are not to be kept tethered in line with the Secretary of State’s Standards of Modern Zoo Practice...no animal or bird may be kept in a position when it is stressed by the proximity of the public –eg the African Grey parrot...”*

YOR170 (07/05/2006): The inspector stated the following , among others, in the notes next to the tick boxes: *“The primate diets contain unsuitable cafeteria waste, and need to be reviewed... There is a general lack of knowledge or inspiration about exhibit design for anything other than paddock animals, and enrichment furniture is clearly not regularly renewed...out of date and unlabeled drugs kept...PMs [post mortems] should be carried out on most deaths...”*

DUD252 (09/02/2010): The inspector stated the following in the notes next to the tick boxes: *“with the exception of the reptile house, many of whose exhibits have incorrect substrate...we are concerned about the temperature of the giraffe house, which was well below the recommended minimum on the day...need for more UV provisions in the reptile house...but some snake enclosures are too small...one giraffe has overgrown hooves...but the conditions behind the birds aviaries were poor...”*

PAR270 (27/06/2005): The inspector stated the following in the notes next to the tick boxes: *“there is room for improvement for the Emus, Camels and Zebras...the lighting in the quarantine area would not meet the need of all species...it was noted*

the mesh on the Lion gate was showing signs of wear...room lacked an air extraction system..."

SEW124 (31/03/2008): The inspector stated the following in the notes next to the tick boxes: *"but the indoor enclosure of the macaws could be improved. The indoor enclosure of the capuchins needs more ropes...but the isolation building in which a sick pheasant was recovering needs provision of more heat. The adjacent building which houses degus is not appropriate...but the walk through exhibit is crowded...but over preening among the macaws should be looked at..."*

BIR18 (15/05/2009): The inspector commented in his recommendations: *"the aviaries would benefit from some higher perching and areas of shelter from heavy wind and rain. Boxes are not really ideal for this purpose...it is important that proper post mortem examinations are carried out on any bird dying and a report received and filed..."*

WES153 (26/06/2007): The inspector stated the following in the notes next to the tick boxes: *"but marmoset enclosure still has poor ventilation although improved from last inspection...but damage from ageing roof is allowing water to flood into the zoo...no backup facilities for the aquaria...but some out of date drugs need disposal...[isolation and containment] not adequate but new plans should incorporate veterinary treatment area and isolation areas..."*

LOT263 (01/02/2007): The inspector stated the following: *"But the situation in the mixed species enclosure should be kept under review taking into account seasonal changes etc... The effect of the loss of shelter provided by large windbreak trees in the park on the aviaries, birds and environment in the collection should be re-assessed on a regular basis... The existing planned programme of maintenance and repair for the buildings in the collection appears to be inadequate in that certain areas were seen to be seriously affected by timber rot or other deterioration. The plan must be reviewed and these areas prioritised and corrected. Specifically, the inspectors are concerned about, the roofing in Turaco shelter (first three aviaries), the area at back of the owls' enclosure and the broken concrete step also in the Turaco service area. A structural report on the octagonal timber built enclosure must be undertaken. (6months)..."*

DRA250 (08/10/2009): The inspector stated the following in the notes next to the tick boxes: *"The Bosc Monitor's enclosure was considered inadequate and it is recommended that it is moved into a larger enclosure... The effectiveness of the use of UV light in some exhibits in the Reptile house were inadequate (Chelonians) and should be reviewed... The inspectors request that a written schedule for preventive Veterinary Medicine is produced in conjunction with the Veterinary Surgeon appointed for the Zoo... Concern was expressed about the off-show area of the aviary where a parrot with "feather plucking" was evident.*

GOL64 (02/03/2006): The inspector stated the following in the notes next to the tick boxes: *"Metal struts and other horizontal bars likely to be used by birds as perches should all be covered... The new quarantine unit is very good, but there should be an additional, separate, small aviary for monitoring and treatment of sick birds...Grey*

squirrels were seen in aviaries, and corvids are known to cause significant mortality of young birds. The draft control policy must be finalised and implemented...

SUF134 (03/10/2008): The inspector stated the following comments the notes next to the tick boxes: *"but staff kitchen needs to be separated from animal food prep area...some aviaries had inadequate shelter...need to record observations...[vet plan] this must be organised. Twice yearly routine visits and a written programme of veterinary care is needed...more detail on vet treatment needed... [PM] but reports must be held on site..."*

PRI111 (25/02/2008): The inspector stated the following in the notes next to the tick boxes: *"but a review on animal diets is needed...but there is no food preparation area...but the pheasants should have more [shelter]...there were husbandry issues with several bird species..."*

FAL56 (09/05/2008): The inspector stated the following in his conditions: *"My opinion is that the centre is currently over stocked, when considering the space, aviary space, flying grounds, and the work which is to be done...suitable flying grounds must be available daily for all birds, including falcons, eagles and vultures...all bird aviaries to be provided with a seclusion area, where they can avoid the gaze of visitors if they feel stressed...any bird with abnormal health signs MUST be presented to a suitable experienced vet for treatment without delay..."*

BLA241 (24/05/2007): The inspector stated the following comments, among others, in the notes next to the tick boxes: *"sugar glider enclosure is small for this species...several crane aviaries are adjacent and the visual contact between groups may prove stressful. Some screening is advisable...[clinical and pathological records] A formal recorded process should be made...no strict quarantine area is present..."*

Compliance with EC Conservation, Education and Research licence conditions

In 33% (n=738) of the inspections reports we found unsatisfactory issues related to the EC Zoos Directive conservation, education and research conditions. Also, 58% (n=207) of the zoological collections, or 67% (n=179) of the collections with reports sent, have shown unsatisfactory issues in relation to the EC Zoos Directive conditions on conservation, education and research since 2005. Even if we ignore the inspectors' answers we qualified as "False YES", we still find 17% of the inspection reports and 33% (or 39%) of the collections to be lacking in this area. If we only use formal inspections, we find that unsatisfactory issues were found in 52% (n=316) of the inspection reports with regard to the EC Zoos Directive conservation, education and research conditions, which equates to 69% (n=160) of the zoological collections since 2005. If we ignore the inspectors' answers we qualified as "False YES", we still find 20% of the inspection reports and 33% of the collections present unsatisfactory results in this area.

Figure 25 in the chapter before and Table 22 show the percentages of inspections with unsatisfactory issues identified with regard to the EC Zoos Directive conservation, education and research conditions per stratum.

TABLE 22: Relative frequencies of inspection reports for zoological collections in England since 2005 where unsatisfactory issues (breaches), according to the inspectors, on EC Zoos Directive Conservation, Education and Research conditions can be found, per stratum and type of inspection reports used in the assessment.

	All Inspections	Formal inspections	Current formal inspections
All zoos	33%	52%	50%
Full licence zoos	23%	47%	48%
14.2 dispensations	37%	53%	52%
14.1 dispensations	7%	33%	0%

Figure 28 shows percentage of zoos with unsatisfactory issues identified under the EC Zoos Directive Conservation, Education and Research criteria (per type of zoo):

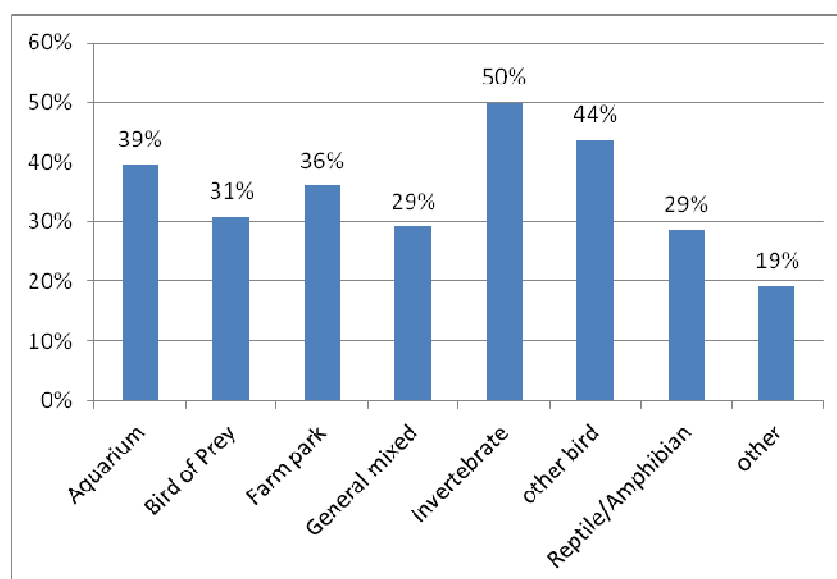


FIGURE 28: Relative frequency of inspection reports in England since 2005 with unsatisfactory issues according to inspectors regarding EC Zoos Directive Conservation conditions, per type of zoo.

We found that in 8% (n=738) of the inspections reports the inspector explicitly noted failure to meet conservation conditions (3% of the inspections of fully-licensed zoos, 10% for zoos with 14.2 dispensations, and 3% for zoos with 14.1 dispensations). Also, 23% (n=207) of the zoological collections, or 27% (n=179) of the collections with reports sent, have inspection reports in which the inspector explicitly failed the collection on conservation provisions. If we only look at formal inspection reports, then we find 13% (n=316) of the inspection reports and 23% (n=160) of the zoological collections with formal inspection reports failing under the same criteria.

Question 7.1 of the ZOO2 form (*“Is the zoo participating in at least one of the following:”*) is different than the others because instead a YES-NO-N/A answers, it gives five possible answers to tick, and as long as the answer is YES in one of them, the question as a whole is “satisfactory” even in the zoo is not participating in the other four. Therefore, this question was analysed separately from the others. The best-performing zoos on this question would

have “passed” all five options, which is the case of 17% (n=738) of the reports or 35% (n=362) of the reports with Q7.1. In the remaining cases only some of the options were chosen. Table 23 summarises the answers given:

TABLE 23: Relative frequency of inspection reports and zoos in England since 2005 with different types of participation in conservation, according to inspectors.

Inspection reports stating the zoo is participating in...	% of reports (n=738)	% of reports with Q7.1 (n=362)	% of zoos (n=207)	% of zoos with reports (n=179)
i) research from which conservation benefits accrue to species of wild mammals	34%	69%	58%	66%
ii) training in relevant conservation skills	33%	67%	58%	66%
iii) in the exchange of information relating to the conservation of species of wild animals	41%	84%	66%	75%
iv) in breeding of wild animals in captivity when appropriate	37%	76%	62%	70%
v) the repopulation of an area with, or the reintroduction into the wild of, wild animals, when appropriate	24%	48%	46%	52%

Following are some examples found in our study of cases that support the idea that little conservation work is occurring in zoos, and that inspectors did not appear to take the conservation requirement of the legislation very seriously:

BUT37 (08/04/2008): It appears that the DEFRA inspector of this periodical inspection considered that the collection “passed” on the conservation for only breeding animals in captivity.

LIN259 (17/02/2011): The DEFRA inspector in this periodical inspection contradicts the YES of previous inspectors in the conservation question 7.1 by marking fewer options with a YES. He only accepts option 3 and 4 while the previous inspectors ticked all the five options. Although it is possible that in a few years the conservation work of the collection may change, it is unlikely that it has diminished in just the last year to the extent of losing all the research, the training and the reintroduction options the other inspectors claimed the collection was participating in.

WOR167 (18/10/2006): The DEFRA inspector states that the conservation requirements do not apply to this collection (which holds a 14.2 dispensation).

BIR20 (13/12/2006): During this informal inspection the local authority inspector failed this collection on the conservation requirements but he passed it on this issue in the previous inspection.

HUN71 (16/01/2006): The DEFRA inspector in this renewal inspection “passed” the zoo on conservation requirements but it is not clear on what grounds he made this

assessment as his comments state that "*there is not much evidence*" regarding the zoo's claim of participating in conservation activities.

CAT42 (05/11/2010): The DEFRA inspector of this periodical inspection accepted as significant conservation work the placing of bird and bat boxes within the zoo's grounds, and the keeping of coppices and woodland undisturbed.

PRI111 (26/10/2006): The local authority's inspector states "*It was pleasing to see the progress in the conservation aims of the park in respect of the placing of a plastics recycling bin near to the children's playhouse. Mr. XXX will be writing to you in the near future to set out a number of options by which the park may meet its full conservation requirements*". Two years later (25/02/08) the DEFRA inspector failed this zoo on the conservation requirements in their renewal inspection, as he had failed it in the periodical three years earlier, although he marked as YES question 12.3 on meeting all existing licence conditions FAR59 (31/03/2009): The local authority's inspector considered information about "rare breeds" of farm animals as conservation work in the context of the ZLA. The DEFRA inspector on 28/03/2011 did not correct this mistake.

SEW124 (31/03/2008): The inspector states that research has been done in this collection, although in reality it seems that it consisted only on students making observations as part of their education work without publishing the results for scientific scrutiny.

BLU24 (27/04/2006): The DEFRA inspectors in this renewal inspection accepted that the collection undertakes sufficient conservation and research, but yet the local authority in 27/03/2008 found that the collection had failed on conservation and research.

WES153(13/03/2010): The DEFRA inspector in this periodical inspection passed the collection on conservation requirements based on guessing what the zoo may achieve in the future rather than what it was doing on conservation at the time of the inspection.

SOU274 (22/11/2009): The DEFRA inspector in this renewal inspection writes the exact same notes on question 7 than in the previous periodical inspection in 2007, but yet this time two of the options are ticked NO instead YES, showing inconsistencies and possibly inaccuracy in "YES" answers in previous inspection.

KNO79: In the inspections made on 08/11/2006, 03/09/2007; and 09/07/2010 the inspectors marked options 1, 3, and 5 in Q7.1 with a YES. In the inspections on 23/10/2008 and 10/09/2009 they marked the options 1, 2, 3 with a YES instead. The collection may be fluctuating in its compliance with these issues or this may be a case of careless and inconsistent assessment by the inspectors.

Zoos' standards of modern zoo practice

Figure 29 shows the average number of different types of unsatisfactory issues and recognised breaches of licence conditions found per inspection reports in England since 2005, per year:

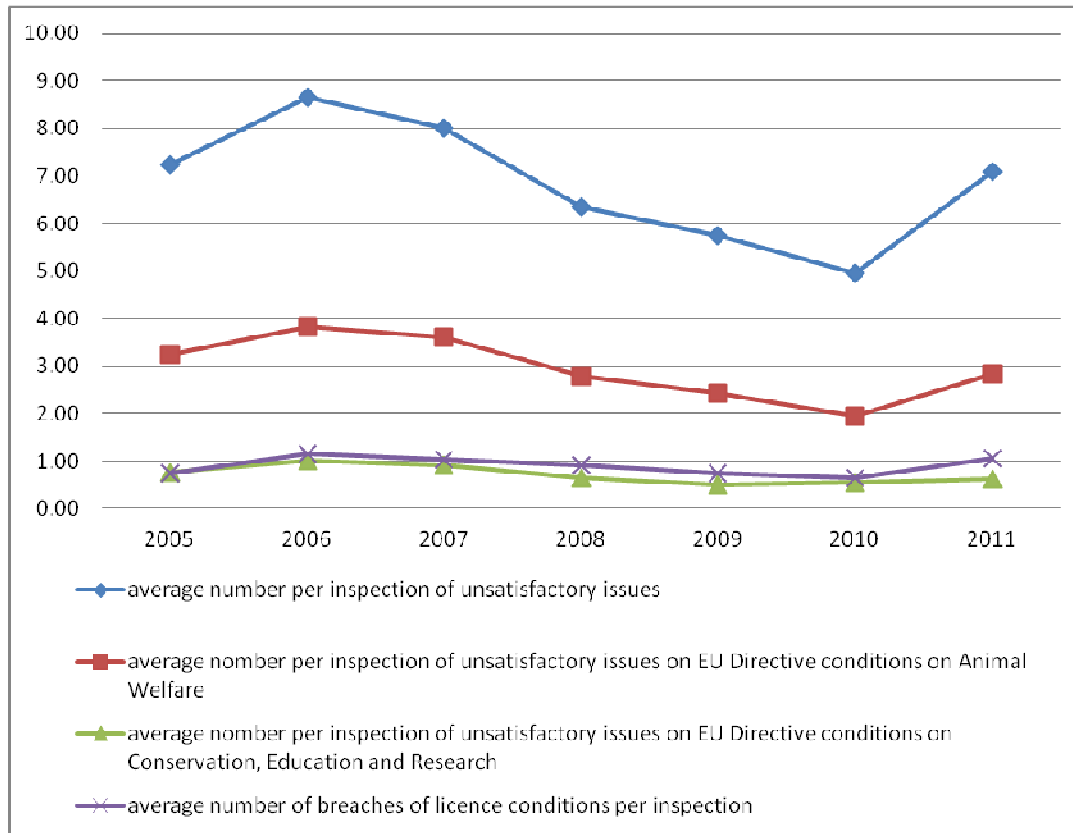


FIGURE 29: Average number of different types of unsatisfactory issues and recognised breaches of licence conditions found per inspection reports in England since 2005, per year.

Table 24 shows the linear regression analysis for the years 2005 to 2010 of the variables of Figure 29.

TABLE 24: Statistical data from lineal regression analysis of different types of unsatisfactory issues and breaches of licence conditions found per inspection reports in England since 2005, and time.

	Coeff.	Std Err	H0: Coefficient = 0		Confidence Ints.	
			T	p-value	Level	0.95
	(est.)				Lower	Upper
Unsatisfactory issues	1664.072	422.7558	3.936249	0.058897	-154.899	3483.044
EC Zoos Directive conditions on Animal Welfare	-2426.19	892.3336	-2.71893	0.112833	-6265.6	1413.208
EC Zoos Directive conditions on Conservation, etc.	-2550.22	1473.725	-1.73046	0.225688	-8891.15	3790.708
Breaches of licence conditions	-318.945	1082.287	-0.2947	0.796001	-4975.65	4337.76

Appendix I shows a table with the values of the averages of the variables used per zoo from which we had at least one inspection report, including the average score regarding

standards per zoo. The average final score of all the inspections of all collections was 0.11 (n=738, STD=1.234). If we only look at the last inspection per zoo in order to have an idea of the “current” situation, the value is 0.26. Calculating the averages per each zoo separately, Table 25 shows the number of zoos with reports sent to us found for each category of standards for the whole sample:

TABLE 25: Frequencies of average scores of standards of modern zoo practice found in zoological collections in England of the 2005-1011 period.

Number of zoos (with reports sent, n=179), averages (based on all inspections)		Freq.	Rel.freq.	Freq.	Rel.freq.
sub-standard	"very bad" standards	0	0%	40	22%
	"bad" standards	12	7%		
	"poor" standards	28	16%		
	"unknown" standards	60	34%		
Over-standard	"minimum" standards	39	22%	79	44%
	"good" standards	29	16%		
	"excellent" standards	11	6%		

The same analysis only with formal inspections can be seen in Table 26:

TABLE 26: Frequencies of average scores of standards of modern zoo practice found in zoological collections in England of the 2005-1011 period, based only on formal inspection reports.

Number of zoos (with formal reports sent, n=160), averages (based on formal inspections alone)		Freq.	Rel.freq.	Freq.	Rel.freq.
sub-standard	"very bad" standards	5	3%	87	54%
	"bad" standards	43	27%		
	"poor" standards	40	24%		
	"unknown" standards	33	21%		
Over-standard	"minimum" standards	25	16%	40	25%
	"good" standards	13	8%		
	"excellent" standards	2	1%		

The same analysis only with “current” formal inspections can be seen in Table 27:

TABLE 27: Frequencies of scores of average standards of modern zoo practice found in zoological collections in England of the 2005-1011 period, based only on the last formal inspection report.

Number of zoos (with formal reports sent, n=160), last inspections (based on formal inspections alone)		Freq.	Rel.freq.	Freq.	Rel.freq.
sub-standard	"very bad" standards	9	6%	117	73%
	"bad" standards	60	38%		
	"poor" standards	49	30%		
	"unknown" standards	4	3%		
Over-standard	"minimum" standards	0	0%	39	24%
	"good" standards	38	24%		
	"excellent" standards	1	1%		

If we compare different strata, we find that the average score on standards of modern zoo practice of zoos with full licences is 0.33 (STD=2.041) while in zoos with a 14.2 dispensation is 0.16 (STD=2.047). If we only look at formal inspections these averages are -0.92 (STD=1.469) and -0.69 (STD=1.742) respectively. Table 28 and

Table 30 show the statistical information on average score per type of zoo:

TABLE 28: Statistical information of the average scores of standards of modern zoo practice found in zoological collections in England of the 2005-1011 period, per type of zoo.

	Aquarium	Bird of Prey	Farm park	General mixed	Invertebrate	Other bird	Reptile/Amphibian	Other
Number	76	117	75	326	26	64	7	47
Mean	0.710	0.051	-0.12	0.236	-0.461	0.031	-0.142	0.8297
St Dev	1.7724	2.1002	1.8450	2.0642	1.8596	2.0076	1.5735	2.0464
Skew	-0.180	0.1810	0.3665	0.1596	0.9855	0.3445	0.6819	-0.4753
Min	-3	-3	-3	-3	-2	-3	-2	-3
Q ₁	-1	-2	-2	-2	-2	-2	-1	-1
Median	2	-1	-1	-1	-1	-1	-1	2
Q ₃	2	2	2	2	1.25	2	1	3
Max	3	3	3	3	3	3	2	3

Table 29: Probabilities for statistical significance Kruskal-Wallis one-way ANOVA tests on the average scores of standards of modern zoo practice found in zoological collections in England of the 2005-1011 period, between different types of zoos.

	Aquarium	Bird of Prey	Farm park	General mixed	Invertebrate	Other bird	Reptile /Amphibian	Other
Aquarium	0	0.01754	0.00794	0.05187	0.002693	0.0301	0.21	0.5515
Bird of Prey	0.4911	0	0.8121	0.3298	0.3257	0.9129	0.9823	0.03454
Farm park	0.2223	1	0	0.2742	0.29	0.8223	0.973	0.01195
General mixed	1	1	1	0	0.1091	0.5154	0.7588	0.0867
Invertebrate	0.0754	1	1	1	0	0.2802	0.4057	0.01515
Other bird	0.8429	1	1	1	1	0	0.9921	0.05399
Reptile/Amphibian	1	1	1	1	1	1	0	0.1917
Other	1	0.9673	0.3345	1	0.4242	1	1	0

As shown in Appendix I, the collections of the sample studied with the highest scores regarding compliance with standards of modern zoo practice calculated using only formal inspections are BLU27 and TRE142. The collections BEA14, CRY234, HUN71, MON90 and NAT94 can be added to these if we count all inspections. On the other hand, the collections with the lowest scores calculated using formal inspections only are EDE51, THE139, TRO143, TRO147 and WET155. The collections FAR59, HUX72, KIN77, PET108 and THE139 can be added to these if we count all inspections.

We divided the six year period into three phases: “phase a” 2005-2006, “phase b” 2007-2008, and “phase c” 2009-2010. We found that 11% (n=207) of all the zoos, or 53% (n=147) of the zoos we had enough inspections over time to be able to compare, had improved regarding general standards (as we defined them) comparing “phase a” and “phase c”. On the other hand, 7% of all the zoos, or 37% of those we have enough reports to compare, had worsened. If we only look at formal reports the percentages of either group are 40% improved and 30% worsened (n=50).

We found that in the 63% (n=71) of the zoos for which we have enough inspections to compare, there were variations of standards going up, down or staying the same through the three phases from 2005 to 2010. In 10% there was a constant decline and in 21% a constant improvement. The average score obtained with all inspections per year can be seen in Figure 30:

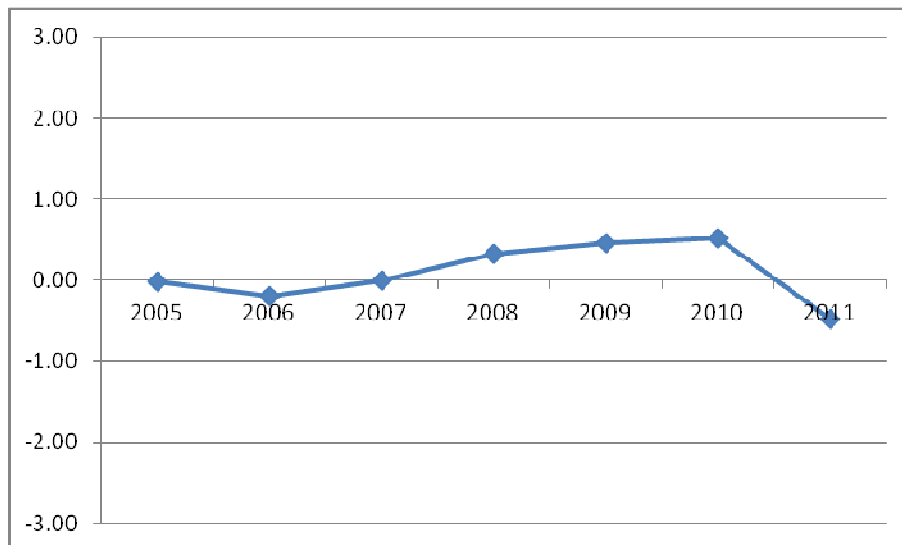


FIGURE 30: Annual average scores of standards of modern zoo practice found in zoological collections in England of the 2005-2011 period, per year.

The current situation

Table 30 shows the most important results laid out in the chapters above, but calculated from only the last formal inspection sent to us by the local authorities for each collection, instead of from all the inspections since 2005, in order to give us a snapshot of the current situation:

TABLE 30: Frequencies and averages found for the variables studied but only using the last formal inspection of each zoological collection.

General researching information

Total # of animals theoretically inspected in the last formal inspection	133,235	
# of zoological collections studied	161	
# inspection reports investigated	161	
# reports in electronic form	104	65%
# reports in paper form	57	35%
# reports of zoos without dispensation	33	20%
# reports of zoos with any dispensation	128	80%
# reports of zoos with 14.2 dispensations	126	78%
# reports of zoos with 14.1 dispensations	2	1%
# reports of zoos with 14.1.a disp.	0	0%
# reports of zoos with 14.1.b disp.	2	1%
Date of earliest inspection studied	23/05/2007	
Date of latest inspection studied	14/04/2011	
# of reports of 2007 inspections	7	4%
# of reports of 2008 inspections	39	24%
# of reports of 2009 inspections	47	29%
# of reports of 2010 inspections	59	37%
# of reports of 2011 inspections	9	6%
# of Aquaria	19	12%
# of Bird of Prey centres	29	18%
# of Farm parks	14	9%
# of General mixed zoos	62	39%
# of Invertebrate centres	9	6%
# of "other birds" zoos	15	9%
# of Herpetological zoos	2	1%
# of "other" types of zoological collections	11	7%

# of zoos starting in 2007	1	1%
# of zoos starting in 2008	4	2%
# of zoos starting in 2009	5	2%
# of zoos starting in 2010 or 2011	3	1%
Maximum number of reports per zoo	10	
Average number of reports per zoo	4	
	STD	1.8105
# of inspection reports in "form" form	161	100%
# reports in DEFRA's ZOO2 form	156	97%
# reports in DEFRA's ZOO3 form	4	2%
<u>Stocklists</u>		
# zoos without current stocklist sent to local authorities (2010 or 2011)	51	25%
# of Councils without current zoo stocklists	44	33%
<u>Dispensation status¹⁷</u>		
# zoos with the wrong dispensation status	106	51%
# zoos known to have the wrong dispensation	97	47%
# of zoos with dispensation that should not have any	66	32%
# of zoos with a 14.1.a dispensation that should have a 14.1.b dispensation	3	1%
# of zoos with a 14.1.a dispensation that should have a 14.2 dispensation	28	14%
# of Councils that have granted a wrong dispensation	74	55%
<u>Types of inspections</u>		
# of "first/fresh" inspection reports	3	2%
# of "renewal" inspection reports	77	48%
# of "periodical" inspection reports	81	50%
Maximum number of licence conditions under which the inspected zoos operated at the time of the inspection	128	
Average number of licence conditions under which the inspected zoos operated at the time of the inspection	17.25	
	STD	14.4516
<u>Pre-audit information</u>		
# of inspections including pre-audits	157	98%
# of inspections with incomplete pre-audits	82	51%
# of pre-audit reports obtained	27	17%
# of pre-audit reports with no ex-situ conservation	16	59%

¹⁷ The percentage in this section have been calculated using the total number of sampled zoos (207), instead the number of zoos with at least one formal inspection sent to us (161) as in the rest of the sections.

# of pre-audit reports with no in-situ conservation	7	26%
# of pre-audit reports with no "other" conservation	2	7%
<u>General zoos' compliance</u>		
# of zoos with any unsatisfactory issue	159	99%
# of zoos with any unsatisfactory issue, explicitly marked as such by inspector in a form	131	81%
# of zoos with recognised breaches of licence conditions	69	43%
# of zoos with recognised breaches of licence conditions, explicitly recognised by inspector with a NO ticks as answers to Q12.3 in ZOO2 forms	29	18%
# of YES ticks in Q12.3 when there actually are breached conditions	42	26%
<u>Zoos' compliance with licence conditions set up in the EU Zoo Directive</u>		
# of zoos with breaches of any licence condition defined in the EC Zoos Directive	143	89%
# of zoos with breaches of licence conditions on Animal Welfare and Conservation, etc., as defined in the EC Zoos Directive, explicitly marked as such by inspectors	87	54%
# of zoos with breaches of licence conditions on escapes and/or records but not on Animal Welfare or Conservation, as defined in the EU Zoo Directive	1	1%
<u>Zoos' compliance with licence conditions set up in the EC Zoos Directive on Conservation, Education and Research matters</u>		
# of zoos failing the conservation affords of the zoo according to inspector (Q7.5 in ZOO2 form)	18	11%
# of zoos with unsatisfactory issues regarding conservation, education or research	81	50%
# of zoos with unsatisfactory issues regarding conservation, education or research, explicitly marked as such by inspectors	29	18%
# of zoos allegedly participating in research from which conservation benefits accrue to species of wild mammals, according to the inspectors	107	66%
# of zoos allegedly participating in training in relevant conservation skills, according to the inspectors	101	63%

# of zoos allegedly participating in the exchange of information relating to the conservation of species of wild animals, according to the inspectors	136	84%
# of zoos allegedly participating in breeding of wild animals in captivity when appropriate, according to the inspectors	117	73%
# of zoos allegedly participating in the repopulation of an area with, or the reintroduction into the wild of, wild animals, when appropriate, according to the inspectors	74	46%
# of zoos allegedly participating in all the five options of the question 7 on conservation, according to the inspectors	54	34%

Zoo's compliance with licence conditions set up in the EC Zoos Directive on Animal Welfare matters

# of zoos with breaches of EC Zoos Directive Animal Welfare conditions	139	86%
# of zoos with breaches of EC Zoos Directive Animal Welfare conditions, explicitly marked as such by inspectors	78	48%

Recurrence of unsatisfactory issues

# of inspections with unsatisfactory issues identified in the previous inspection	71	44%
# of inspections with unsatisfactory issues identified in the second to last inspection	53	33%
# of inspections with unsatisfactory issues identified in third to last or more inspections	55	34%
# of inspections without any unsatisfactory issue identified in a previous inspection since 2005	21	13%

Inspectors

# inspections with one inspector	18	11%
# inspections with two inspectors	61	38%
# inspections with three inspectors	40	25%
# inspections with four inspectors	19	12%
# inspections with five inspectors	21	13%
Maximum number of inspectors per inspection	5	
Average number of inspectors per inspection	2.77	
STD	1.201	
Average # of animals per inspector in inspections	290.48	
STD	501.200	
Maximum # of animals per inspector in inspections	3700	
Average # of issues assessed per inspector in inspections	44.59	
STD	23.551	
Maximum # of issues assessed per inspector in inspections	102	

Minimum # of issues assessed per inspector in inspections	11	
<u>Inspectors' notes</u>		
# of inspections reported in forms with inspectors' notes	160	99%
# of inspections reported in a form with grades marked	14	9%
# of inspections reported in a form with notes contradicting the selected tick boxes	148	92%
# of inspections with specific inspectors' recommendations	144	89%
# of inspections with additional licence conditions	100	62%
# of inspections without any recommendation or additional licence condition	93	58%
# of inspections recommending no change regarding the licence	5	3%
# of inspections recommending granting the licence without additional licence conditions	58	36%
# of inspections recommending granting the licence with additional licence conditions	82	51%
# of inspections recommending granting the licence altering the current licence conditions	16	10%
# of inspections with the wrong licence concluding recommendation considering the own inspection's notes	65	40%
<u>Inspection reports forms</u>		
Average # of box tick assessments per inspection	100.16	
STD	11.721	
Average # of YES tick assessments per inspection	90.73	
STD	13.518	
Average # of NO tick assessments per inspection	4.97	
STD	7.0195	
Average # of N/A tick assessments per inspection	4.46	
STD	3.331	
Average # of notes next to tick assessments per inspection	17.77	
STD	10.716	
Average # of FALSE YES tick assessments per inspection	6.16	
STD	4.615	
# of form reports without any FALSE YES tick	13	8%
# of form reports with any FALSE YES tick	148	92%

Average of the % of FALSE YES tick relative to number of YES per form inspection	7%	5%
STD	0.051	
# of form reports with "grades"	27	17%
# of form reports with only some "grades"	13	8%
# of form reports completely "graded"	14	9%
 # of incomplete forms	 40	 25%
 <u>Inspectors' conclusions</u>		
# of inspections with unsatisfactory issues not addressed with licence conditions	144	90%
# of inspections with unsatisfactory issues not addressed with licence conditions or recommendations	120	75%
# of inspections with recommendations not added as licence conditions	132	82%
# inspections with False YES, unaddressed issues or wrong conclusions	153	95%
 <u>Assessment of standards of zoos</u>		
Average score of all zoos with all inspections	-0.71	161
STD	1.683	
# of zoos with "very bad" standards	9	6%
# of zoos with "bad" standards	60	37%
# of zoos with "poor" standards	48	30%
# of zoos with "unknown" standards	4	2%
# of zoos with "good" standards	39	24%
# of zoos with "excellent" standards	1	1%
 # of zoos sub-standard zoos	 117	 73%

Evaluation of the design of inspection system

Number of animals

Our study shows that there are currently at least 190,000 animals kept in recognised zoological collections in England. This represents an average of almost 700 specimens per zoo.

Considering the average time per specimen and the average number of specimens of zoos today, it would take over 8 full working days for a single inspector to inspect each animal for five minutes (and this is without counting any time checking records or inspecting off-display areas).

The average number of animals each inspector had the opportunity to inspect in an inspection made in the period studied is 506, although as all inspect the same animals together, in reality the “team” has an average of 700 specimens to inspect per zoo. Since they tend to inspect the collection in a single day, assuming a non-stop seven hour inspecting session, they would spend an average of 36 seconds per specimen, without any time to talk to staff, read signs, attend educational events or check documentation (in the collections with the biggest number of specimens found, it would be 1.4 seconds).

Zoological collections with a full licence keep an average of 2145 specimens, so it would take an average of 2.6 months to inspect them all giving 10 minutes inspection time per animal. For an average collection with a 14.2 dispensation it would take 12 days.

The maximum number of animals that collections should have, to allow inspectors to dedicate 10 minutes to each individual in a 7-hour inspection day, is 42 animals. Only 10% of the zoological collections would have no more than this number of specimens.

Figure 31 shows the average number of 7-hour working days necessary for the ideal inspection scenario, per type of zoo and stratum. The average for all these results is 14.23 days.

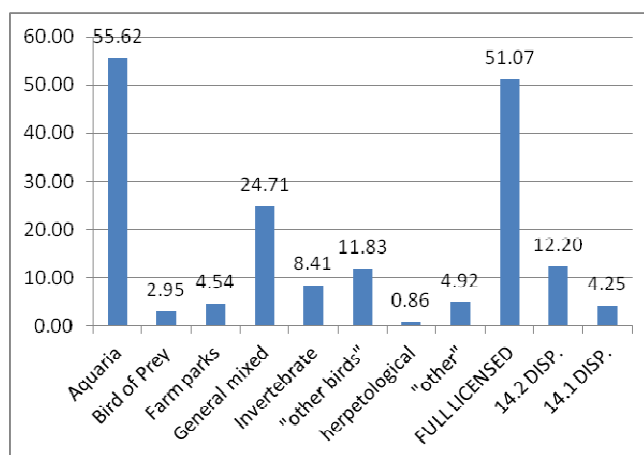


FIGURE 31: Average number of 7-hour work days it would take to inspect a zoo giving 10 minutes inspection time per individual animal, per type of zoo and stratum.

Seasonal variation

Figure 32 shows the frequency of inspections made since 2005 respect the seasons of the year, for all the collections together:

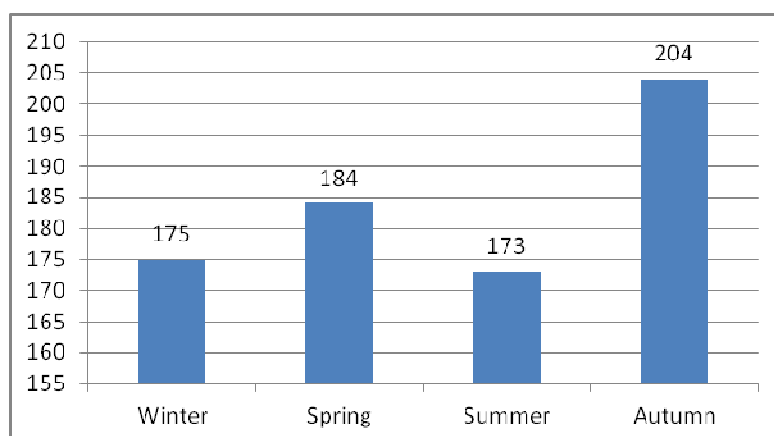


FIGURE 32: Frequencies of inspections made at zoological collections in England since 2005, per season of the year.

Inspection costs

The average cost of a formal inspection found from financial information in correspondence is £560 (n=19), and the average cost of other charges is £142 (n=3) per year.

It is estimated that the zoo industry pays annually £0.24 per animal in full licensed zoos, and £0.78 per animal in licensed zoos with dispensations, for their inspection and licensing (see discussion for explanation of the calculations).

In the hypothetical scenario of giving an average of 10 minutes of inspection time per animal, the annual cost of all the inspections in England would approach £3 million, instead the current £100,000 (see discussion for explanation of the calculations).

4. DISCUSSION

PERFORMANCE OF LOCAL AUTHORITIES

Local authorities are the key players of the licensing system not only in their role as enforcers of the relevant legislation but also for playing several important roles in it at different levels (see Appendix C). Firstly, they are responsible for inspecting zoos, secondly they licence and oversee them, and finally they can run zoos themselves. They are also the middlemen between the zoo operators and the Government, which makes them key in the communication between all the stakeholders. Assessing their performance in all these roles would be an essential part of assessing the inspection system as a whole, and DEFRA has recently commissioned an independent study to do precisely that (ADAS, 2011).

The ADAS study, gleaned from questionnaires sent to 138 local authorities and interviews with nine of them, provides some evidence for a number of issues raised in connection with the implementation of the Act, such as missed or late inspections, incomplete inspection teams and licence conditions not being enforced, but also concludes that there is also evidence of significant improvements in these areas in recent years, despite the fact the study was not done diachronically.

All zoo inspections are organised by the local authorities in the sense that they contact the zoo operators to agree with dates, they organise the nominated inspectors with DEFRA who they commission to undertake inspections, they receive the inspectors reports from which they decide on licensing issues, they communicate the inspectors' conclusions to the zoo operators, they pay zoo inspectors, and they charge the inspection cost back to the zoo operators. In addition to this, local authorities also perform inspections themselves, not only with their officials accompanying DEFRA zoo inspectors in those formal inspections where their presence is required by law, but also providing inspectors for informal and most special inspections. Therefore, they both organise and perform zoo inspections.

Missing inspections

Since the local authorities are the public bodies that organise all zoo inspections, they are responsible of ensuring that all legally required inspections are performed within their assigned schedule. The ZLA is clear on the fact that no zoological collection should go without inspections in any given year since publicist opening. It sets up the frequency of renewal and periodical inspections, and stipulates that in the calendar years when no formal or special inspection will take place, an informal inspection should.

The ADAS (2011) study suggests that the majority of inspections were carried out in a timely and effective manner but there was room for further improvement with around 10% reporting delays to formal inspections and 13% to informal inspections. Our study, which covers a longer period and is not based on the opinion of a non-representative sample of local authorities, finds much more than that.

We found that 63% (n=207) of the zoological collections in England missed at least one inspection due to be carried out since January 2005, and 14% missed a formal inspection in the same period. Figure 7 shows these percentages per stratum.

This is not the error of just a few sub-standard local authorities; rather the majority of local authorities with zoos selected in this study have missed at least one inspection for at least one of their collections since 2005. In total, at least 380 inspections have been missed since 2005 in the collections studied (possibly more than 500 if we extrapolate this value to the total population). More than a third of the local authorities that have zoos in England missed half or more of the minimum inspections required for the period from 2005 to 2010 for at least one of the collections in their jurisdiction.

There is a significant difference between any type of inspections missed and formal inspections missed, since 92% (n=380) of the missed inspections are in fact informal inspections. Since such inspections are the sole responsibility of the local authority, and DEFRA/AH does not monitor them directly, the fault for missing them lies entirely with such authorities. Regarding different strata, we also find high values across the board.

This enormously high percentage indicates that local authorities do not inspect zoological collections with 14.1 dispensations, especially “exempted” collections with 14.1.a dispensations. It is true that the obligation to inspect 14.1.a collections does no longer fall within the ZLA since such collections are exempted from its provisions, but this does not mean that the obligation is entirely gone. Implicit in the ZLA, and explicit in DEFRA’s guidance, local authorities need to check regularly (annually at least) that a dispensed collection continue to have the number and type of animals that led to the grant of their dispensation in the first place. The animals of “exempted” collections are not exempted from breeding, dying or being moved, and there is nothing that prevents the operators of such collections from acquiring new species. In the same way that inspections are required for zoos because the inspector has to see with his/her own eyes what the collection has and how it operates –as opposed to simply believing the written declarations of the zoos operators– this principle should also apply to exempted zoos, since the only difference between them and any other type of zoo is the kind and number of animals they keep. Therefore, a local authority should formally verify (by inspection) the periodical declarations of the zoo operators of exempted collections at least once a year.

DEFRA/AH addresses this issue explicitly in its guidance to local authorities, through different documents: In DEFRA’s “Zoo licensing questions and answers”¹⁸ it states “*If the LA is of the opinion that the collection does meet the definition of a zoo to which the ZLA applies, but is of a size and nature that the LA thinks the ZLA should not apply (either as a whole, or in respect of s.10, s.11, or both) i.e. the collection contains small numbers of non-conservation sensitive and/or non-hazardous species and these animals are well cared for and the premises well managed, then the LA can inform Animal Health which will decide whether or not to grant a dispensation under section 14(1)(a) or (b) of the Act. However, there is the possibility in future that the collection may change, so it should be logged and checked in future. We would advise annual reappraisal.*” In DEFRA’s guidance flowcharts¹⁹ it states that local authorities should “monitor” zoos with 14.1.a dispensations for “*significant changes that may affect exemption status i.e. increase in stock numbers and species type, especially species that are conservation sensitive or hazardous (Local authority should request annual stock lists)*”. In the context of zoos and local authorities, “monitor” or “reappraise” equates to “regularly inspect” in one form or another, albeit that only informally.

¹⁸ <http://archive.defra.gov.uk/wildlife-pets/zoos/documents/zoo-licensing-faqs.pdf>

¹⁹ <http://archive.defra.gov.uk/wildlife-pets/zoos/documents/zla-flowcharts.pdf>

More explicitly, in the Government circular 02/2003²⁰ it is stated *"If a 14(1)(a) direction is issued the local authority will have no powers under the Act to inspect the zoo. However, in practice, the local authority may find that they are able to keep a check on it by means of inspections carried out under other legislation, such as the Health and Safety at Work Act 1974."* In this study, when requesting inspection reports to the local authorities regarding collections under 14.1.a dispensations, we accepted Health and Safety inspections, so when we assessed that an informal inspection had not been made, we included this type of inspection that could "double" as informal zoo inspection.

When DEFRA/AH grants a 14.1.a dispensation to a collection after the local authority has requested so in behalf of the licensee, *Animal Health* normally replies to the authority reminding them that the collection needs to be checked regularly to ensure that it has not changed so the dispensation still applies, sometimes explicitly stating that annual inspections need to be made. For instance, in the case of the collection coded BAN174, DEFRA's letter dated 17/06/2004 to the local authority granting a 14.1.a dispensation states *"Although this exception means that there is no requirement under the Zoo Licensing Act (as amended) for the collection to comply with any conditions the inspector who reviewed the case did make the following suggestions and I attach these below for your information. It will be for you to decide whether, or how you wish to impose them:(...) an annual veterinary inspection be undertaken on behalf of the local authority..."*.

Furthermore, sometimes DEFRA/AH grants a 14.1.a dispensations under certain conditions (as if they were in fact licence conditions), and therefore there should be checked regularly with inspections as any other type of local authority conditions. For instance, in a letter to the local authority dated 22/08/2007, DEFRA issued the following conditions for having a 14.1.a dispensation to the collection coded MEM208: *"The exemption direction has also been issued on the basis that it appears to Secretary of State that the premises is satisfactorily operated. In granting this exemption it was recommended that your review how the birds are assigned to each aviary. In reviewing the case concern was expressed that there was overcrowding in the aviaries and that inappropriate species were housed together. We would therefore recommend that this issue be addressed and would suggest that the service of an experienced aviculturist are sought to assist in the management of this collection. A further recommendation was that an annual pooled faecal sample should be taken for C psittaci PCR. This latter recommendation relates to human health and it may be something you could consider under health and safety legislation"*.

In conclusion, we believe that it is an obligation of the local authority to inspect exempted zoological collections at least once a year, and at least informally, since although they are no longer directly under the provisions of the ZLA, they still are under DEFRA's provisions created by their dispensation status, which are derived from the spirit of the ZLA and the EC Zoo Directive. Therefore, local authorities that did not inspect such collections did "underperform" in their inspection duties.

In the case of collections with 14.1.b dispensations instead 14.1.a, the ZLA explicitly states that they should receive the same number of inspections as collections with 14.2 dispensations or no dispensation at all. In the three cases in our sample, one had five

²⁰ DEFRA (2003). Circular 02/2003. Zoo Licensing Act 1981 (as amended by the Zoo Licensing Act 1981(Amendment)(England and Wales) Regulations 2002)("the 2002 Regulations"). Department of Environment, Food and Rural Affairs and the Regions. London

missed inspections, another had an informal inspection in place of the required formal, and only one had the correct inspections. Confirming the conclusions above, the fact that in these cases the obligation to inspect was more explicit in the ZLA did not seem to make much of a difference, and inspections continued being missed.

In the case of collections with a 14.2 dispensation or a full licence, they are both required to have the same number and type of inspections with the only difference being in the number and type of inspector that carries them out. However, we found twice as many cases of missed inspections for collections with 14.2 dispensations (62%) than those with a full licence (30%), and three times more if we look only at formal inspections (20% and 6%). We can only conclude that local authorities treat the collections differently dependent on the size and type of animals held there, and are more careful in ensuring that inspections are not missed for large zoos..

These results show us that the high percentage of missed inspections can be explained by a combination of missed inspections on zoological collections with 14.1 .a dispensations (possibly because many local authorities erroneously consider that they do not have to inspect them), but also by missed inspections in other types of collections (and in this case there is no apparent reason for having missed them).

Figure 4 also show us that in 2008 there was an increase in inspection reports produced, and since the number of collections had not changed, this could be explained if the supervisors of the system had realised that there was a problem with missing inspections, and they had addressed the issue to local authorities which missed fewer inspections since. However, they continued missing them, as they still do.

Keeping reports

Accepting that our interpretation that all inspections, formal or informal, should have produced some sort of report (even if only a small note in a computer stating that all was satisfactory), our study shows that local authorities as a whole have misplaced or no longer keep one or more inspection reports from 37% of the zoological collections since January 2005, which in licensing terms it means within the period of the current or previous licence term.

These figures, put together with the number of inspections missed as shown above, indicate that local authorities do not have in their possession the minimum number of inspection reports expected per zoo for the majority of zoos in their jurisdiction (64%, n=207).

As we have seen in Appendix C, we consider that the production of reports after inspections is an implicit and explicit requirement in the zoo legislation and regulation. The keeping of such reports by the local authorities, however, it is not an explicit requirement by law, but it certainly is implicit if we consider the purpose of the existence of the reports themselves. They are there to inform the local authorities, DEFRA and other inspectors of the outcome and findings of any inspections, and therefore they are crucial for the decision making process any local authority is engaged during zoo licensing matters, and essential for any enforcing or legal action an authority may decide to take against a non-compliant zoo operator.

It is reasonable to assume that keeping inspection reports on file is a standard practice of any inspection institution. The question is for how long. It could be argued that, to comply

with data protection and “space saving” measures, public bodies would from time to time dispose of old documents that do not longer hold any active purpose. This may involve date-dependant policies based on destroying documents older than a particular date.

Common Data and Record Retention Policies stipulate that no data file or record should be retained for more than five years after it is closed but, of course, any documents that may still be needed are exempt from this principle. The idea is that data and records should not be kept for longer than is necessary, and in the UK this principle finds statutory form in the Data Protection Act 1998²¹, which requires that personal data processed for any purpose “*shall not be kept for longer than is necessary for that purpose*”. The key word is, “necessary”. In the case of zoos, considering that standard zoo licences last for six years, and that two of the roles of inspections is to check on the issues flagged up by previous inspectors and in checking for compliance with previous inspectors’ recommendations, one would expect that (at the very least) all inspection reports from the previous six years are kept by the local authority. Therefore, we would expect that no inspection report requested for this study has been deliberately disposed off by the local authorities, so if they state that they no longer possess them, this is likely to mean either premature disposal, or misplacement.

It could be, though, that we are facing here a conflict between different pieces of legislation which may lead to a disposal of data prior 2006, if local authorities feel that the necessity of keeping inspection reports (in this case dating back to 2005) have not been proven and at the same time the “five year” retention policy is draconically applied. Analysing our data diachronically may clarify the situation: In 54% (n=76) of the collections the local authorities had missed inspection reports, none of the missing reports is from 2005. Therefore, the phenomenon of missing inspections is not mainly caused by “five-year” disposal policies (although it helps to explain it because all things being equal we would expect the previous percentage to be around 80%) but otherwise simple poor practice.

Supervision

The role of local authorities in overseeing the zoo inspection system should not be underestimated. Although this role mainly belongs to DEFRA/AH, part of it is shared with local authorities. In particular, local authorities oversee the part that zoos play in the system, while DEFRA mainly oversees the part that the local authorities play in the system.

In many respects, DEFRA’s role in overseeing the system depends largely on the local authorities since the information it receives about the zoos, in most instances, comes from them. If a zoo wants to apply for a dispensation to DEFRA it has to do it via the local authority, which will approach DEFRA on its behalf. If DEFRA wants to know which zoological collections are in a particular region it will need to ask the local authority for this information. If DEFRA wants to know if a zoo has complied with the licence conditions imposed by one of its inspectors in the years between inspections carried out by DEFRA inspectors, it will need to ask the local authority which will have to check this with its own inspectors before the next formal inspection is due.

Once a zoo has been licensed the local authority has to ensure that any conditions which were added in order for that licence to be granted are maintained through the whole period of the licence term (four or six years), that the zoo has the appropriate number of inspections

²¹ <http://www.legislation>

with the right type and number of inspectors according to its dispensation (or lack thereof), that the required inspections are carried out on time, and that the zoo is not in breach of any section of the ZLA. In addition to this, for those zoological collections in its jurisdiction, it has to ensure they are properly licensed if they need to be, and if they are exempted in any way of the requirements of the ZLA, that the conditions that granted such exemptions are still valid.

Stocklists

The easiest and most straightforward way that a local authority can check the type and number of animals held in a zoo is by using the zoo's stocklist, which is updated annually.. The list also shows the death and births that have occurred, and any movements of animals in and out of the collection. A dramatic change in types or numbers of animals may be a good indicator that the circumstances under which the last inspection was made, have changed significantly so a new inspection may be required, a dispensation may need to be reviewed, or a particular licence condition that referred to types and numbers of animals has been breached. These reasons explain the requirement of the local authorities to obtain annual stocklist of all the zoological collections of their jurisdiction.

This requirement is expressed in the ZLA and its regulations: The ZLA forces the zoos to compile records from which the stocklist can be created, and it also empowers zoo inspectors (and by extension local authorities that employ or hire them) to obtain such records from the zoo. The compulsion of specifically acquiring annual stocklists from zoos is made clear in the Secretary of States' Standards of Modern Zoo Practice²²:

9.5 In addition to the individual records, an annual stocklist of all animals must be kept.

A copy must be forwarded to the local authority no later than 1 April of the year following

that to which it relates. The stocklist must include the following:

- a) common and scientific names of the species;*
- b) total in the collection at 1 January;*
- c) number of arrivals into the collection from all sources during the year;*
- d) number of births or hatchings within the collection during the year;*
- e) number which died within 30 days of birth/hatching;*
- f) number which died at other times, including culls;*
- g) number that departed the collection, including sales, breeding loans, etc.;*
- h) total remaining in the collection at 31 December;*
- i) the sex of each animal, where known, must be recorded – e.g. 1.2.3 indicates one*

²² <http://archive.defra.gov.uk/wildlife-pets/zoos/standards.htm>

male, two females and three unsexed;

j) the records should be set out in columns for ease of compilation and reference, e.g.:

Common Name	Scientific Name	Group at 1.1.2000	Arrive	Born	Death within 30 days of birth	Death	Depart	Group at 31.12.2000
White-necked Crane	Grus vipio	2.1.1	0.2.1	0.0.2	0.0.1	1.0.0	0.1.0	1.2.3

As can be seen above the SSSMZP indicate that a copy of the annual stocklist “must be forwarded”, which seems to put the responsibility on this to the zoos themselves. However, since the responsibility to make the zoos comply with everything that the zoo licensing system requires relies on the local authorities, this implies that local authorities must ensure that the annual stocklist is forwarded to them. As can be seen in the Appendix C, this is normally done by adding this condition to the zoo licence, with a combination of the mandatory condition: *“keep up-to-date records of the animals, including numbers of different animals, acquisitions, births, death, disposals and escapes, causes of deaths and the health of the animals”* and the discretionary condition 5. *An annual stocklist of all animals must be kept and a copy must be forwarded to the local authority no later than 1 April of the year following that to which it relates and the stock list must include the information and in the format indicated in Section 9.5 of the Secretary of State’s Standards of Modern Zoo Practice* “, sometimes together with an additional condition the local authority may add to make this point more explicitly. Some local authorities also write to the zoos of their jurisdiction annually (normally at the beginning of each calendar year) reminding them to send them such lists.

Regarding zoos under 14.1.a dispensations (“exempted” zoos) the lists are arguably still needed, although expressed less explicitly in the regulations and guidance. In DEFRA’s guidance flowcharts²³ it states that local Authority should do the following regarding such collections: *“Monitors zoo for significant changes that may affect exemption status i.e. increase in stock numbers and species type, especially species that are conservation sensitive or hazardous. (Local authority could request an annual stock list). Should the local authority consider an exemption is no longer appropriate it is required to notify Animal Health”*. The “could” instead “should” does reduce the obligation –and the format of the list has ceased to be too restricted– but in essence, since the local authority has to fulfil its obligations regarding ensuring that the collection has the appropriate dispensation, and this will depend of types and numbers of specimens (see Appendix A), it stands to reason that obtaining the annual stocklist remains the best course of action, only to be substituted by an annual inspection where the inspector may “count” the animals without the need of such list (in cases where we are talking about very few numbers), effectively calculating annually the stocklist him/herself..

Therefore, since local authorities have the power to demand that zoos send them their stocklist (or equivalent) annually, and have the obligation to ensure they do if the zoo is to comply with the SSSMZP as the ZLA stipulates, one can conclude that if a local authority

²³ <http://archive.defra.gov.uk/wildlife-pets/zoos/documents/zla-flowcharts.pdf>

does not have such stocklist without justification, this indicates poor practice. We can measure this since we requested to the local authorities the current annual stocklist of each selected collection, which they should have.

Since we made the FoI request to local authorities before April 2011, in our study the term “current stocklist” includes annual stocklist produced both for 2010 or 2011 (since some collections may still have had time to send the 2011 list before the April deadline). When, in response to this request, we received any stocklist from a previous year, we asked the local authorities if that was the most current stocklist they had in their possession, or they had send us an older one by mistake. Their reply would allow us to know if they did have the current stock list but they had disposed of it or not wanted to send it to us, or they had not received the current stocklist from the zoo despite the fact the April 1 deadline had now passed. In the cases they did not hold any stocklist we always asked for an equivalent (an account of the number and type of animals the collection keeps), in case that for that particular collection the local authority had decided to use other methods to obtain the information required in the stocklist. Therefore, in our study we can quantify how often the local authorities failed to obtain the current annual stocklist or its equivalent.

Local authorities failed to obtain the current stocklist in any form from 25% of the zoological collections, and for some authorities this failure was recurrent. By looking at Figure 9 we immediately see that the local authorities lack the majority of the fully licensed zoos’ current stocklists, twice the amount than in the case of zoos with a 14.2 dispensation. One explanation could be that the local authority cares less about the stocklist of fully-licensed zoos since it does not need it to check whether a dispensation is still valid, and because of this it does not chase the zoo operator up when he/she has not sent the list on time each year. Another explanation may be that fully-licensed zoos are bigger and therefore it may be more difficult to up-to-date their stocklists, which may cause delays in sending them to the local authority. We cannot know which, if any, of these explanations have caused these results, but to assess their impact we can calculate that the relative number of zoo animals the local authorities as a whole do not hold current data on is 17% of the specimens for all collections (n=143380), 20% for those from fully-licensed collections (n=70782), 14% for those of 14.2 dispensation collections (n=65100), and 20% for those with 14.1 dispensations (n=7481).

Apparently, three of the local authorities studied had a policy of regularly destroying stocklists immediately after using them for inspections (Birmingham City Council, Brighton & Hove City Council, and Canterbury City Council), which we consider poor practice in itself. The reason given to us for doing so was to preserve commercially sensitive information, but this does not seem a very good reason, not only because there is no difference between the commercial value of the information of their collections with other collections of other authorities that have no problem in releasing it, but because zoos are open to the public and therefore do not keep the types of animals and their numbers secret.

Inspection reports also show that the failure of submitting an annual stocklist is an issue detected by zoo inspectors, even if they are not necessarily in a position to know whether the local authority has been receiving these lists.

Applying for dispensations

The grant or refusal of a dispensation is a power of DEFRA/AH, which may be exercised when a zoo operator has requested a dispensation for the collection. However, the request is not made to DEFRA directly, but via the local authority, which then relays the request to DEFRA on the zoo's behalf. Therefore, if the local authority recognises that the request has no merits according to the dispensation criteria, it should either inform the zoo operator so the request can be withdrawn, or it should advise DEFRA that the request is not accompanied by the local authority's recommendation the dispensation to be granted. The local authority, therefore, has some role in the decision-making process of granting dispensations, and if a dispensation ends up being granted incorrectly, it has some responsibility.

The local authority itself may receive a recommendation about the merits of a possible dispensation for a collection from a zoo inspector, who may have written about this in his/her report. However, although such recommendation could be used to support its recommendation to DEFRA, the authority is free to disregard it and give an alternative recommendation if it so wishes. Therefore, if an inspector recommends a wrong dispensation for a collection, the authority could identify this mistake and correct it when giving its own recommendation to DEFRA.

Although our study can detect wrong dispensations given, we cannot establish which party (or parties) might be responsible for the mistake as the authorities did not necessarily send us correspondence between them and DEFRA which might clarify this point. Nevertheless, an assessment of the number of incorrect dispensations given may give us some indication of the level of scrutiny the requests are given by the local authority before passing them on to DEFRA.

We found that almost half of the zoological collections in England have assigned the wrong dispensation if we consider DEFRA's own criteria. There was no evidence of a collection being given a dispensation when they should not have one, nor of collections being granted a 14.2 dispensation when it warranted a 14.1. On most occasions these incorrect dispensations are caused by the zoo holding significantly more specimens than the threshold value, which is normally 50 hazardous (H) and/or conservation sensitive (CS) specimens. Errors on dispensation status occur in all types of zoos, but relatively more in Birds of Prey Centres, Aquaria and Farm Parks where most of the incorrect dispensations are found, possibly because the conservation and hazardous status of fish and birds of prey may often be underestimated (see chapter on "granting dispensations" below for a more in-depth discussion).

All of these mistakes point to the same serious consequence: more than a third of zoological collections are, as a direct result of having an incorrect dispensation granted to them, inspected less frequently than they should be, or being inspected by fewer officials than they should. A major part of responsibility for this oversight lies with DEFRA/AH, but the value is so high that the local authorities should undoubtedly share the responsibility, since it would appear that they have done little to check that zoos that request a dispensation meet the DEFRA criteria.

This could simply be because DEFRA does not check the stocklist and simply follows the local authority advice, that the local authority that has not checked the list, or both. It could

also be that DEFRA has changed its criteria but this is unlikely since the guidance has not been updated to reflect any changes. Correspondence from DEFRA/AH to a local authorities on this issue confirms that the guidance “remains unchanged”, and DEFRA’s website does not show any alternative guidance or criteria. We discuss the possible reasons for these errors in more detail in the “granting dispensations” chapter below.

Enforcing the Zoo Licensing Act 1981

Local authorities are responsible for enforcing the ZLA, and they have several instruments available to them in order to do so. They can investigate zoos by inspecting them regularly, demanding that documentation is provided, and if they receive information from the general public or employees/volunteers with concerns they can carry out unannounced special inspections to investigate any allegation of breach of zoo regulations; they can grant, or refuse to grant, licences dependent on their opinion of whether standards will be met ; they can issue recommendations to the zoo operators in order to prevent them from falling in breach of the legislation; they can issue licence conditions and check that they are complied with; they can issue “direction orders” to force zoos to comply with licence conditions; they can close zoos and remove the animals they keep; and they can prosecute zoo operators for offences under the ZLA, which may lead to disqualifying them from ever running another zoo. How well local authorities perform in their ZLA enforcement role will depend on how well they apply all these tools they have available, so we will look at them one by one.

Problems with enforcing the ZLA on the part of the local authorities had already been raised with DEFRA in the past, so in 2008 DEFRA wrote to all local authorities in England in response to a small number of incidents in which local authorities were reported not to have been meeting the requirements of the Act. The local authorities involved in these incidents were contacted directly, but DEFRA felt it prudent to issue a general reminder of the Act’s requirements.²⁴ In DEFRA’s letter it is noted that “*it appears that at least one major zoo was operating without a licence for a number of months*”.²⁵ The recent questionnaire-based ADAS study (2011) mentions that local authorities have the power to alter zoo licences but, when asked, only 13% of respondents had used this power in the two years prior to 31 March 2010. Over the same time period 27 local authorities (23%) experienced zoos’ non-compliance with licence conditions. Although not all respondents detailed the causes of non-compliance there were some recurring themes among those that did with issues relating to stock lists and record keeping cited most often. Conservation and education requirements and the ethical review process were also mentioned (three respondents for each).

The methods for dealing with non-compliance mentioned by the respondents of the ADAS’ study included: informal advice, letters and reminders (n=14); formal notices, additional visits or meetings with zoo staff to ensure compliance (n=6); formal extensions to timescale for completion (n=3); a special inspection which may result in new additional conditions (n=3); and zoos unable to meet conditions that closed before formal measures taken (n=2).

Granting and refusing licences

The most basic enforcement activity that a local authority can carry out with a zoological collection that meets the minimum required standards of modern zoo practice is to grant it a licence, and to renew it when it expires, and to ensure that the conditions remain above

²⁴ <http://lacors.conseq.net/lacorsdev/core/page.do?pageId=230074>

²⁵ <http://www.lacors.gov.uk/lacors/upload/18232.doc>

minimum standards. This should guarantee that all the provisions of the ZLA are applied to protect the animals and the visiting public, including regular inspections.

The first decision the authority will have to make is to determine if the collection is indeed a zoo. All the collections in the DEFRA list of zoos in England have been deemed to be zoos (even if some may have received dispensations or exemptions), but the question is whether we have any information that suggests that the authorities have erroneously excluded collections that should be in the list, or whether any collection in the list should not be there according to the definitions in the ZLA.

We do not know how many collections local authorities have investigated and determined that they should not be considered zoos, so we cannot know if they have made any errors doing this. However, we can check whether all the zoological collections in the list are indeed zoos. We found that 4% (9, n=207) of the collections are borderline cases regarding the zoo definition because in addition to being zoos, they are also something else.

Four collections where a mixture of pets shops and zoos, and in theory they were still considered zoos because the pet shop was separated from the zoo (the ZLA states that it does not cover establishments that are pet shops). We are not sure if such separation is real, and therefore if the local authority and DEFRA were right to consider them zoos. However, we believe that unless there is a complete separation that does not allow customers of the shop and visitors of the zoo see the animals in both sides, and that they have separate staff and procedures, allowing this mixed existence should not be allowed, and the local authority should either only give them a zoo licence not allowing them to sell animals, or give them a pet shop licence not allowing them to display animals not for sale.

Three collections belonged to zoo operators that also held Dangerous Wild Animals 1976 (DWA) licences, which are the licences that local authority gives for people that own dangerous animals but do not display them to the public. Since the licence requirements and the inspection regime are very different between a DWA licence and a zoo licence, authorities should be careful in assessing when a person could hold both. There should not be a situation in which a zoo operator that is failing to provide animals with the minimum husbandry standards under the ZLA simply removes those particular animals from display and keeps them under a DWA licence, to avoid improving the conditions in which they are kept. This risk may be present in three collections of our sample.

Initially local authorities had the power to revoke licences in addition to refusing them, but such power was lost with a ZLA amendment which, in exchange, gives them extra powers to close zoos. This was done to comply with the EC Zoos Directive, but also to avoid situations where a sub-standard zoo lost its licence but kept its animals in the same conditions with the only difference of not being open to the public, which of course it is an unsatisfactory outcome as far as animal welfare is concerned. Now, if there is an issue of very poor animal welfare standards, the authorities can close a zoo and remove the animals, rather than just revoking the licence.

We have asked DEFRA using the Freedom of Information Act how many licences have been refused in England during the period of our study, but they replied that do not have this information. Information of refused licences would not necessarily show up in the correspondence we acquired from the local authorities between them and zoo operators,

because obviously such operators had their licences granted because otherwise they would not be in the list of zoos. However, especially in cases of zoos with 14.1.a dispensations, there could be mention of such in the correspondence; for instance when a zoo licence is refused but a 14.1.a dispensation is given instead (however, if such communication occurred prior 2005, we would not necessarily have the relevant correspondence). There is also the possibility of inspectors making a recommendation to the authority that a licence be refused, and the authority could then approach the zoo operator and make recommendations that might eventually lead to a licence being granted. We could detect such cases through either the correspondence or the inspection reports.

We only found one possible case of refusal of a licence of an inspector apparently recommending the refusal of a licence for a Council-owned zoo, so this enforcing tool does not seem to be used regularly.

Investigating zoos

When there is an issue on zoos performing as they should, an investigation is required. Although several animal protection organisations take it upon themselves to investigate particular zoos if they are alerted to suspicions of poor practice, official investigations are undertaken by local authorities, which are often the recipients of the complaints about zoos from the general public or the animal protection organisations themselves.

The basic investigatory tool a local authority has at its disposal is the inspection. Since the ZLA already establishes set inspections that need to be undertaken on an agreed timescale, and local authorities are involved in all of them, they should be versed in the necessary techniques required to obtain information from zoo operators, remotely or by visiting their establishments.

As seen in other chapters, according to the ZLA each zoo should be inspected at least once annually, in an inspection carried out by local authority only or in conjunction with DEFRA zoo inspectors. An inspection usually last a few hours, but on occasions can last a couple of days. Inspectors and local authority officials can inspect a zoo as many times they see fit, and can compel the zoo operators to provide them any documentation related to the running of the zoo. They therefore have plenty of opportunity to obtain information about the zoo's activities and investigate any allegations made.

In reality, zoos are inspected fewer times than they should be. Fewer than required by law; demonstrated by the number of times local authorities fail to organise the relevant inspections (see chapter above), and fewer than required by common sense when we are talking about very big zoos, or zoos with a long history of non compliance with zoo regulations. Our study shows that on average a zoo in England receives 4.4 inspections over a six-year period (STD=2.778, n=207), when it should have received at least six (this is including those inspections that we know occurred but the local authorities did not send us any report of them). 63% (n=207) of the zoological collections have missed at least one obligatory inspection since 2005.

Our study shows that 10% of the inspections performed are "special inspections" under Section 11 of the ZLA. These are undertaken by the local authorities for whatever reason necessary and at any time they see fit and, contrary to any other type of inspection, these can be made unannounced, and "incognito" (although this normally does not happen).

Therefore, this type of inspection is potentially the most important for revealing information that might be missed during the normal inspection, which are announced well in advance thus giving ample preparation time. As such, it is reasonable to assume that normal inspections might not show a true picture of the day-to-day running. In the worst cases, zoos may use the advance notice to cover up poor practice and in best cases, issues might be inadvertently missed. As such, special inspections are ideal for investigating “complaints” from the public. We found that, in most cases, the local authority was correct in carrying out a special inspection since some of the allegations made against the zoo were deemed to be correct and the complaint was upheld. Having said that, the majority of complaints are not upheld following special inspections.

The relatively low number of special inspections made as a direct result of public complaints (2% of all inspections, n=738) may be explained by the fact that in the years when a periodical or renewal inspection is due, the local authority could simply relate the complaint to the DEFRA inspectors, while if the complaint happens just before an informal inspection was scheduled in other years, the inspector may use the informal inspection to investigate the complaint. Therefore, the actual number of special inspections in relation to complaints does not necessarily reflect the number of complaints sent to the local authority.

It could be argued that one of the reasons why the ZLA has allowed special inspections is to compensate the fact that it is limiting the number of formal inspections, and it would not be logical to limit any number of inspections if the objective is to stop poor practice. Special inspections could be done at any time by any number of inspectors, which would seem to cover the problem of limiting formal inspections. However, in practice this does not happen because special inspections do not normally cover many issues, and tend to concentrate in just a few, as a result of a complaint (as it can be seen in Figure 10).

Giving recommendations

One way that local authorities can enforce the ZLA is by giving recommendations to zoo operators in order to prevent them from failing to comply with zoo licence conditions. This constructive form of enforcement is essentially a preventive method, in which breaches of conditions can be avoided if the zoo follows the recommendations. Often the inspectors (mainly DEFRA inspectors) are the ones that issue such recommendations in their reports, which may (or may not) be passed along to the zoo operators, depending on whether the local authority chooses to do so.

Most of the time local authorities do pass inspectors’ recommendations to the zoo operators, normally in the form of a letter, since recommendations are not usually added to the licence. Some local authorities may add additional recommendations of their own. However, zoo operators are not obliged to address them if they have not been added to the licence as conditions, so many do not. An illustrative example is the case of the collection coded MEL88: the 2006 “first” licence inspection report contained 16 recommendations but no additional licence conditions, but three years later the zoo had failed to address most of them since they were just recommendations, so the inspector then added them as licence conditions (it is not known if they were addressed afterwards since the following informal inspections were not recorded). Another example is the case of CAT42, where, in 2010, it had taken three years to make several recommendations into licence conditions in order that the zoo take action on them.

Our data suggest that inspectors seem to favour recommendations over licence conditions, which may be an indicator of how they perceive their role (advisors for improvement rather than detectors of poor practice). However, giving recommendations is not necessarily a very effective way to enforce the ZLA, since they lack of statutory value and failure to address them cannot be used to apply stronger enforcing instruments such as direction orders, closure orders, or prosecutions.

Issuing licence conditions

Once a zoo licence has been granted to a zoological collection the most important instrument to enforce the ZLA is the licence condition. Local authorities can attach licence conditions to a licence, and if the zoo operator does not comply with them this could eventually lead to the closure of the zoo, prosecution, or both. DEFRA has provided mandatory conditions for the authorities to add to all zoological collection licences, along with suggested conditions which the council might add at their discretion. In addition to these, zoo inspectors can recommend the addition of further conditions following each inspection. If inspectors make these recommendations, the local authority usually follows advice.

Because DEFRA have identified six “mandatory conditions”, all zoos should, theoretically, have these six conditions attached automatically to their licence (see Appendix C). In addition to these, the local authority may have choose to add the five discretionary conditions DEFRA suggest. In addition to these, each inspector may suggest any number of additional conditions. Therefore we would expect that each zoo licence should have attached at least 11 licence conditions, if the local authority is following best practice guidelines. The average number of licence condition found attached to zoo licences at the time of the inspections from which we have reports of is 16.40, which means an average of 5.4 additional inspectors’ conditions per licence. Therefore, it would appear that issuing additional licence conditions is a normal practice among local authorities in all types of zoos but we would question if they are issuing enough of them to address the issues identified.

We can answer the question by estimating how many licence conditions inspectors should have recommended on account of the number of problems they encountered in their inspections. When reading the reports sent to us we could clearly quantify the number of “issues” the inspector had identified which were in need of correction. This identification of issues often came with advice on how to correct them. We found that most of the inspection reports show that unsatisfactory issues had been detected by inspectors. We could then check how many of these issues had been addressed in the inspector’s suggested recommendations and additional conditions written in their reports. We found that the majority of the inspection reports had unsatisfactory issues not addressed by inspectors in their additional licence conditions, and at least 40% not addressed in either the licence conditions or the specific written recommendations. Also, most zoos had at least one inspection where unsatisfactory issues were not addressed in licence conditions or recommendations. Therefore, it does seem that local authorities issue fewer licence conditions than they should, because inspectors recommend fewer licence conditions than they should, partly because they use recommendations instead of conditions to address them, but also in a quarter of the cases because they do not address them at all – they only identify the problem. Since, on most occasions, the local authorities only write to the zoos about licence conditions and specific written recommendations the inspectors have suggested in their report summaries, the zoo operator may not even be aware of the

unsatisfactory issues that never made it to recommendations or conditions. It appears that the weakness in the system on this matter happens at inspector level, so we will discuss this further in the chapter on inspectors below.

Issuing “Direction Orders”

The power of issuing “direction orders”, which are legal documents sent to the recipient that compel him/her to act in a particular manner within a specific deadline, can be clearly seen in section 16A of the ZLA. It would normally be the precursor of any more drastic actions, such as full or partial closure (or prosecution under S.19 of the Act), which would be the next step if the zoo continues to fail to comply.

According to DEFRA’s guidance, “Where a local authority are not satisfied that a zoo licence holder has complied with a condition (or several conditions) attached to the licence, section 16A requires them, after giving the zoo licence holder the opportunity to be heard, to issue a direction requiring compliance with that condition. There is no need, however, for the authority to make a direction if they decide instead to close the zoo permanently in accordance with powers in subsection 16B(5). Section 16A(2) specifies the contents of a direction. The direction must say what licence condition or conditions have not been complied with. For each condition it must say whether the condition has been breached at the whole zoo or whether only a section of the zoo (for example a department of the zoo or a particular part of the zoo’s premises) breaches the condition. The direction must also stipulate the steps the licence holder must take to comply with the condition or conditions and the period for compliance, which must not exceed two years. The direction can also require the zoo, or a part of it, to close to the public while the direction is in force, or for part of that period, if that is considered appropriate. A direction under section 16A cannot require a zoo or a section of a zoo to close permanently. Permanent closures may be required under section 16B or section 16(1A) and (1B)”²⁶

It is important to note that, section 16A “requires” the local authority to issue such direction orders when they “are not satisfied” that a licence condition (and only one is enough) has not been complied with. This is not an optional tool at the disposal of the authorities when they want to be tougher with a non-compliant collection. This is something they have to do every time they think a condition has been breached. The question is when they will be satisfied that that is the case, and here is where inspectors enter into the equation. If an inspector, who is an expert on licence conditions, considers that a condition has been breached, it can say so in his/her inspection report, and if the authority believes that the inspector is competent and not biased against the collection, unless further evidence suggest that he/she was wrong it should assume that indeed a condition has been breached, and it should be satisfied enough to issue a direction order. If in doubt, the authority could extend the investigation and perhaps contact the zoo operator or organise a special inspection. What it should never do is simply ignore the inspectors’ conclusions and not issue any direction order if breaches of licence conditions have been detected.

We found that only two direction orders had been issued over the entire six-year period of our study. This means that it appears that during six years only in 1% (n=207) of the zoological collections a direction order under section 16A of the ZLA had been issued by local authorities as a response to failure to comply with licence conditions. This, when

²⁶ <http://archive.defra.gov.uk/wildlife-pets/zoos/documents/zoo-gc022003.pdf>

compared with the figure that in at least 21% (n=663) of inspections (for 38% of the collections (n=207)) it was explicitly acknowledged that licence conditions had been breached, it is clear that enforcement action under Section 16 is not being followed correctly.

Closing down zoos

Theoretically, zoo closure would follow a direction order if the zoo operator did not comply with within the agreed timeframe. DEFRA's guidance states *"Any decision to issue a direction under section 16A closing the zoo, or a section of it for a period of time, should not be taken lightly. Such a direction should be revoked once the zoo has complied with the condition or conditions. However, if the licence holder does not comply within the period specified in the direction (taking into account any extensions of time granted under section 16A(4)) and the condition not met relates to the requirements set out in section 1A of the Act, it will be necessary either to close down the zoo permanently under a direction issued under section 16B or permanently close the affected section of the zoo."*²⁷

It is important, therefore, to establish how many times local authorities have closed down zoos during the period studied. The difficulty here is that zoos that are already closed down may not be in the zoo list that DEFRA provided to us, so we cannot be really sure that we can detect all closures. However, zoo closures are unlikely to be unnoticed by the media, or uncommented on in the public domain – there had been previous high profile closures in the 1990s and early 2000s, such as Glasgow zoo, Gatwick zoo or Southport Zoo, all of which left a distinctive trail in the internet– so we should be able to find news reports about any closure since 2005. One solution could have been asking DEFRA for a list of zoo closures, but when we used a FoI request for this information, DEFRA stated that it does not hold that information.

To begin with, we already know that six of the collections in the original DEFRA list have closed permanently. Most of these are small collections under a 14.1.a dispensation, and we do not know if they just closed down voluntarily or were forced to close down by the local authorities (although the former is more likely since otherwise it would be unlikely that they would remain in the DEFRA zoo list, and local authorities did not mention forced closure when we enquired about them).

From the information contained in the inspection reports, we know that, at least during the six years of this study, three collections were closed down (and re-opened later) which may have been as a result of local authority enforcement work. Looking at information on zoo closures on the Internet, we could not find any case of a licensed zoo closed down by a local authority in England since 2005. This means that, since 2005, it appears that at least 1% (n=274) of the zoological collections are known to have closed down, but we doubt that the actual percentage would be much bigger than that. We can also see that, as far as licensed zoos are concerned, council action does not normally lead to permanent closure (although they may lead to improvements from refurbishment or new ownership). Therefore, it appears that the zoo closure as an enforcement tool is hardly ever used by local authorities when enforcing the ZLA.

The low frequency of closures can also be confirmed with other studies. In the questionnaire based ADAS' study (2011), only eight out of 138 respondents had experience of administering zoo closures in the two year period under review (not all necessarily of

²⁷ <http://archive.defra.gov.uk/wildlife-pets/zoos/documents/zoo-gc022003.pdf>

licensed zoos). Two of these stated that the closures had gone smoothly whilst three experienced some difficulty obtaining details relating to the future care and distribution of stock. Only one respondent reported severe difficulties that related to a prolonged struggle with an unlicensed collection about the need for a zoo licence. Difficulties relating to powers of entry for inspection of unlicensed collections were expressed.

Another way to assess closure of zoos, with or without the intervention of local authority, would be to assess how often new zoos are created and compare the list of zoos in two different years. In our case, we can see how many new zoos were licensed every year since 2005 because we have received the licence inspections that lead to their licensing. If we could find a list of English zoos from 2004 and compare it with our list from 2011, knowing the ratio of new zoos opening per year we could calculate the amount of zoos that were closed down since 2005.

DEFRA did not have a zoo list for zoos in England in 2004, but we can estimate the total number with information of animal protection organisations that were at the time already engaged in investigating them. From the year 2000 the Born Free Foundation started to compile a database of zoological collections in the UK that led to several investigations and research, such as the publication of the *Official Zoo Health Check* reports²⁸ and the exposé of the number of unlicensed zoos. The 2004 study showed that 31.6% of zoological collections meeting the legal definition in the UK appeared to be operating without a zoo licence²⁹. Incidentally, missing collections that should be licensed still occurs today. In our study we found that the collection coded FAR190 had been in operation since 2006 but the Council only identified it as requiring a licence in 2010 (the local authority eventually made an inspection with DEFRA and a 14.1.a exception was given to the collection).

From the information obtained during these investigations and others by other organisations such as CAPS we can estimate that, in 2004, there were about 426 zoological collections in the UK from which 332 were licensed. Looking only at England, they were 273 licensed zoological collections, surprisingly only one less than the population of collections for 2011.

If we have a population of 273 zoos and every year an average of 3.17 new zoos are added, today we should have 292 zoos, but since we have 274, we know that 18 licensed zoos have been closed down since 2005, which represents a rate of 3 zoo closures per year. Therefore, in essence, since 2005 every year there are as many new zoos being licensed as licensed zoos closing down, and these do not represent more than 1% of the zoological collections each year. These results are consistent with the information we found in the reports and the Internet, and therefore we can say with confidence that local authorities' use of zoo closure as a method to enforce the ZLA is negligible.

Prosecuting

Prosecutions not only work as a deterrent for future offences, but also help to set case law precedent to inform future legal proceedings and thus facilitate ongoing enforcement. The efficacy of enforcement action under any law that fails to lead to successful prosecutions after a long time should be brought into question if offences persist under the legislation.

²⁸ Casamitjana, J. and Turner, D. (2001) *Official Zoo Health Check 2000* Horsham: Born Free Foundation.

²⁹ BFF (2004). Memorandum submitted by the Born Free Foundation 23 August 2004. Select Committee on Environment, Food and Rural Affairs Minutes of Evidence. House of Commons.
<http://www.publications.parliament.uk/pa/cm200405/cmselect/cmenvfru/52/4091508.htm>

We only could find evidence of one prosecution ever made under the Zoo Licensing Act 1981, undertaken successfully in 2002. DEFRA does not know if any more prosecutions have been made under the ZLA, as they do not collect this information, and neither does the Ministry of Justice, but it is unlikely that another took place in the last ten years or so because information about it would be available in the Internet, and we could not find it. In 2008 David Amess MP tabled a Parliamentary Question to ask how many reports, investigations and prosecutions of offences under several pieces of animal welfare legislation, including the ZLA, happened in 2006 at magistrates' courts. The reply showed the cases for all the other laws, but none for the ZLA because "*Information on the number of prosecutions under the Zoo Licensing Act 1981 is not collected centrally by the Ministry of Justice.*"³⁰ In 2002 a similar question to DEFRA by the Select Committee on Environmental Audit was given the response "*The Department has no central record of prosecutions under this Act.*"³¹

On issues affecting vertebrate animals, zoo operators could be prosecuted under the Animal Welfare Act 2006. However, it would be difficult to bring a successful prosecution under this Act if the defenders could rely on zoo inspectors as a defence, since the fact that experts on zoos visited the premises and found nothing wrong with the animals in question would create a very difficult obstacle to overcome by the prosecution. We could not find any case of a prosecution of a zoo operator made under the Animal Welfare Act 2006.

Transparency

Due to the fact the local authorities are the most important decision makers of the whole zoo licensing system, whether they are transparent enough in their zoo licensing activities may prove vital if the system is to be independently assessed.

Local authorities do not publish their dealings with zoos. They sometimes publish some guidance for zoo operators in their websites (particularly the procedures for applying for licences), and any licensed zoo is legally required to display its licence (including licence conditions) so the public know whether the authority has issued a licence to them. However, without asking the authority directly, in general it would not be easy to determine which zoos are licensed under an authority, when they were inspected and what the outcome of the inspection was, whether they have a dispensation, and this sort of information.

Therefore, the degree of transparency of local authorities would be determined by their openness and proficiency in responding enquiries about zoos, in particular via Freedom of Information requests.

Many local authorities would redact the names of the zoo inspectors (including DEFRA nominated inspectors) when sending information about zoo licensing, so in this respect they are not very open. Although it is perfectly understandable to remove personal information such as addresses and telephone numbers, we do not believe that there is a justification for not releasing the inspectors' names, since their disclosure could help to identify conflict of interests or patterns of poor practice in their inspections, and therefore they should be open to scrutiny. Clearly some local authorities consider that this is the case, since they do not redact their names or correspondence with the authority.

³⁰ <http://www.publications.parliament.uk/pa/cm200708/cmhansrd/cm080624/text/80624w0001.htm>

³¹ <http://www.publications.parliament.uk/pa/cm200304/cmselect/cmenvaud/605/4070811.htm>

In general, the local authorities approached with this study's FoI requests sent some information to us. However, more often than not only sent part of the information we requested, many reminders were needed to get all the information from them, and it often arrived much later than the deadline imposed by the legislation (20 working days). As can be seen in the section on FoI in the Methods chapter above, local authorities only sent the requested information within the legal deadline for 39% of the selected collections. This shows either incompetence on the part of the FoI officers, or a reluctance to release all this information. The latter can clearly be seen in the replies of some of these officers. For instance, Staffordshire Moorlands District Council replied to our standard request saying that the only information they could send us was the stocklist and the zoo licence. Regarding inspection reports and correspondence, they claimed *"The Council has decided not to release any zoo inspection reports and correspondence between the zoo and the Council since January 2005, as this contains information of a personal and sometimes sensitive nature making it inappropriate to reveal this to any third party. The information is exempt under Section 40 and Section 43 of the Freedom of Information Act 2000. The Council does not consider this is in the public interest to release the information in view of the decision by DEFRA which is not to release copies of zoo inspection reports or similar correspondence"*. Further insistence from us, including communication with senior council officials, allowed us to obtain some of the reports after more than five months of delay, but with the following caveat, which goes beyond the standard copyright requirements: *"Under the Re-use of Public Sector Information Regulations 2005, if you wish to re-use any information that you have been provided with by the Council for any purpose that is not your own individual use, you require the written consent of the Council. In order to make a request you should write to the Council for permission to use the information and provide your name and address and state the purpose for which the document is to be re-used."* It might not be coincidental that the collection KIN77, one of the collections in this authority's area, has had several reports showing one of the highest number of licence conditions breaches found in this study (and in several variables of performance is the worst collection found in this study), and yet the authority was reluctant to release it into the public domain. In fact, we would not have received this information had we not pressured the authority to release it).

Other examples relate to apparent reluctance to send to us zoos' stocklists. Often information initially withheld was eventually released after insisting and arguing against the reasons given by quoting legislation and guidance (for instance, the requirement of doing at least an inspection per year), which goes to show that, in most cases, it would be very likely that information on zoo licensing activities requested by members of the public not very well-versed in the system and the regulations, would not be sent to them.

Sometimes information could not be obtained because the local authority simply did not keep proper records, or did not do the right inspections. Each zoological collection should have had at least an inspection report in the possession of the local authority, but 12% (n=207) of the collections had none. Due to the annual inspection requirement from the ZLA in a six year study we would expect an average number of inspection reports held by the council for each zoo to be about 6 (the number of inspections for those zoos that started since 2006 would be balanced out by those zoos that received more than two inspections per year, as in the case of special inspections). However, the actual average of inspection reports per zoo received was 3.62 (STD=2.412, n=207). Sometimes the reports were

missing because inspections did not take place, but in others because they had been misplaced.

Ultimately, obtaining the information needed for this research from the local authorities become very difficult and quadrupled the budgeted time length for the project. From a design point of view (publications, poor record keeping), and from a performance point of view (Fol requests compliance in content and timing), local authorities show in average very poor transparency performance.

Local Authorities as zoo operators

Some local authorities own zoos. This is allowed under the ZLA provisions, through its section 13, which states that in such cases the Secretary of State (DEFRA) would substitute the local authority in the licensing decisions. This is what DEFRA has to say regarding these cases, in their guidance issued in the SSSMZP³² :

Section 13 deals with the situation where the local authority are the owner of a zoo. It is recommended that the local authority nominate an officer to be responsible for the zoo. Section 13 applies the Act to authority-owned zoos subject to various additions and modifications. The local authority is required to send to the Secretary of State a copy of the licence, or notification in writing of any extension to it. They must also send her a copy of any inspectors' report, along with any comments they may have on it. The object of this latter requirement is to enable the Secretary of State to direct the inclusion of conditions in a licence (section 5(5)).

Section 13(4) and 13(5) gives the Secretary of State (not the authority) the functions of issuing directions permanently closing a zoo under s16B, or a section of a zoo under s16(1A) and (1B), or enforcing licence conditions under s16A. Section 13(6) makes simplified provision for the closure of unlicensed zoos owned by local authorities and operated unlawfully (in place of section 16C). Section 13(8) deals with the future care or disposal of animals at local authority-owned zoos that close permanently (and replaces section 16E for these zoos). The local authority are required to make arrangements for the future care of the animals, or their disposal and care until disposed of. There is a right of appeal against a direction issued under section 13(8) – see paragraphs 129-133 below. The local authority are also required to supply any information on the care or disposal of the animals to the Secretary of State, as requested and the Secretary of State may give the local authority directions about the care or disposal of animals at permanently closed zoos. Section 13(9) to 13(11) provides the Secretary of State with the option of requiring a local authority-owned zoo to be inspected.

Because local authorities that own zoos are themselves responsible for the licence administration of other zoos, we should expect that the standards of their zoos should be very high. Equally, due to the fact that, DEFRA has more hands on involvement in the licensing of local authority-owned zoos, this should also lead to improved standards. However, we do not find this. In the chapter below about zoo standards, in the section regarding the performance of zoological collections, a method created by the author to “score” the standards of zoos using several variables (breaches of licence conditions, unsatisfactory issues found by the inspectors, recurrence of such issues, etc.) was used.

³² <http://archive.defra.gov.uk/wildlife-pets/zoos/standards.htm>

Comparing such scores with those found in the collections not owned by the local authorities does not show any statistically significant difference that suggests that the authorities' zoos score higher. In particular, testing for the variable of average score found that, using only formal inspections (see Appendix I) using the Kolmogorov-Smirnov two-sample one-tailed test ($D=0.278$, $p=0.345$; $m=11$, $n=153$) since not all the samples are normal, we do not find any statistical difference, and, using the variable of average number of unsatisfactory issues found by inspectors, we do not find it either ($D=0.2136$, $p=0.586$). On the contrary, if any change can be detected is a slightly worse performance by the local authority-owned zoos, since their average score when using all inspections is -0.38 (and it is -1.14 if we only look at formal inspections), while the average score for those collections not owned by the authorities is $+0.15$ (and -0.66 when only looking at formal inspections).³³

The issue becomes more complex when we consider that, in the cases of zoos belonging to the local authorities, despite the change of roles regarding DEFRA deciding on most issues, the role of the authority as inspector and overseer has not been completely substituted, and therefore we have a remaining case of potential conflict of interest. For instance, DEFRA still relies in the information sent to them by the local authorities regarding their own zoos, such as the case of stocklists that are needed to decide if their dispensation is still valid. In fact, in our sample we have found that 36% ($n=28$) of the local authorities' zoos have the wrong dispensation assigned to them. This is clearly DEFRA's fault, but it is difficult to ascertain how much the local authority may have contributed to these mistakes. Also, informal inspections continue to be made by local authority inspectors, which, even if from a different department, still they may have certain conflicts of interest. In some cases, though, you can tell that an inspector is making an effort of not showing any bias. For instance, in the case of the collection coded TIL141 we find the best informal inspection report we have encountered in this study (12/10/2010), with photos attached to illustrate issues, although the collection still scores as having poor standards.

PERFORMANCE OF DEFRA/AH and ZEC

A key player in the zoo licensing system in England is the UK's central government which, in zoo matters, is represented by DEFRA and Animal Health and informed by the *Zoo Expert Committee* (see Appendix C). Together they are the top hierarchical levels of the system, and therefore are responsible of ensuring that it works properly. These organisations are in charge of setting definitions, devising criteria, resolving conflicts, designing methods, developing policies, creating guidance, evaluating the performance of the system as a whole and all its components, and solving problems of application of the system.

DEFRA/AH is aware that there are problems with the current zoo inspection system, and it has tried to address them. For instance, Dr. Kirkwood, the former chair of the *Zoos Forum*, in the 2009 zoo inspectors' training seminar, said he was aware that there had been some difficulties in the operation of the licensing system in some cases, such as inspection schedules had slipped, licences had not been renewed in time, and inspections had proceeded without the correct compliment of inspectors. He also acknowledged that

³³ In this score system explained in the chapters below 0 means a standard zoo, +3 an excellent zoo regarding standards of modern zoo practice, and -3 a very bad zoo regarding such standards.

criticisms had also been made regarding the ZLA not being applied uniformly, powers of enforcement not being used, zoos remaining open without licences, backdating of licences, inspections not taking place, mandatory conditions not being attached, and inspectors' recommendations on reports not being implemented³⁴.

However, whether the awareness of the problems and their flagging up in past training sessions was sufficient to address them in practice remains to be seen, since the performance of these organisations can of course be also evaluated.

Zoo inspection forms

One of the clear examples of how DEFRA is involved in the design of the zoo licensing system is by designing the forms that inspectors use when writing up the reports for inspections carried out. This is more important than it sounds at first glance, since they "set the tone" with which DEFRA's inspectors will do their inspections, which will be spread through the entire system since local authority's inspectors will be influenced by it, and from them local authority officials that are in charge of enforcing the ZLA. A poorly designed form might have a major impact on the system itself.

As seen in Appendix C, DEFRA designed two forms for inspections (ZOO2 and ZOO3) and one for the pre-inspection audits (ZOO1). Their existence tells the inspectors which subjects they have to pay attention to, and which information they have to seek from each zoo inspection. They also work as a method of standardising practices, and as a tool to evaluate the performance of zoos, providing comparative information year-on-year, and as a legal document from which basing any potential enforcing legal action (since once filled they have to be signed by the inspectors).

According to a questionnaire sent to a sample of inspectors by Greenwood et al. (2003), 94% of zoo inspectors reported that they use the recommended inspection form, printed as an Appendix to the SSSMZP, when conducting their inspections. In the ADAS (2011) questionnaire study a number of local authorities and inspectors felt that the inspection forms associated with the Act would benefit from some updating to reflect the different types of animal collections.

The most common form used is the ZOO2 form, designed for the majority of types of inspections (renewal, periodical, special and informal), and which could be used, theoretically, in over 90% of the inspections. In reality it is used, either in paper form or in its interactive PDF electronic form, far less than that. During the period of our study (which begins with the first year the form was made available) it has only been used in 46% of the inspections. Its usage has increased over time, but even today its usage still falls short of what it should be, especially because it is hardly ever used in informal and special inspections (15% and 7% usage respectively, n=340).

The most important element of the ZOO2 form is that it is primarily based on a tick-box system where each important issue to consider is presented in the form of a question with a three possible answers (YES, NO and N/A). It is interesting to notice how frequently the answer YES is given, and how infrequently the NO or N/A answers are chosen. From an

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[http://animalhealth.defra.gov.uk/about/publications/cites/performance/Report%20of%20the%20Zoo%20Seminar%202009%20final%20\(03%2008%2009\)%20.pdf](http://animalhealth.defra.gov.uk/about/publications/cites/performance/Report%20of%20the%20Zoo%20Seminar%202009%20final%20(03%2008%2009)%20.pdf)

average of 93.14 issues to tick in forms, we find an average of 83.63 ticks on YES, 4.61 ticks on NO, and 4.43 ticks on N/A. Although it appears that the questions are properly formulated because they clearly state that they refer to all animals and all enclosures, not the majority (i.e. Q1.1 *“Is each animal provided with a high standard of nutrition?”*), or that issues should be assessed widely in all their dimensions (i.e. Q3.16 *“Are post mortem examination arrangements satisfactory?”*) nevertheless the “yes, but” option is chosen far more often than the “no, because” option (see chapter about inspectors below).

A tick-box system in inspection forms may fuel the misconception that an inspector can thoroughly inspect each and every animal of the zoo and summarise their status with a simple tick. In reality, a complete inspection that analyses in detail all the animals, enclosures, signs, displays and methods around zoo practice would inevitably find many issues that would require improvement and the recommendations to address them would be wide and diverse. A tick-box system points towards the opposite direction, which is to ignore individual animals and specific procedures and made sweeping generalisations of a long term performance on a short pre-announced visit where zoo representatives have been given sufficient notice to demonstrate their establishment in the best possible light, rather than offering a true day-to-day view of the zoo, which may or may not differ by comparison. A tick-box system encourages speed and generalisation, not thoroughness and particularisation, which is what the animals and the general public would expect of a licensing system that is key for the protection of their wellbeing.

One peculiarity of the ZOO2 form is that it gives the option to grade the YES answers on a scale from 1 (excellent) to 4 (barely acceptable). Interestingly, it does not allow grading of the NO answers (from let’s say “barely inadequate” to “terrible”). However, it must be said that the grade system offered in the forms is not used very often by inspectors.

Conditions vs. Recommendations

Another problem with the inspection forms created by DEFRA is that they force the inspectors to divide their advice between “recommendations” and “licence conditions” in a way that seems to have led inspectors to that there are two types of condition with different degree of compulsion that a zoo has to meet to solve the problems the inspectors have identified. Obviously, the inspectors should be able to make recommendations to the local authorities regarding anything they consider relevant, so in addition to suggesting additional licence conditions to address unsatisfactory issues, they should be free to write any other recommendation in their reports. However, one thing is to write recommendations which may include the suggestion for additional licence conditions to be added to the zoo’s licence, but another thing is to issue two different types of conditions to be given to the zoo operators to solve unsatisfactory issues detected, ones under the title “licence conditions” that are mandatory, and others under the title of “recommendations” that are not. This is what we have find often happens, and we believe is a cause of great confusion.

The ZLA stipulates that licences should be given under conditions that are there to guarantee that the zoo would not fall below standards. It does not create two different types of inspector’s advice with a different degree of compulsion: written recommendations and licence conditions. In the Act we do see the term “recommendations” but to describe any advice an inspector or local authority would give. When following such advice is to become obligatory it is expressed in the form of “licence conditions”, but the ZLA does not describe anything relating to advice that is not obligatory. However, in DEFRA’s ZOO2 page 9 is set

up for “additional notes and comments on the answers to the earlier questions; recommendations (other than in respect of grant or refusal of a licence and any specific conditions recommended for a licence); and any general remarks which the inspecting team may wish to record” while page 10 is set up for “Additional conditions” in the context of zoo licences. This means that as far as DEFRA is concerned recommendations are advice other than “in respect of grant or refusal of a licence and any specific conditions recommended for a licence”, which is to say advice to improve the performance of a zoo beyond what it is regarded as already satisfactory regarding the minimum standards of zoo practice.

It seems that this distinction was originally conceived by the *Zoos Forum*; an advisory group mainly composed by members of the zoo industry itself. We can see this in the Secretary of State’s Standards of Modern Zoo Practice (SSSMZP)³⁵ they created, where the embryonic form of the form ZOO2 was already presented. The role of inspectors can be seen more clearly in another of the *Zoos Forum*’s publications, the “*Zoos Forum Handbook*”: “we suggest that the role of the inspector will more usually be one of auditing operating procedures to check that zoos have appropriate systems for the routine assessment and regular review of their animal’s welfare. Any actions considered necessary by the inspectors as a result of their own assessments of animal welfare or of their findings concerning the zoo’s systems for routine assessments and regular reviews, may be reported to the Local Authority for tackling either by setting conditions or making recommendations on a licence or amended licence. A local authority officer with concerns for animal welfare at any other time, having failed to receive adequate reassurance from the operator, is advised to discuss them with the Local Authority’s veterinarian or Secretary of State’s inspector, and under certain circumstances a special inspection may be deemed appropriate.”

This “improvement adviser” view of the inspectors is endorsed by DEFRA and Animal Health, since can be seen in the Government circular 02/2003³⁶: “*The inspectors’ report may include advice and/or recommendations for any improvements designed to ensure the zoo carries out its conservation, public safety and animal welfare activities. For this purpose the inspectors are required to have regard to the Secretary of State’s standards drawn up under section 9, and are recommended to have regard to any other associated advice.*”

We can see the results of this division of the advice given. In all the inspection reports studied we found twice as many recommendations as conditions. We also found 37% of inspections reports with recommendations only and 4% with conditions only, which again suggests the clear tendency of inspectors to avoid issuing licence conditions to address unsatisfactory problems.

Our study also shows confusion on the part of inspectors and officials about the exact meaning of recommendations and conditions, and when to issue them. The watering down effect of these “pseudo-conditions” does not seem to have stopped at DEFRA’s guidance, since some inspectors went beyond creating more types of advice, even “pseudo-recommendations” that seem to have even less obligation attached than recommendations.

Considering DEFRA’s view of the inspectors’ role it could be argued that the analysis we made in this study of inconsistencies and “False YES” ticks on the inspection reports is flawed because it is based on the premise that the inspector is seeking unsatisfactory

³⁵ <http://archive.defra.gov.uk/wildlife-pets/zoos/standards.htm>

³⁶ <http://archive.defra.gov.uk/wildlife-pets/zoos/documents/zoo-gc022003.pdf>

issues, rather than seeking things to improve, regardless how satisfactory they may already be. This is not the case. Even under DEFRA's interpretation, "recommendations" are not pieces of advice for issues that need changing which are less imperative than the advice given for licence conditions, nor pieces of advice for changes on less important issues, but are still pieces of advice for "*improvements designed to ensure the zoo carries out its conservation, public safety and animal welfare activities*". The SSSMZP are not there as "aspirational" targets but as minimum requirements, so any inspector's advice, given in the form of recommendations or conditions, should be aimed to such minimum standards. If that were not the case, the questions on DEFRA's form would have been completely re-written to reflect aspirations, improvements and "most animals" rather than "each animal" assessments. They have not, and therefore our interpretation of "False YES" answers remain valid because these are relative to the actual wording of the question, which relates directly to the wording of the relevant legislation, not our interpretation of what they should mean.

Granting dispensations

According to the ZLA, the ultimate responsibility for granting or refusing dispensations falls on the Secretary of State. In this case this means DEFRA/AH. Even if the local authorities have a role since they apply for such dispensations on behalf of the zoo operator, and they can recommend whether or not they should be granted, the ultimate decision lies with DEFRA. If DEFRA believes that both the inspectors and the local authority officials that may be recommending a dispensation be granted are wrong, such dispensation should not be granted.

As discussed in the chapter of "Applying for dispensations" above, our study shows that DEFRA has wrongly granted dispensations to 49% of the zoological collections. It must be said, though, that the term "wrong dispensation" used in this study may be misleading, since legally speaking DEFRA can give any dispensation it wants to any collections, since it can choose the "criteria" under which to award them, and can apply a flexible policy when using it by dealing on a "case by case" basis with each dispensation request. Therefore, in this context "wrong dispensation" actually means "dispensation given against DEFRA's published criteria". The fact remains, though, that DEFRA has published "guidance" to the local authorities and zoological collections from which they are bound to make their own decisions regarding whether to apply for a dispensation or recommend one. DEFRA did not need to do this if it had decided that it would not apply any criteria and it would just judge each case on its individual merits alone. But it did, and by publishing the guidance and the criteria, and by making it very specific with very well defined thresholds, what it did is to set up some "expectations" that should not being met only in the context of justified "exceptions". DEFRA/AH used the *Zoos forum* as the expertise to draw up the criteria for granting dispensations, so ignoring this criteria means ignoring expert advice. Unless set against other expert advice, ignoring it certainly equates to poor practice, and it is our contention than DEFRA, by systematically –as opposed to occasionally– ignoring the experts' advice and criteria, is wrongly granting dispensations, and therefore the dispensation given are "wrong dispensations".

We only could find one case where we thought that it could be argued that it was justifiable to grant a dispensation when DEFRA's criteria had not been fulfilled. This is the case of the collection code TRE142, which received a 14.2 dispensation, but yet it keeps 142 hazardous mammal specimens (and therefore it should not have a dispensation according to DEFRA's

criteria). This is because in this case there is only one species kept (monkeys), and all the specimens are kept in the same enclosure (in a free range scenario), so it could be argued that one inspector effectively check them all (although whether that is true would depend on the access of the inspector of each of the individual monkeys). In all other cases, since “hazard” and “conservation” adds several important and complex dimensions to any collection which require a more detailed inspection, and since zoo inspectors are required to play many roles and assess many issues within a very limited timeframe, reducing the number of inspectors or the frequency of inspections is hardly justifiable in such cases. In effect, it could be argued that the threshold of 50 Hazardous or Conservation sensitive specimens may be too high already, and that any inspector would struggle to pay enough attention to all of them during a one-day inspection.

There is one variable that we can measure and use to compare the collections with the right and the wrong dispensation status among Aquaria, Bird of Prey Centres and Farm Parks: number of specimens kept. Since part of any criteria –the “official” DEFRA criteria in the guidance or any other that may have been used– involves numbers of specimens in the sense that the bigger the collection the more of a need of a full licence with the maximum number of inspectors in the inspection team (and therefore it is more likely that if it has a dispensation instead, that would be a wrong dispensation) we would expect to see that the average number of specimens in the collections with the wrong dispensation status is significantly smaller than the same average for the collections with the right dispensation status. Whatever hypothetical supra-criteria DEFRA may have used on top of its original criteria, the end result should be that the bigger the collection in term of specimens, the less likely that a wrong dispensation is granted to it (since wrong dispensations always go in the same direction, which is decrease in inspection requirements, not increase).

However, our more in-depth analysis of the data does not show the result to be to the contrary of our assumption. Regarding Aquaria, we cannot find any statistically significant difference between the mean of number of specimens kept between the group of collections with the wrong dispensation status and those with the right one (t-test one-tail equal variance, $p = 0.0647$; checked for equal variances and normality). We found the same results for Farm Parks (t-test one-tail equal variance, $p = 0.2476$; checked for equal variances and normality). Birds of Prey Centres, however did show statistically significant differences between the two groups (t-test one-tail unequal variance, $p = 0.0038$, with the “right dispensation” group not being normal), but with more specimens as an average in the group with the wrong dispensation status, therefore the opposite than expected. This means that, in the case of Birds of Prey centres, DEFRA tends to reduce the inspection regime by granting dispensations to the collections with more birds, and in the case of Aquaria and Farm Parks the number of specimens does not seem to affect its decision to grant dispensations. Therefore, the data does not support the hypothesis that there is a “rationalisation” of the wrong dispensation phenomenon, and if there is a new set of criteria such as tending to dispense particular types of collections such as aquaria and falconry centres, this is not applied consistently so the end result is that seemingly equal collections may receive different dispensation statuses.

We can find this in various examples. For instance, the collections ILF73, SEA121 and WOR166 are aquaria with less than 700 specimens (570, 645, and 250 respectively) and fewer than 50 hazardous and/or conservation sensitive specimens each, but the aquaria BOL28, OCE100 and BLU26 have more than double the number of specimens (1900, 2921,

and 3565 respectively) and more than 50 H/CS specimens each, and yet they all hold the same 14.2 dispensation, when obviously the latter group should require a full licence. In the case of Bird of Prey Centres, PEC105, HOL68 and BIR18 keep 32, 22 and 15 specimens respectively, while RAP112, WOO165 and WIL161 keep 398, 406 and 341 specimens respectively and more than 50 H/CS specimens each, and yet they all hold the same 14.2 dispensation.

Perhaps DEFRA/AH is trying to apply some sort of artificial distinction not shown in the legislation between general mixed collections and the rest, trying to give only full licences to “proper” zoos, and give dispensations to the rest disregarding the ZLA and its own guidance. It is a fact that from the 274 zoological collections in England, mostly Mixed Collections and “Other Birds” collections are the types of zoos that have collections with full licences, with the exception of three Aquaria and one “Other”. It is almost as if guidance and legislation (which make no distinction about types of collections) has been ignored, and DEFRA avoids giving full licences to Aquaria, Farm Parks, Birds of Prey Centres, Invertebrate Centres and Herpetological Centres, no matter how big they are and how many hazardous or conservation sensitive specimens they keep. Since most birds of prey are in fact hazardous and listed in categories 1 and/or 2 of Appendix 12 of the *Secretary of State’s Standards of Modern Zoo Practice*, perhaps the wrong dispensation has nothing to do with them, but simply to do with the fact they are not kept in a “proper” zoo, so it is considered that they should not be inspected with the same rigour as those with a full licence. Equally, the presence or not of a wild mammal in the collection may be completely disregarded by DEFRA and only considered relevant if it is kept in a Mixed Collection or a big Ornithological zoo.

This hypothesis is consistent with the case of the collection BLU27, where the “passive” role of DEFRA in the dispensation process (granting a dispensation when it is requested by the zoo) seems to have been broken, and DEFRA seems to be the one seeking to grant dispensations even when not requested yet, perhaps in an attempt to “correct” the current profile of dispensations to make it fit the one they would prefer. This collection is an aquarium that holds now a 14.2 dispensation, but it had a full licence before. A letter from DEFRA to the local authority dated 13/05/2005 stated that DEFRA would ask the zoo inspector to see if he could recommend a 14.2 dispensation, rather than reacting from a recommendation already given by him/her, or from a request from the zoo operator. In this case it is obvious that DEFRA thinks that there is an argument for granting dispensations to aquaria, as can be seen in the following extract from the letter: *“...a dispensation under section 14(2) does not appear to have been issued to this collection. However, as most aquaria of this nature and size tend to have 14(2) dispensations (where periodical inspections are required to be carried out by an inspector or inspectors nominated by the Secretary of State only) and given the fact that the periodical inspection is overdue we have decided to arrange the inspection in accordance with section 14(2) of the Zoo Licensing Act and request that the inspector nominated assesses at the time of the inspection whether he would recommended such a dispensation”.*

Another letter from DEFRA sent to various local authorities in 2006 gives another insight of this possible attempt to change the rules, in this case relative to the presence of wild mammals in the collections, which in the current system their presence already prevents the collection from having a 14.1 dispensation – unless it only keeps deer. DEFRA states in the letter the following: *“You may also wish to be aware that the Department has considered the*

guidance for full dispensations ('exemptions') under section 14(1)(a) and the flexibility which may be applied. The guidance remains unchanged but the Department will consider whether collections containing very small numbers of wild animals might be suitable for a full dispensation, for example, where those mammals are non-hazardous and/or non-conservation sensitive species and the animal husbandry is of an excellent standard".

Whether DEFRA/AH did decide that the mammal criteria does not longer count in the decision process to grant a dispensation at some point after this letter, is unknown, but it is possible that the decision was made but the guidance not changed which would account for some of the wrong dispensations detected.

In any event, whether as a result of oversights in granting dispensations to collections without having checked their stocklists, deficient supervision in accepting local authorities' recommendations at face value, or attempting to apply a new undisclosed dispensation system to benefit the zoo operators but disregarding the spirit of the ZLA and expert advice, the end result of the dispensation policy is a landscape of zoological collections where only 16% of the collections have a full licence, and 36% of the animals kept in zoos in England are under-inspected by design. There seems to be something wrong in a licensing system where 84% of the entities to licence turn out to be exceptions of some kind. The Zoo Licensing Act was set to licence all zoological collections and to guarantee the welfare of the animals kept in them regardless of the type of the collection, and yet DEFRA policy in dispensation granting, by error or by design, seems to undermine it unnecessarily reducing the level of inspection of most collections.

If DEFRA guidance had been applied to the letter and no wrong dispensations would have been granted, almost half of the collections would have had a full licence, which would be the biggest strata of the population (at it should be if the "rule" is to outnumber the "exception"). Comparing the current profile of the collection population with the theoretical profile of the population if no wrong dispensations had been granted, the latter fits far better the expected population profile of any licensing system that would include dispensations and exemptions. Figure 13 illustrates this, clearly showing that, currently, not only do the exceptions outnumber the rule as a whole, but that the 14.2 and the 14.1.a strata are bigger than the "non dispensation" stratum, with an overall median in the position around 14.2 dispensations. However, the "corrected" version using the very own DEFRA guidance – which they currently do not follow– shows a median towards the full licensed zoo, being this stratum the dominant, closely followed by the stratum of 14.2 dispensations, and only showing very exceptional complete "exceptions" to the ZLA (7%), as we believe it should be.

Guidance

An important role of the "overseeing" part of the licensing system is to set up policies and communicate them to the stakeholders in the form of guidance. DEFRA/AH does this either writing

Arguably the strongest and most specific guidance on zoos that DEFRA has published is the *Government circular 02/2003*³⁷. However, in the same introduction of this guidance it is stated that *"This guidance should not be taken as an authoritative statement of the legal effect of the Act"*, which means that it could not necessarily be used as a means to prosecute anyone breaching any of the sections of the ZLA. The interpretation of the ZLA

³⁷ <http://archive.defra.gov.uk/wildlife-pets/zoos/documents/zoo-gc022003.pdf>

would in the end fall on the judiciary, but to our knowledge no “direction” from any judge has been made public about any “grey area” of the zoo licensing system.

In addition to this general guidance, when an issue arises DEFRA/AH also writes directly to zoos (or to local authorities asking them to write to zoos in their behalf) with ad-hoc guidance, as in the case of the anti-venom guidance issued in 2010 in partnership with the Department of Health, reminding zoos to put in place arrangements for the availability of appropriate anti-venoms for the species they keep. Similar letters were sent in relation to *E. coli*, avian influenza and *foot and mouth* disease outbreaks.

In 2008, in view of concerns about certain aspects of the operation of the licensing system, the then Minister for Climate Change, Biodiversity and Waste, Joan Ruddock, took the unusual step of writing to all local authorities to remind them about their responsibilities under the ZLA, and to help avoid any risk of missed schedules for inspections or licensing, and Animal Health started writing every year to all local authorities with zoos, to remind them to make timely preparations for procedures scheduled for the coming year³⁸.

In general it could be said that the overseeing role of DEFRA/AH/ZEC on providing general and specific guidance to zoo operators and the local authorities is being fulfilled at least since 2002, and DEFRA has worked on not allowing the proliferation of “grey areas” and loop-holes in the zoo licensing system.

However, another story may be how well DEFRA performs in ensuring that its own guidance is followed, and judging at the poor performance of inspectors and local authorities, as can be seen in the relevant chapters in this study, it does not seem that in this regard it is doing a very good job. One case serves as perfect example of this failure to supervise properly. The DEFRA’s inspector on the inspection made on 24/04/2008 at the collection coded LAK82 had the following initial remark in his report: *“It appears on examination of the paperwork provided that the last inspection for the Zoo Licensing Act may have been as long ago as 2002. If this is the case then the attention on the local Authority should be drawn to the requirement for Periodic and Informal inspections between renewal dates”*. This inspector, when having to answer the question of whether the existing licence condition had been met, he ticked the box as N/A and noted “unknown”, and yet it the collection continued being licensed despite 16 unsatisfactory issues had been identified, any of which could have been a breach of a licence condition. Not only DEFRA seemed unaware of all this, but apparently nothing was then done and the local authority continued with further irregularities: the informal inspection that was due in 2009 did not happen and it was carried out in January 2010, and the periodic inspection that was due in 2011 was brought forward and took place in August 2010 (which showed 15 unsatisfactory issues, several of them already identified in previous inspections, but none deemed serious enough by the inspector who recommended granting the licence without any additional licence condition). This is not a tiny collection with just a few invertebrates or so. It is a general zoo with 500 specimens (invertebrates, fish, birds, reptiles, amphibians and mammals, including big cats and primates) operating since at least 1999, year that received a 14.2 dispensation (which is still applied but wrongly so, since the zoo already keeps more than 50 hazardous and/or conservation sensitive

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[http://animalhealth.defra.gov.uk/about/publications/cites/performance/Report%20of%20the%20Zoo%20Seminar%202009%20final%20\(03%2008%2009\)%20.pdf](http://animalhealth.defra.gov.uk/about/publications/cites/performance/Report%20of%20the%20Zoo%20Seminar%202009%20final%20(03%2008%2009)%20.pdf)

specimens). Therefore, DEFRA/AH's failure in supervising this case with so many irregularities at so many levels is quite significant.

Transparency

Since DEFRA/AH and the ZEC are public bodies with an important decision making overseeing role in the zoo inspection system, the issue of transparency of their work is relevant. There are different ways in which these bodies work "transparently": being open to scrutiny by politicians and other sections of government; publishing reports, guidance and minutes related to their decisions; and responding to Freedom of Information requests from the general public making available the documentation related to their work.

As any government work, MPs can of course table parliamentary questions in order to check on the work of these departments on zoos. This has been done in several occasions, for example in 2005 Mike Hancock MP asking the Secretary of State for DEFRA about issuing definitive guidance to local authorities on all species status under the ZLA and revising the ZLA. These questions can be directed to the Zoo Forum/ZEC, as in the case of one in 2010 regarding the assessment of the effect of the ZLA on sanctuaries and another on what assessment has been made of the effects of the Zoos Directive on welfare standards in England³⁹.

As far as publications are concerned, the *Zoos Forum*, when was still operational, published through DEFRA's website the name of its members, the guidance they produced (the *Secretary of State's Standards of Modern Zoo Practice*, the *Zoos forum Handbook*, and other specific guidance such as the *Zoos Forum review of issues in elephant husbandry in UK zoos in the light of the Report by Harris et al. (2008)*⁴⁰), annual reports⁴¹, as well as the minutes of all their meetings. In addition to this, Open Meetings were held annually and allow the public to observe the Forum at work and to ask questions. We have no reason to believe that the recently formed ZEC that substitutes the Forum will not do the same, and therefore their official activities seem to be fully transparent.

As seen above, DEFRA/AH also publishes their guidance to zoos and local authorities in its website. However, it does not publish the minutes of all the meetings they may have on zoo related matters, and it does not publish the list of inspectors they nominate for zoo inspections. Therefore, the question is whether this information can be obtained through Fol requests, and then conclude that DEFRA's work on zoos is also fully "transparent".

In addition to the local authorities, DEFRA also keeps copies of the formal inspection reports made by their nominated inspectors. However, they attitude respect these reports is quite different than most local authorities. In a template letter DEFRA/AH sends to the local authorities after they requested an inspector to be nominated for an incoming inspection, we can read "*You should note that since the Zoo Licensing work has moved over from DEFRA to Animal Health, it is Animal Health's policy generally not to release inspection reports under the Fol, although each request will be considered on a case by case basis*". Therefore, had a local authority misplaced an inspector's report (which as we have seen it happens often) it would be unlikely that it could be obtained using a Fol request to *Animal Health* directly, which makes the process even less transparent.

³⁹ <http://archive.defra.gov.uk/wildlife-pets/zoos/documents/110127-minutes.pdf>

⁴⁰ <http://archive.defra.gov.uk/wildlife>

⁴¹ <http://archive.defra.gov.uk/wildlife>

Regarding the response to FoI requests, we made one for the list of nominated DEFRA zoo inspectors, which was denied within a 5 hours from sending it, and another FoI request on zoo closures and licence refusals which was also denied, and despite our follow up for clarification, no information about licence refusals and zoo closure direction orders were ever sent to us, not even an acknowledgment that they were not aware of any refusal or closure direction order having been issue by a local authority during the period of our study. These are not very good examples of transparency.

Zoos Inspectorate

DEFRA/AH, through its *Zoos Inspectorate*, is responsible of creating the list of zoo inspectors the local authorities would have to use when choosing Secretary of State's inspectors for their formal inspections, but it also appoints directly the specific nominated inspector of the list for each specific formal inspection, when local authorities requests DEFRA to nominate an inspector.

The Secretary of State, after consultation with the presidents of the British Veterinary Association, the National Federation of Zoological Gardens and the National Zoological Association and with such other persons as he thinks fit, compiles a list of inspectors consisting of two parts, the first part containing the names of veterinary surgeons and veterinary practitioners and the second part containing the names of persons who can advise on the keeping and welfare of animals, the implementation of conservation measures, and the management of zoos generally.

The key issues in terms of assessing performance on this task will be about whether the composition of the list is fit for purpose (we made a FoI request to DEFRA/AH of their list of nominated inspectors, but it was denied), and whether the selection of particular inspectors for particular inspections is adequate.

Although it would be difficult for DEFRA to find zoo inspectors that are not linked to the zoo industry in any way, questions should be asked about why so many of DEFRA nominees inspectors happen to be either still working at a zoo or directing one. For example, Nick Jackson from the Welch Mountain zoo, Sharon Redrobe from Twycross Zoo, Bryan Carroll from Bristol Zoo Gardens, John Lewis from Colchester zoo, etc. Considering that there are experts in the UK on animal welfare, wildlife veterinary and animal behaviour that could easily become good inspectors without having any direct links with the zoo industry, choosing those that are so directly linked to the industry almost transforms what it should be a government regulated activity into a self-regulated activity. The "independent" character of the zoo inspector does not seem to be an attribute DEFRA is seeking for, and since inspectors are so crucial for the licensing system, their lack of independence undermines it.

Indeed, when DEFRA advertises for zoo inspectors as it is doing at the time of writing this report, the "independence" preference is not added in the advert. On the contrary, it states *"candidates will be expected to demonstrate considerable experience in the management of zoos in the European Union at a senior level (preferably curator or above)."*⁴²

There may also be the issue of competition between zoos (after all they are all businesses competing for visitors) and problems that may have arisen between zoos in their working relationship, so a zoo inspector from a particular zoo could be biased in favour or against

⁴² <http://zoowork.blogspot.com/2011/03/zoo-inspector-vacancies.html>

another zoo, and fail to declare an interest. There are examples that illustrate such situations. For instance, the zoo operator of ISL75 wrote in 2008 to the local authority complaining about another zoo operator in the same authority because they both had birds of prey displays but one did not seem to be licensed. In the case of FAL56 the local authority's inspector for the 21/11/2009 inspection seemed to believe that the DEFRA's inspector was unbiased and *"had personal issues that left a bad atmosphere"*.

The same could be said of the *Zoos Forum* and the ZEC, which are mainly composed by experts from the zoo industry itself.

A historical example of poor choice for part of DEFRA of a zoo inspector was Roger Cawley, who in 1999 was convicted of cruelty to a sick elephant called Flora, in the famous trial with Mary Chipperfield related to their circus⁴³. He obviously resigned after the conviction. We are of course unaware of the antecedents of all the inspectors DEFRA currently appoints and whether since the 1999 case there has been an increase in scrutiny of their past and present work before nominating one.

Although the information about which inspectors were in each inspection was normally erased from the documentation before it was sent to us by the local authorities, and in consequence we cannot make an in depth analysis of the appropriateness of the inspectors selections, in some cases information regarding inspectors could be read in the correspondence and reports that suggested that sometimes DEFRA's choice was poor. For example, in the case of the collection coded WOR166, DEFRA chose an inspector for the first inspection undertaken in the zoo the 12/04/05 who was in fact a trustee of the organisation running the zoo, which of course would make him very biased. The inspector did declare a conflict of interest, but both the local authority and DEFRA decided not to replace him. Three years later, in the renewal inspection, the same inspector was chosen by DEFRA again, although this time he stood down as a trustee of the organisation (which would not prevent him to be biased in its favour).

Another example is for the collection ISL257, in which in 2010 the DEFRA nominated the vet of the actual zoo as the nominate inspector for the 16/04/2010 inspection. The inspector noticed and reported it, but DEFRA responded that due to the limited number of vets in the island it was acceptable to use him. At least in these two particular cases, DEFRA does not seem to mind if an inspector may be biased towards the zoo operator. Another example is the case of the inspector visiting the collection SEA118 on 03/05/2007 who stated that he had previously visited the aquarium as vet, visitor and inspector for over 25 years.

This problem has been happening for longer than the period researched here. In the questionnaire-based study of Greenwood et al. (2003), they authors stated *"it is surprising that one of the centres was inspected (under a 14(2) dispensation) by an inspector who was the veterinary surgeon to the main collection."* A similar case was reported in the most recent study DEFRA commissioned to ADAS (2011).

The role of the inspectors in the zoo inspection system is of course crucial, and if they are wrongly chosen this could render the whole system useless. Among all the inspectors, those chosen by DEFRA are the most important. We know that they are not the majority, since not only have to share the formal inspections with local authority's inspectors, but also only 43%

⁴³ <http://news.bbc.co.uk/1/hi/uk/263864.stm>

(n=738) of the inspections were formal, so in the majority of inspections no one from DEFRA was present. However we also know that their expertise is greater (so when the two types of inspectors are together, DEFRA's "dominate" the inspection), and the relative importance in terms of setting the standards the collection has to achieve is also greater. For instance, 92% (n=212) of the inspections that did not contain any recommendation or licence conditions were inspections made by local authority's inspectors only. Therefore the influence in a collection in terms of "changing things" is far greater from DEFRA's inspectors than from local authority's inspectors, while in terms of "leaving things as they are" is the other way around. Therefore, choosing the right DEFRA's inspector will have a very important effect on how well problems can be detected and improvements can be implemented, and undoubtedly having an inspectorate too close to the role of "zoo operator"—as opposed to the role of "animal welfare expert"—would lead the system to become too lenient, which may be the case here.

PERFORMANCE OF ZOO INSPECTORS

Both DEFRA and the local authorities depend on the zoo inspectors' recommendations to make decisions regarding licensing and enforcement of the ZLA, so their proficiency is essential for an effective system (see Appendix C).

The performance of zoo inspectors started being evaluated officially in 2002 through the *Secretary of State's Zoo Inspectors' Performance* study made by the International Zoo Veterinary Group at the commission of DEFRA (Greenwood et al., 2003)⁴⁴, which had already done similar studies for other animal protection legislation (Greenwood et al. 2001). The most appropriate theoretical discipline for this sort of study was the Evaluation Research, which is a method of applied research, which aims to produce information about the implementation, operation, and ultimate effectiveness of policies and programmes designed to bring about change (Clarke, 1999). In this case, the minimum required data would be the 'change' from unacceptable to acceptable compliance with modern zoo standards. However, the authors of the study admit they could not use this method *"Unfortunately the means to house, catalogue and monitor Zoo Inspection results have not previously existed - there is not even a centralised list of UK zoological collections. - and, therefore, this data was not available for this study."* Therefore, they concentrated on voluntary questionnaires sent to various stakeholders (zoo operators, inspectors and licensing authorities).

In Greenwood's study, 73% of local authorities (n=27/37), 69% of zoos (n=48/70) and 31% of zoo inspectors (n=11/36) felt that there was a real need to instigate some form of performance evaluation for zoo inspectors. 76% of local authorities, 64% of zoos and 50% of zoo inspectors felt that the major benefit of any appraisal scheme would be improved consistency of inspections. Other perceived benefits included improved credibility and transparency; maintenance of an up-to-date understanding of the role and legislation from inspectors; raised standards in zoos; and the identification and removal of substandard inspectors.

⁴⁴ Greenwood, A.; Cusdin, P.; Hicks, S. (2003). *Secretary of State's Zoo Inspectors' Performance*: International Zoo Veterinary Group. Keighley

According to the research above, only 4% of zoos complained specifically of inconsistent knowledge between zoo inspectors. 56% of zoos felt that it is a good idea to use the same inspectors for each inspection. Some respondents noted that it would be helpful to have at least one regular inspector in an attempt to improve consistency. 56% of zoo inspectors declared that they were aware of an inconsistency in the general level of knowledge between zoo inspectors.

We believe that there are only two ways to assess properly the performance of inspectors: double inspections on site with independent evaluators checking that the inspectors have not missed problems and have given the right recommendations in the cases studied; or analysing inconsistencies, omissions, and errors in the inspectors' reports considering the already established guidance. In our study we used the second method.

Inconsistencies

Scott et al. (1999), in their Zoo Standards Review (1999), reported "*inconsistency in inspection has been a concern for a number of years*". There were "*anomalies and inconsistencies in the legislation relating to zoos*", which the ZSR attributed to the fragmented development of this area of law, both in respect of its history and in the several Ministries responsible for implementation. The difficulties identified in this review were related to the fact that one piece of legislation had been designed to cover the whole spectrum of zoos, from small, single species exhibits, to large zoos and safari parks. Additionally, it was noted that similar establishments, such as private wild animal collections and circuses, were treated inconsistently, as they fall outside the Zoo Licensing legislation. A lack of a standard approach for zoo inspections was also suggested as a factor causing inconsistency. Various methods were suggested by the ZSR to improve consistency, including highly detailed prescriptive standards, greater supervision by DETR (department responsible to supervise the zoo inspection system before DEFRA), and the use of a Chief Inspector to correlate, oversee and monitor the operation of the Zoo Licensing Act (post that was never developed).

According to the questionnaire-based study of Greenwood et al. (2003), 56% of zoo inspectors declared that they were aware of an inconsistency in the general level of knowledge between zoo inspectors. There was a small number of comments relating to a lack of technical knowledge or confusion about legislation, and the experience of List 1 (veterinary) inspectors was questioned where such individuals do not have experience of many zoo collections. The main areas of the inspection process identified by the zoo inspectors of this study where inconsistency tends to arise were: ethical review process, research, conservation, public safety, education, and inspection of specialist collections (such as aquaria). Each group of respondents was asked in which areas they felt training would be beneficial, and their responses were: ethical review process, provision of a suitable environment, associated legislation (fire, electrical safety, refuse disposal, CITES etc), conservation, education, research, legal requirements of ZLA, administration and conduct of inspections, maintenance of consistency, legislation, miscellaneous provisions (insurance, toilet facilities, etc.), and public safety. Therefore, the year previous to the period researched here the stakeholders of the zoo inspection system were well aware that the inspectors were under trained.

DEFRA's inspector forms ZOO2 and ZOO3 –and any similar local authorities may use inspired on them– are very useful to detect inconsistencies because for each issue the

inspector may enter his/her opinion in three different parts of the form (the tick boxes, the notes next to them and the remarks at the beginning or end of the report).

Most of the reports we received were written in forms, and in 97% of them inspectors wrote explanatory notes next to the tick boxes, so we are in a good position to detect inconsistencies. In fact, we detected many, since inconsistencies were found in 82% of these reports.

“False YES”

The easiest form of inconsistency to detect is when a tick box is marked as “YES”, while the notes next to it clearly show that it should be marked as “NO”. Since all but two of the questions are worded in such a way that “NO” means an unsatisfactory issue that needs changing (see Appendix C), and they all refer to all the animals in the collections and not just the majority, if the inspector has ticked “YES” to indicate that there are not problems on a particular issue but in the notes uses statements starting with “except in the case of” or “but...”, then this is a clear inconsistency because the tick box should have been ticked as “NO”, and then explain why in the notes. We call this type of error a “False YES”, and we can count how many they were in each report, having eliminated the appropriate questions where the rationale of interpreting them as inconsistencies was not applicable (such as question 1.6 and 7.1 of the ZOO2 form). We found an average of 5.49 per inspection of “False YES” answers, and most zoo inspectors made inconsistencies of this type in their reports.

The fact of ticking boxes YES when they should be NO has the effect of over-scoring the zoo’s performance, making it “pass” the inspection when it may have “failed”, or making it look less worse than it is, since in theory each box ticked as NO normally implies that a change needs to be made, expressed either as a written recommendation or as an additional licence condition added at the end of the form, to correct the “unsatisfactory issue” identified. This over-evaluation would have a biasing effect in favour of the zoo operators (and in consequence in decrement of the animals or the public involved in the wrongly “passed” unsatisfactory issue) on the inspectors’ minds, when they surmise the inspection and write the final recommendations, and also on the local authority that would have to make the final decision on the licence, since a quick glance to the number of NO boxes ticked may be a good indicator of the collection standards. The average number of “NO” ticked by the inspectors is 4.61 (STD=6.934) per form, which considering that there is an average of 93.14 (STD=23.539) boxes to tick per form (some old forms have fewer questions), this means that the “score” regarding relative amount of “NOs” is about 5 out of 100. However, if all the “False YES” cases had been properly ticked as NOs, then the average number of “NOs” (what we call “Real NOs”) per inspection would be 6.63 (STD=8.195), and then the score would be about 7 out of 100. This is actually very significant because in the context of zoo inspections in theory a “pass” would only be given with a perfect 100 score, so the fact that the average zoo scores at least seven points less than that already shows that we are facing a situation of average low zoo standards, but most importantly it shows that about a third of the negative points (“Real NOs”) that indicate lower standards in a zoo have been erroneously miss-classified by the inspectors as positive points.

We see that there does not seem to be much of a difference regarding the number of inconsistencies between the different strata (Table 13), but we do find more cases of NO boxes being ticked in collections with 14.2 dispensations. This difference is statistically

significant when comparing full licence zoos and zoos with 14.2 dispensations through the Kolmogorov-Smirnov two-sample one-tailed test ($D=0.2477$, $p=0.00017$; $m=98$, $n=301$ using all inspections; $D=0.2765$, $p=0.0004$, $m=68$, $n=244$ using only formal inspections). Are inspectors more “fussy” with these “middle size” collections or are these collections particularly sub-standard so more unsatisfactory issues are detected by the inspectors? Looking at the chapter about zoo standards below we can see that the average score of modern zoo practice for zoos with a full licence and those with 14.2 dispensations when only looking at formal inspections are different (0.17 for full licence zoos and -0.70 for 14.2 dispensation zoos), and this difference is statistically significant. However, this does not rule out the factor the inspectors may be biased against 14.2 collections (or rather in favour of full licensed zoos), since, after all, the method used to score zoos depends on what the inspectors write in their reports about them.

These are of course figures for averages. Looking at individual examples there are many collections that have inspections with many more “Real NOs” than seven –and therefore at the time of such inspections their standards were very low, although they may have improved afterwards.

Is the phenomenon of marking “False YES” answers in reports forms something that has always occurred, and if it did has it changed over time? To study this, considering that there are different numbers of inspections every year, and not all the inspections have the same number of YES ticks from which we can assess if they are “right” or “wrong” according to the own inspector’s comments, the best variable to use is the annual average of percentage of “False YES” cases relative to total number of YES ticks per inspection.. Figure 14 shows the progress of this percentage over the years, and we can see that inspectors have always incurred in “False YES” errors during this period, but we find three different situations: from 2005 to 2006 the number of errors increased, then gradually decreased till 2010, and in 2011 it seems to increase again so we are at the same level of errors than that in 2005. Overall, there does not appear to be a correlation between these variables and time (Kendall’s Rank Correlation Coefficient, $Z=-1.351$, $p=0.1764$). The interesting period, though, is from 2006 to 2010, where we do find a significant correlation with time in a decline of “False YES” errors ($Z=-2.038$, $p=0.0207$). This suggests that during this period the number of inconsistencies in inspectors reports decreased, which could be explained either by inspectors getting more proficient, or making fewer comments by YES answers from which inconsistencies could be detected. Figure 15 shows the average number of comments by tick boxes made by inspectors during this period, and since we do not detect a decrease we could conclude that for a while inspectors became better at avoiding inconsistencies in their reporting.

The sudden increase of average number of notes next to tick boxes in 2011 give us an explanation for finding an increase of “False YES” cases in that year. Inspectors’ habits could have change recently (perhaps with the change of inspectors, we do not know), so now they write more notes next to tick boxes, which has allow us to detect more “False YES” cases, although the increase could also have be the result of the small sample for that year. However, in 2005 the increase of frequency of this type of errors was not caused by more notes written, but simply by inspectors being more contradictory in their reporting. The lack of a list of inspectors over the years does not allow us to find out if the performance of particular inspectors who may have joined or left the inspectorate may explain the results, or

we are just seen a global change in all the inspectors perhaps influenced by training or guidance.

“Existing licence conditions met?”

Another useful source of information regarding inconsistencies in inspections reports in the ZOO2 form is question 12.3 which asks if the existing licensing conditions have been met. Knowing these conditions from previous inspection reports or from the zoo licences, and knowing the comments in the reports that may indicate whether or not they have been met, we would be able to detect inconsistencies in which the question is answered YES when the information in the report suggests it should be NO. We found that in a third of the reports written in ZOO2 forms, the inspectors said that the existing licensing conditions were met while the information in their own reports suggested otherwise. This is important because in theory if a licensing condition is not met the zoo is technically operating without a licence and either a direction order or a prosecution should follow. The licensing officers of local authorities may not be versed enough in the nature of the conditions to notice these errors, and may simply base their decisions on the answer of question 12.3 alone, which would be a mistake.

Another type of inconsistency found referring to breaches of licensing conditions is not recognising breaches of conditions derived from the EU Zoo Directive as breaches of licence conditions, despite they clearly are. Since EC Zoos Directive conditions are very general (for instance ensuring the environment the animals are kept is adequate, or having proper records, etc) sometimes the inspectors ignore them even if they have been physically added to the zoo licences with the mandatory conditions, and they may add additional conditions that “supplement” the conditions set by the EU Zoo Directive on a more specific aspect of the zoo’s performance, only considering breach of licensing condition if the specific supplementary condition will not be met after the stated dateline. In effect, a breach of an EC Zoos Directive condition can be in four states depending the perception of zoo inspectors: It can be a “missed issue” (if the inspector did not even see the problem), an “unsatisfactory issue” (if the inspector acknowledges the problem but he does not give it too much importance), a “recognised breach of licence condition” (if the inspector acknowledges that a condition has not been met but only implicitly, and does not “spells it out” as such) or an “explicitly recognised breach of licence condition” (if the inspector unequivocally states that there has been a breach of licence condition).

For example, we can use the hypothetical case of a zoo where the ostrich enclosure does not provide any shelter to the birds. This is a breach of one the EU Zoo Directive Animal Welfare conditions shown in article 3 (the one which states “*accommodating their animals under conditions which aim to satisfy the biological and conservation requirements of the individual species, inter alia, by providing species specific enrichment of the enclosures; and maintaining a high standard of animal husbandry with a developed programme of preventive and curative veterinary care and nutrition*”), and it is also a breach of licence condition since it has been attached to the licence for being one of the mandatory conditions added under section 1A of the ZLA as amended. This hypothetical breach can be in the following four states, as far as inspectors’ perceptions are concerned:

- a) “Missed issue”: The inspector did not notice at all the lack of shelter because he missed this enclosure (for lack of time), because he did not pay much attention to the enclosure (distracted with something else), or he does not know much about

ostriches and shelters (it did not occur to him/her that the ostrich would need a shelter). Nothing in his/her report will show regarding this breach, and in the ZOO2 form the inspector will tick “YES” to the questions 2.1 (*“Is each animal provided with an environment well adapted to meet the physical, psychological and social needs of the species to which it belongs?”*), and 2.3 (*“Do animal enclosures have sufficient shelter?”*). The inspector answers YES to the question 12.3 regarding whether existing licence conditions have been met.

- b) “Unsatisfactory issue”: The inspector notices the lack of shelter, but it does not consider it that much of a deal, so it ticks YES to question 2.1 and 2.3, but in the note box next to the latter he/she writes “Except in the case of Ostriches”. The inspector does not mention this again in either the written recommendations or the additional licence conditions. The inspector still answers YES to the question 12.3 regarding whether existing licence conditions have been met.
- c) “Recognised breach”: The inspector notices the issue and feels that needs to be corrected, he/she ticks YES for question 2.1 but NO for 2.3, adding an additional condition stating that a shelter has to be provided in the ostrich enclosure no later than in a month’s time. However, the inspector still answers YES to the question 12.3 regarding whether “existing licence conditions have been met”, as if he was completely unaware of the existence of the EU Zoo Directive conditions regarding husbandry.
- d) “Explicitly recognised breach”: As the point above, but this time the inspector did ticked NO in question 12.3.

Why are there so many inconsistencies in inspection reports? We can speculate various possible explanations. Perhaps it was indirectly caused by the average low standard of zoos, making the inspectors to become less thorough. There were inspections that did not show any unsatisfactory issues (26%, n=738), but most of these were informal inspections. Regarding formal inspections with forms, only seven reports (1%) representing five zoological collections showed a complete “clean health” (not showing any “real NO”). This clearly shows that the inspections with the highest number of inspectors and the highest expertise in zoo matters hardly ever gave a complete clean health report to a zoo, often identifying issues that needed changing. Therefore, it is possible that the inspectors are perfectly competent but perhaps with time they have become less thorough. As we will see in the chapter below about the standards of zoos, this study does show that there is a very high proportion of zoos with low standards, which might have had an effect of “lowering the bar” in the criteria of previously “thorough” inspectors, who may have started to choose the “yes, but” option more often, to differentiate the bad zoos from the very bad ones. This in turn might have allowed more zoos to “get away with poor practice”, which might have lowered even more the bar, generating the inconsistencies we found, since while this was happening the forms (and their questions), designed for a normal population of zoos (not a sub-standard population), remained unchanged, and so the “yes, but” become an apparently needed option.

However, the inconsistencies linked to “False YES” ticks are not an entirely inbuilt problem of the design of the inspection forms, but an actual error of the inspectors who assumed that questions such as *“Is each animal provided with a high standard of animal husbandry?”* or

“do all animals receive prompt and appropriate attention when problems are noted?” do not really mean “each animal” but “most animals”, and do not really mean “high” or “appropriate” but “sufficient”. This is their error not warranted by the spirit or the letter of the ZLA, or by DEFRA’s guidance, but it may have become a “culture” among inspectors when it became apparent that the average standard of zoos was quite low (and instead of closing down the bad ones they all remained opened and licensed). Every time that a change in the zoo regulations heighten the standards to achieve (such as the amendment of the ZLA in 2002) this might have not been really matched by the improvement in real standards of the zoos, conflict that would show up in the form of inconsistencies in the inspections forms.

This hypothetical reduction of thoroughness of the inspectors work could be manifested in different ways. For instance, could make the inspector focus on “improvement” rather than on “poor practice”, so an unsatisfactory issue in a collection that has been relatively good in previous inspections may have a higher chance to be flagged up and addressed with a stronger licence condition than the exact same poor practice in a collection that was much worse in the past, and this issue does not stand up that much. Since some inspectors may have visited the site before, this may have the double effect of allow them to contextualise better an issue, but also to set it against a previous “status quo” which may “deform” its objective assessment towards being more lenient. The fact that some inspectors may have visited the site before, while others may have not, makes this effect difficult to detect and control. Other examples of inspectors reducing their thoroughness could occur when facing “new owners” of a previously bad collection (the inspector tends to compare them with the previous owners or tends to give them more time to “sort out” the problems created by others) or when the zoo operators are planning to relocate or redevelop, and therefore they do not want to spend any resource in improving the current conditions of their zoo.

On the other hand, the explanation of the results could also simply be “sub-standard inspectors” created by bad selection or bad training (or both): inspectors too close to the zoo industry or trainers too close to the inspectors themselves (perhaps trainers also belonging to the “culture” of “yes, but”). This problem, that may have already started with the first generation of inspectors, may not necessarily be resolved with more training and inspectors appraisal (as DEFRA has been addressing it) if it is not done more independently and from a perspective of more objective trainers.

Omissions

DEFRA’s inspector forms ZOO2 and ZOO3 –and any similar form local authorities may use based on them– are also useful to detect omissions, because the form list all the issues the inspector has to go through, and all the “judgements” it has to make.

We find that a quarter of the inspection reports forms were incompletely filled, and some inspectors (especially from the local authorities) did not create any records of their inspections (as several local authorities told us when they could not send us the reports we requested). Adding omissions to inconsistencies, this reveals a poor performance of DEFRA’s inspectors who tend to be the ones in charge of formal inspections and of filling inspection forms (79% of the inspection reports in forms were written by DEFRA’s inspectors, n=400), but as we will see in following chapters local inspectors may even show poorer performance.

Inspector's final recommendations

The most important element of an inspection report is the final recommendations in the inspector's conclusions. Not only this will spell out whether a zoological collection should be licensed or not, but would be the part of the reports the local authorities would use when deciding on licensing matters. DEFRA's forms have at the end two sections to allow inspectors to list their recommendations and licence conditions, but also another section to facilitate clarity in which the major final conclusions can be expressed in a tick-box multiple answer question. Therefore, this makes it easy to quantify.

Most of the inspection reports ended with the inspector not recommending any change regarding the licensing situation (either granting the licence without additional conditions for first or renewal inspections, or not changing the existing licence for the rest).

Considering that we believe that a recommendation to grant a zoo licence without adding or amending licence conditions should not be given when existing licence conditions have already been breached we could assess how many final conclusions given by inspectors regarding licensing were in our opinion wrong (using the information of their own reports that suggest breaches of licensing conditions). 24% (n=738) of the inspection reports showed wrong final licence conclusions in this context. This can be read as another type of inconsistency similar to those shown in the previous chapter, but this is a much more severe error, since recommending granting a licence despite breaches and poor practice have been detected may "overrule" the entire inspection report and the local authorities may feel powerless if they would like to pursue further any unsatisfactory issue to the prosecution degree. Since at all levels zoo operators can appeal for any decision taken by the local authority, not granting a licence to a zoo that has many breaches in licence conditions may be a very difficult thing to do by the local authority if the inspector "forgot" the breaches of conditions and recommended in the end of his/her signed report that the licence should be granted. That "signature" would be the strongest argument for any appeal the zoo operator may decide to table at any level of the process.

We do not know how many sub-standard zoos were inspected without the inspector noticing breaches in licence conditions or severe poor practice which, never made it in any form to the inspectors' reports, but we do know that a quarter of inspectors failed to recommend refusing a licence in the cases where they themselves recognised that existing licence conditions had not been met.

Inspectors' errors

We have seen several different types of inspector's errors that can be detected by reading the inspectors reports. We will now consider them altogether.

If inspector's errors are very widespread –as they seem to be– there may be some underlying cause other than lack of training or expertise. It could be an undetected phenomenon that causes inspectors to find poor practice but fail to make appropriate recommendations to eliminate it in line with the enforcing instruments that the ZLA provide. Our results are not consistent with a "conspiracy theory" in which all inspectors deliberately ignore poor practice in benefit of the zoo operators. If there was a general "intention" to hide poor practice altogether we would not have detected so many inconsistencies, and such "rubber stamping" could have happened to sub-standard zoos without leaving any trace of their condition in the inspection reports. However, the fact that inspectors do write in their

reports about specific sub-standard performance for part of the zoos but, in our opinion, then fail to “evaluate” the zoo properly in the end, or do not recommend proper “enforcing” actions considering the legislation and regulation available to do so, is as if there is something that prevents them to categorise what they have uncovered as actual “poor practice”. There are four “errors of judgement” where this phenomenon seems to manifest itself, as seen in previous chapters:

1. The “False YES” tick. Accepting that on a particular issue a problem occurs for a particular animal, enclosure or method, but at the same time failing to realise that because of that, the zoo should be “failed” on that issue.
2. Unaddressed unsatisfactory issues. Failing to notice that when an issue has been identified as “failed”, this should be corrected in the form of a licence condition (or at least a written recommendation).
3. Wrong final conclusions. Ignoring the fact that existing licence conditions have already been breached, and therefore that re-issuing them or extending their deadline is not a guarantee that the collection will meet the minimum standards required.
4. Not recognised breach of licence condition. Not recognising that an unsatisfactory issue related to an EC Zoos Directive condition that had been already attached to the licence through the mandatory conditions, is a breach of a licence condition.

We found that most of the inspections had any of these four types of “errors”, covering the majority of zoological collections. If we could add the errors of judgement we could not detect because they did not manifest themselves in the form of contradictions in the inspection reports (which could be many more because after all only 18% of the tick boxes had notes next to them from which a contradiction could be spotted), these percentages could rise much higher.

In addition to the errors we detected in this study we have to add of course all those that were not detected, but happened nonetheless. We did not perform any visit to zoos while being inspected to see how many problems had been missed, misinterpreted or undervalued, which would be an alternative way to address a study on an inspection system. Our study, for being entirely based on the inspectors’ own reports and therefore reliant on their mistakes on not avoiding inconsistencies, is bound to have only unveiled “the tip of the iceberg” of the errors of judgement that may be routinely taking place during zoo inspections. This misjudgement from DEFRA’s inspectors is consequently transferred to the local authorities’ inspectors and licensing officials, completely undermines the effectiveness of the zoo licensing system. The effects of these errors would be passed along to all other levels of enforcement of the ZLA, with the results of very few direction orders issued, very few zoos forced to close down, and very few prosecutions (as we have seen in the enforcing chapter above) while the standard of zoos remain low (as we will see in following chapters).

Local Authority’s inspectors

In the questionnaire based ADAS’ study (2011), local authorities were asked whether or not they had received any training on the Act and what form(s) this had taken. A total of 64 respondents (49%) had attended a zoo licensing training seminar, and 13 (10%) a regional local authority seminar or meeting. In-house training was reported by 20 respondents (15%).

Overall 40 respondents (31%) did not report any training and this rose to 64% (seven out of eleven) of those authorities that only had responsibility for exempt collections.

Although local authority's inspectors are present in all types of inspections, in the formal inspections their role in the inspection reports is eclipsed by DEFRA's inspectors. For this reason the best way to judge the performance of local authority's inspectors is by analysing only informal inspections, since no DEFRA's inspectors are present in any of them (while some may be present in some special inspections).

By definition informal inspections would cover fewer issues, in less depth, and the reporting would be less exhaustive (although there is no reason why they should be, as the relative good inspection reports of 01/07/2008 for WOB280 or of 22/10/2010 for DRA250 prove), but this does not mean that they are not important. These are the most numerous inspections (47% of all inspections), but they are also crucial for the enforcement of the ZLA since they are the inspections most likely to detect breaches of licence conditions. This is because they are normally the next inspection after a formal inspection, and the tacit main role of the inspectors is to check whether the conditions issued from the formal inspection have been met on time (since most of the time additional licence conditions have a deadline with a year of issuing them, which is the period when a informal inspection should be made).

Therefore, from all types of inspections, these are the ones we would expect to find breached conditions more often (since formal inspections take place every three years it is likely that a zoo has had enough time to meet the condition by the third year, especially because in theory the local authorities would have been reminding the zoo about it every year). However, this does not seem to be the case. Only in a quarter of the informal inspections recognised breaches of licence condition are identified, and from those only in 57% of the inspections the inspector explicitly states so (the rest is deduced from his/her notes). Comparing it with 35% (n=738) for all the inspections, we see that instead of finding more cases as expected, we find fewer (this difference is statistically significant between informal inspections and the rest; $\chi^2=8.955$, $p=0.003$). In this regard local authority's inspectors seem worse than DEFRA's inspectors at finding and/or recognising breaches of licence conditions.

Because informal inspections are made with only one inspector, one would expect to find fewer unsatisfactory issues than when two or more inspectors with a higher degree of zoo inspection expertise are present. However, if the local authority's inspectors only focus on the compliance with licence conditions issued in the previous formal inspection (as many do) and they find breaches, we would expect that as a final conclusion they would recommend either altering the licence conditions by giving an extension in the deadline, altering them by making them more specific or clear, adding new conditions to address the breaches, or recommending that the licence is refused if the inspection was made just after a first or renewal formal inspection. What you would not expect is to find more cases of "no change" in the final conclusions compared with other types of inspections. However, this is not what we found. Our results show that only in one informal inspection an alteration of a licence condition was made, only in 18 inspections new licence conditions were suggested, and in the rest of informal inspections (95%, n=349) no change in terms of licences and their conditions was the final recommendation (explicit or tacit) of the local authority's inspectors. This contrasts with the percentage of 36% (n=389) of "no change" conclusions for the rest of the inspections (this difference is statistically very significant between informal inspections

and the rest; $\chi^2=43.865$, $p<0.001$). In this regard local authority's inspectors seem worse than DEFRA's inspectors at giving the right recommendations regarding licensing and conditions.

Regarding question 12.3 of DEFRA's form about existing licensing conditions being met, we could also count informal inspection reports not written in a DEFRA form because we could deduce from the report what would be the answer to the question (whether there have been breaches of existing licence conditions). We find wrong "YES" answers to the question about breaching existing licence conditions in 16% ($n=243$) of the informal inspections, while the percentage is 32% ($n=242$) in the non-informal inspections (the difference is statistically significant between informal inspections and the rest ($\chi^2=18.346$, $p<0.001$). In this regard local authority's inspectors seem better than DEFRA's inspectors at avoiding contradictions about the existing licence conditions being met.

Since some (not many) informal inspections are written in DEFRA forms, we would be able to analyse the issue of inconsistencies on specific issues counting the frequency of "False YES" answers as we did in previous chapters. In 46% ($n=79$) of the informal inspection reports in DEFRA forms, there were cases of inconsistencies in the form of "False YES", fewer than in the case of non-informal inspections (73%, $n=389$). This difference is statistically very significant between informal inspections and the rest; $\chi^2=49.017$, $p<0.001$, showing that informal inspections have fewer inconsistencies detectable. In this regard local authority's inspectors seem better than DEFRA's inspectors at avoiding contradictions on specific issues in inspection forms.

In summary, local inspectors compared with DEFRA's inspectors seem worse in finding breaches of licence conditions and giving the right recommendations about licences, but better at avoiding contradictions. This can easily be explained by the fact that informal inspections tend to cover fewer issues in their reports, and therefore the chances of finding an inconsistency in them are reduced; at the same time they tend to write fewer notes (an average of 11.8 notes per report in informal inspections respect 16.73 in the rest) on the issues they are assessing, which reduces even further the chance of showing contradictions. Therefore, local authority's inspectors could be affected by the same phenomenon than causes DEFRA's inspectors to make many errors in their inspections (see previous chapter), and they can equally become less thorough –or be "sub-standard" from the start– but this would be more difficult to detect with this study because they tend to write less. Nevertheless, with what they have written, and considering that the primary role of a local authority's inspector in an informal inspection is to check on breaches of licence conditions, we can say that on average local inspectors perform worse than DEFRA's inspectors in their inspection duties. This, considering that many do not normally undergo training in zoo inspection, and they are often unqualified to judge on animal welfare or zoo husbandry matters (they do not tend to be vets and often their expertise seem to lie on Health & Safety issues alone), is not surprising.

PERFORMANCE OF ZOOLOGICAL COLLECTIONS

In order to evaluate the efficiency of the zoo inspection system we have to assess the performance of zoological collections since, on one hand, they are part of the system by collaboration with the inspections and compiling with the licence conditions, and on the other the effectiveness of the system can be measured counting the number of zoos that appear to be sub-standard after the system has been operational for some time (see Appendix A and C). We will discuss these issues separately.

Unsatisfactory issues and practices

When an inspector visited a zoo and noticed a practice or issue that was not satisfactory, that was expressed in the inspection reports in either the form of a note next to a question in a report form, a written recommendation at the end of the report, an additional licence condition suggested to the local authority, or simply a comment written anywhere in the report.

However, some of the inspectors' comments may not be pointing out an unsatisfactory issue, but simply recommending an improvement in practices beyond what is already perfectly acceptable. Normally such cases are highlighted as "remarks" or "general notes" separated from recommendations, conditions and "questions' notes", and therefore they are relatively easy to spot, but they could also be placed next to particular questions. In such cases, the use of "yes, but..." or "except..." at the beginning of such notes help to separate the comments that highlight problems from mere "optional" improvement "tips". The way forms' questions are phrased and the knowledge of the Secretary of State's Standards of Modern Zoo Practice (which are the "minimum" standards the inspector have as a reference) help further to be able to separate them. Therefore, what we mean as "unsatisfactory issue" is an issue that the inspector flagged up by either ticking NO as an answer of a form question (in those questions where this would mean underperforming, which are the majority) or making a specific comment which indicates that the issue has not met the minimum standards set in the SSSMZP (which is the only option for reports not written in DEFRA's forms). In consequence, when we identified a "False YES" reply in a form questions the comment that identified the error took prevalence over the tick box, and we classed this issue as a "real NO", and therefore another unsatisfactory issue to be added to the rest of "NOs".

We found unsatisfactory issues in the majority of inspections and zoos. Figure 18 show us that similar results in most strata, whilst the case of zoos with 14.1 dispensations can be explained by the fact that only very few zoos were inspected, only a few formal reports were produced, and in the majority of informal inspections only a few issues were assessed –such as whether the dispensation still applied.

Some of these unsatisfactory issues were addressed by the inspectors in their recommendations or licence conditions, but many were not. The majority of the unsatisfactory issues were not addressed in the licence conditions suggested by the inspector, and 25% were not addressed at all in either the conditions or the recommendations. Therefore, unsatisfactory issues are better indicators of how zoos under-perform than are the number of licence conditions the inspectors suggest to the local authorities.

As in the case of different strata, Figure 19 shows that unsatisfactory issues are found in all types of zoological collections in more or less similar proportions relative to the number of issues assessed by inspectors, with the exception of aquaria and farm parks that have relatively fewer and more respectively.

Regarding the effect of time, Figure 20 shows the average number of unsatisfactory issues found per inspection over the years, and we can find an increase in 2006, a gradual decline till 2010, and an increase again in 2011 (although this one could be caused by the small sample for that year). This variation could be a reflection of an improvement of the zoos' standards from 2006 to 2010, or a reduction of thoroughness for part of the inspectors in reporting unsatisfactory issues, but overall the correlation is not statistically significant using the Kendall's Rank Correlation Coefficient ($Z=-1.6908$, $p=0.0908$), so we should say that our results regarding the effect on time in this variable are inconclusive.

Recurring failures

Although finding unsatisfactory issues is a good indicator of a zoo's under-performance, this may be temporal and not necessarily indicative that the collection is sub-standard. Finding the same exact unsatisfactory issue during various inspections in different years would give a more accurate picture about the state of the collection.

Our study found that most of the inspection reports had unsatisfactory issues that had been already flagged up in a previous inspection since 2005, and that most of the zoological collections had inspections with recurrent unsatisfactory issues.

These results can lead us two different conclusions: most zoos are sub-standards and have unresolved unsatisfactory issues over the years, or the zoo licensing system is inefficient in enforcing the ZLA. A way to see which of these two causes may be the most prominent is to watch the recurrence over time. If the poor zoo standards cause dominates we would expect to have more recurrence the first years and then gradually less on the same issues while the "efficient" zoo licence system has the time to correct the problems. If, on the other hand, the poor enforcement cause dominates, we would expect that there would not be that much difference over time, showing unsatisfactory issues remaining for longer periods and their elimination not been gradual over time. Our study allows us to look at this. We found more than a third of the inspections showed unsatisfactory issues flagged up by inspectors in the previous inspection, 20% in the inspection before that one, and 17% in inspections before that one. We can see both a gradual decline over time but not that much difference between the data of the first year and the data for three years or more. Therefore our results are consistent with a scenario where we have both causes –the poor standards of zoos and an inefficient enforcement of the ZLA– operating more or less at equal footing. Regarding different strata (but disregarding the case of collections with 14.1. dispensations, since the very few number of inspections distort the results), Figure 21 shows that the values are similar in the case of zoos with full licences and those holding a 14.2 dispensation.

The effect of recurrence over time can be seen better in Figure 22, where the actual number of recurrent issues involved in the whole study, both for all inspections and for formal inspections alone, is shown. There is not the sharp decline that we would expect with a very efficient licensing system that would identify issues quickly and sort them out in no more than a year. Since most licence conditions issued by inspectors do attempt to resolve issues within a year by giving deadlines that tend to be of a few months, it appears that the system

breaks down at the level of post-condition breach, where the local authorities fail to pressure or impose deterring sanctions to re-offending zoos which continue failing on the issues. In fact, if we project the regressed slope (-0.005 for all inspections, -0.021 for formal inspections) of Figure 22 to see what would be the expected time to see complete success in eliminating recurrent unsatisfactory issues (a recurrence value of 0), this would be in about five years if we count all inspections, and seven if we count only formal inspections. Since the ZLA established annual inspections, and most inspectors normally set licence conditions deadlines in within two years at the most (although they do not have to), this indicates that the system is set up to stop recurrence in within two years, but in reality the data shows that in average it happens in five to seven years.

Zoos' compliance

The compliance of zoological collections to the conditions and directions of the licensing authorities can be measured by analysing the comments of zoo inspectors relative to previous inspectors' recommendations and existing licence conditions, supported by comments of the local authority written in the correspondence to zoo operators.

Pre-inspection audit

Zoo operators must provide to the local authority and its appointed inspectors all documentation about the running of their zoos, but the question is when. Some local authorities remind the operators to send their stocklist annually, and any information about plans to open new exhibits, animal temporarily displayed away from the zoo premises, and things like that. However, even if some local authorities do not remind zoos to do so, they always ask the zoos for the pre-audit information prior to a formal inspection, which normally can be given with DEFRA's ZOO1 forms. Do zoos comply with these requests and always send the filled forms prior such inspections?

As seen above in the chapter on stocklist, we already know that many zoos failed to send their annual stocklist to the local authorities (or that such authorities failed to ensure they send them). 25% (n=203) of the zoological collections had not sent the current stocklist to the authorities.

There are two ways we can measure compliance regarding sending the ZOO1 forms. Firstly, by looking at ZOO2 forms which contain a page dedicated to compliance on pre-inspection audits. Secondly, by looking at the correspondence between the zoo and the authority we received, since such filled forms should be in there.

Not all the inspections will involve pre-inspection information to be sent in a ZOO1 form to the inspector. For instance, informal and special inspections can be made without it. It is not surprising that our data shows evidence of only 43% (n=738) of the inspections having had pre-inspection audit sent in ZOO1 forms. However, all formal inspections should have, and we find that only 94% (n=340) do. This information, though, is not always complete. According to the inspectors themselves, in 53% (n=318) of the inspections where pre-inspection audits had been sent, the audit was incomplete.

We only found pre-inspection audits in the correspondence from local authorities for 12% (n=340) of the pre-inspection audits we know existed. Probably most local authorities have destroyed the pre-audit forms –or they consider that this is not correspondence. However, it is more likely that those pre-audit forms we have not received in this way had been sent by the authority to the zoo inspectors (not keeping any copy), or had been sent directly from the

zoo operators to the inspectors, rather than to the local authorities. Perhaps the inspectors did send the audits back to the authorities, which then consider them correspondence between the inspector and the authority, not the authority and the zoo operator.

According to the questionnaire-based study of Greenwood et al. (2003), inspectors may not be given a view of all earlier relevant inspection reports or the pre-inspection audit before the inspection. However, most likely this would be the local authority's fault.

Recognised breaches of licence conditions

In theory, the simplest measure of zoo compliance is quantifying the breaching of licence conditions (that is failing to meet a condition that was attached to the zoo licence, and therefore that the zoo operator was aware that was a prerequisite for being allowed to operate a zoo). However, it can be detected that the interpretation of what constitutes a breach of a licence condition is an issue among inspectors and licensing officials. In some cases an additional condition that an inspector has attached to the licence is very specific, and a future inspector can identify that such condition has not been met and explicitly say so in the inspection report. In other cases the attached condition is more general and vague, and future inspections may consider that although a condition has not been fully complied with, it has not really been breached, since it has been complied enough, so they may flag up the issue as unsatisfactory but not consider it a breach of condition. In other cases the additional condition is one of the mandatory conditions derived from the EU Zoo Directive that was not added by a previous inspector, but by the local authority. These often are the most general conditions –which in itself does not make them ambiguous, though– and often inspectors act as if they did not exist, flagging up unsatisfactory issues that equate breaches of these conditions, but not recognising this in their inspection reports. Therefore, for this study we will need to study separately these different “perceptions” of what constitutes a breach of condition.

We will deal with the latter type of breach in the following chapter, and in here we will show results referent to breaches of specific licence conditions attached to the zoos licences that the inspectors recognise that have been breached, although they may not necessarily spell it out as such in all occasions, almost as if “reluctant” of writing the words (perhaps for the legal consequences that breaches may cause to zoo operators). This lack of “spelling out” can take the form of not using the expressions “the condition has not been met” or “the condition has been breached”, but otherwise expressing that this is the case with the notes and especially the recommendations, or in other occasions by not responding “NO” to the question “have existing licence conditions being met?” but nevertheless suggesting in the notes that some have not.

Our study shows that in more than a third of the inspections breaches of licence conditions had been recognised by the inspectors, and we found them at least once in most zoological collections. Considering that any zoo that is breaching any of its licence conditions can be considered “unlicensed” and therefore in breach of section 1 of the ZLA, finding that the majority of the zoos may have been illegally opened to the public at least in one occasion during the six years period of this study, is very alarming.

Therefore, it would be prudent to see whether we still find significant results using the most conservative estimations we can make. If we ignore the inspectors' notes and recommendations and only concentrate in what the inspectors have to say about question

12.3 – which asks whether the existing licence conditions have been met– or equivalent (even they may contradict themselves in other parts of the reports), we find that in 23% (n=340) of the reports in ZOO2 forms, the inspector clearly shows that existing conditions had not been met by the way he/she answers the question. Going even further towards a “conservative” estimation by ignoring all the notes next to Q12.3 that show that they are “False YES” answers (see chapter above) and only counting the cases where the question about meeting the existing licence conditions is explicitly answered with a NO tick in ZOO2 inspection forms, still 19% (n=340) of such forms show “spelled out” breaches of existing licence conditions. Using this most conservative measure we find that still 30% (n=164) of the zoological collections from which we have received at least one DEFRA inspection form had one or more breaches of licence condition explicitly and unequivocally registered by inspectors in their report forms. Figure 23 shows the number of recognised breaches of licence conditions found in each different stratum is almost identical.

Whatever type of estimation we use, we found recognised breaches of licence conditions in at least one fifth of the inspections and one third of the collections, which could be as much as one third of the inspections and two thirds of the collections. This is as much of a measure of the amount of possible “illegality” that occurs among zoological collections as is of the level of inefficiency of the zoo licensing system in either deterring zoo operators to breach licence conditions, or enforcing the ZLA properly so to eliminate such breaches. The latter is very likely because as we have seen in the chapter about enforcement above, this possible illegality has hardly ever led to the licensing authorities issuing direction orders, closing down zoos or prosecuting offenders, as it should.

Looking at Figure 24 we can notice an increase of recognised breaches in 2006, a gradual decline from 2006 to 2010, and another increase in 2011. These changes could be variations in the zoos conditions, or in the inspector’s detection and reporting of poor practice. However, the increase on the 2011 period may be the result of a much smaller sample (only 19 inspections) and the remaining inspections of the year not included in this study may bring the value down. It is unlikely that all of a sudden the collections became more sub-standard from 2005 to 2006, while it is more likely that changes in the Inspectorate or in guidance/training made the inspectors record more information from which breaches of licence conditions could be identified. The gradual decline from 2006 to 2010 is small but remarkably constant, which although could be explained by a gradual reduction of thoroughness of the inspectors, it could also be a reflection of a small but gradual improvement in the zoos’ compliance. However, overall the correlation is not statistically significant using the Kendall’s Rank Correlation Coefficient ($Z=-1.3157$, $p=0.1884$), so we should say that our results on the effect on time in this variable are inconclusive.

A more in depth analysis of the type of unsatisfactory issues that the zoo inspectors have identified that may have lead to the discovering of this lack of compliance, may be useful to assess the impact of these recognised breaches in the actual animals and visiting public.

Compliance with licence conditions derived from the EC Zoos Directive (S1A of the Zoo Licensing Act 1981)

There are many types of issues addressed in the SSSMZP and many types of licence conditions local authorities can attach to zoo licences, but the provisions incorporated into the Section 1A of the Zoo Licensing Act by virtue of the EC Zoos Directive are, arguably, the most important as they deal with the welfare of the animals, the zoo’s conservation

contribution and the zoo's visiting public. In recognition of their importance, it is the provisions of the EC Zoos Directive that make up the mandatory conditions that must be attached to each and every zoo licence issued under the ZLA and breach of these conditions have more serious legal consequences than conditions which do not relate to the Directive. For these reasons, it would be particularly useful to study them in a little more detail.

If a zoo is found to be non-compliant with one or more of the Section 1A provisions of the ZLA (the EC Zoos Directive conditions), it would automatically be in breach of one of its own licence conditions as compliance with this section of the legislation is mandatory and failure to comply should lead to immediate enforcement action. In practice though, this is usually not the case.

Firstly, some local authorities did not follow DEFRA's guidance and did not attach the mandatory conditions to the licences for zoos under their jurisdiction (we found 16 cases when this happened). Secondly, the local authority inspectors sometimes do not treat breaches of licence conditions which enforce the EC Zoos Directive as breaches *per se*, but as issues that the zoo can improve upon. Although a failure to meet EC Zoos Directive (Section 1A ZLA) conditions should, by law, result in immediate enforcement action (a direction order to bring the zoo into compliance in the first instance) inspectors and local authorities often seem to ignore this and only consider that the conditions have been breached if, after the inspector has noticed the issue, has written it in the report as an unsatisfactory issue, has issued some recommendations or additional licence conditions to address it, the authority has informed to the zoo operator, time have been given to correct the problem, the zoo operator still has not resolved it and the issue remains after a given deadline has passed. Only in these circumstances do the authorities appear to reach the conclusion that condition has not been met and may (although in practice, it seems, do not) then consider enforcement action against the zoo.

In this study, since it relies entirely on inspectors' reports and authorities' correspondence, this difference of perception by the key players of the UK licensing system forces us, for now, to treat the EC Zoos Directive conditions differently than other specific licence conditions, although in the other chapters below we will return to what we believe is the correct interpretation. Therefore, for now we would regard breaches of conditions borne of the provisions of EC Zoos Directive (which is to say breaches of section 1A of the ZLA) only as "unsatisfactory issues on EC Zoos Directive conditions" identified by inspectors.

Our study shows that the majority of inspections and zoos demonstrated unsatisfactory issues regarding the EC Zoos Directive conditions.

Figure 26 shows the occurrence of inspections with unsatisfactory issues with regard to the EC Zoos Directive through different years, in which no decline can be found in the most recent years (the 2011 data was disregarded since only a quarter of the year was studied) but, on the contrary, the number of unsatisfactory issues increases. The correlation is clearly significant for using the Kendall's Rank Correlation Coefficient ($Z=2.442$, $p=0.0072$).

This view is confirmed if we also look at it through the number of zoos with unsatisfactory issues on EC Zoos Directive conditions found, as can be seen in Figure 27, which indeed shows a slight increase of lack of compliance over the years (regardless whether we

consider all inspections or only formal inspections). This correlation is almost statistically significant using the Kendall's Rank Correlation Coefficient ($Z=1.566$, $p=0.058$).

There are two possible explanations why we see more unsatisfactory issues in the inspections over time, affecting an increasing number of zoos. Either the performance of the collections is getting worse or the inspectors have become better at detecting and/or reporting unsatisfactory issues. The existence of inconsistencies in inspection reports and, in particular, the case of the "False YES" answers (see chapter above), indicates an conflict in inspectors' roles that shows two forces in action: the need to detect and flag up problems, and the desire to instruct and encourage zoo operators rather than impose sanctions. It could be that over time the former force is gaining terrain and this is why we see more unsatisfactory issues reported. If that is the case we should not find at the same time an increase on "False YES" cases, and as can be seen in the chapter about this type of error above, we do not find an increase overall, and in fact we find a decrease between 2006 and 2010. Therefore, we have a scenario where more unsatisfactory issues are detected looking at the same number of issues, while the inspectors show fewer contradictions in their report writing (marking areas as satisfactory and then making comments to the contrary, for example) which may suggest that they are getting better at detecting problems. This suggests that the hypothesis that the zoological collections have worsened over time, or at the very least have not improved, is sound.

The licence conditions derived from the EC Zoos Directive are of different types, but can be classed in the following four main categories:

Conservation, Education and Research conditions

1. *participate in research from which conservation benefits accrue to the species, and/or training in relevant conservation skills, and/or the exchange of information relating to species conservation and/or, where appropriate, captive breeding, repopulation or reintroduction of species into the wild;*
2. *promote public education and awareness in relation to the conservation of biodiversity, particularly by providing information about the species exhibited and their natural habitats;*

Animal Welfare conditions

3. *accommodate their animals under conditions which aim to satisfy the biological and conservation requirements of the individual species, inter alia, by providing species specific enrichment of the enclosures; and maintaining a high standard of animal husbandry with a developed programme of preventive and curative veterinary care and nutrition;*

Ecological conditions

4. *prevent the escape of animals in order to avoid possible ecological threats to indigenous species and preventing intrusion of outside pests and vermin;*

Enforcement conditions

5. *keep up-to-date records of the zoo's collection appropriate to the species recorded.*

In DEFRA's ZOO2 form, question 1 to 6 (with their respective sub-questions) correspond to issues within the EC Zoos Directive animal welfare conditions, while question 7 with the EC Zoos Directive conservation, education and research conditions. Therefore with our data it is quite easy to calculate the level of compliance on these conditions.

Our study shows most inspections and zoos had unsatisfactory issues regarding the EC Zoos Directive conditions on animal welfare and conservation, education and research. On the other hand, only 1% (n=316) of inspections showed unsatisfactory issues regarding the EC Zoos Directive conditions on the environment or enforcement, but not on animal welfare or conservation, and 1% (n=160) of the zoos with formal inspection reports have had unsatisfactory issues only on these conditions since 2005. Therefore, the first two categories of conditions are not only the most important to judge the performance of a zoo modern practice, but also the ones for which we find stronger links to most unsatisfactory issues and breaches found in our study. We will be discussing them separately in more detail.

Compliance with EU Animal Welfare licence conditions

From an animal protection point of view the animal welfare conditions set up in the EC Zoos Directive that DEFRA translated into the six first questions and sub-questions of the ZOO2 forms (altogether 42 questions) are the most important. They are the questions referring to the universally accepted "five freedoms" of animal welfare.

In the majority of inspection reports and zoos we found unsatisfactory issues related to the EC Zoos Directive animal welfare conditions. Figure 25 shows the values per stratum, and we do not find much difference except in the obvious case of zoos with 14.1 dispensations.

Compliance with EC Conservation, Education and Research licence conditions

Although animal welfare issues were already addressed by the zoo licensing system before the EC Zoos Directive came along, the issues of conservation, education and research are a direct product of this Directive. In the ZOO2 forms, we find these issues dealt with question seven and its eight sub-questions.

There are three ways to measure compliance with this type of EC Zoos Directive issue from the inspection reports in our study: by assessing such compliance from specific comments, by the discovering of unsatisfactory issues related to these subjects with the answers of the eight sub-questions in question 7.1, and by specifically assessing the answer to question 7.5 ("*Are the conservation efforts adequate for the resources of the collection?*") which summarises the entire issue as far as conservation is concerned.

Looking first at the comments and answers to all questions, we found that one third of the inspections reports found unsatisfactory issued related to the EC Zoos Directive conservation, education and research conditions. Also, the majority of the zoological collections have had, since 2005, unsatisfactory issues relating to the EC Zoos Directive conditions on conservation, education and research.

Figure 25 shows the percentages of inspections with unsatisfactory issues on the EC conditions on conservation, education and research per stratum, and we find that zoos with 14.2 dispensations have relatively more unsatisfactory issues than zoos with full licences (37% and 23% respectively). This difference is statistically significant ($\chi^2=12.192$, $p=0.0004$), and could be simply explained by the fact that most of the full licence collections (85%) are general purpose zoos from which the model of modern conservation zoo was originally developed, while high proportion of collections with 14.2 dispensations are aquaria, bird of prey centres, farm parks, and “other” types (together 56% of the collections), which traditionally had had very little to do with conservation (and it seems that more than one third still do). This seems to be confirmed by Figure 28 which shows the percentage of zoos with unsatisfactory EC Zoos Directive Conservation issues found, per type of zoo.

It is interesting to notice that, despite legislative amendments which meant that zoos had to make a valid conservation contribution to be allowed to continue to operate, we still find that almost a quarter of fully-licensed zoos (and almost a third of the general mixed zoos) showed unsatisfactory issues on EC Zoos Directive conservation conditions.

Whether, according to the inspectors, these unsatisfactory issues are sufficient to “fail” the zoo with regard to its conservation obligations can be studied looking at question 7.5 alone. We found that in 8% of the inspections reports the inspector explicitly failed the collection regarding its conservation efforts. If we look only at formal inspection reports, then we find 13% ($n=316$) of the inspection reports and 23% ($n=160$) of the zoological collections with formal inspection reports.

Question 7.1 of the ZOO2 form (*“Is the zoo participating in at least one of the following:”*) is different than the others because instead a YES-NO-N/A answers, it gives five possible answers to tick, and as long as the answer is YES in one of them, the question as a whole is “satisfactory” even in the zoo does not take part in any one of the other four. Therefore, this question was analysed separately from the others. The best performing zoos on this question would have “passed” all five options, which is the case in 17% ($n=738$) of the reports or 35% ($n=362$) of the reports with Q7.1. In the remaining cases only some of the options were chosen.

In Table 23 we can see that the option relating to the exchange of information is the most commonly answered in the reports. From all the options this is the one that requires the least effort, and it is difficult to believe how a collection can fail in the process of participating in exchanging conservation information (whatever this means exactly) with “others”. However, there were 17 reports (5%, $n=362$) where the zoo failed in all five options including this one, and 11 reports (3%, $n=362$) where the only option chosen was the exchange of information. Although the EC Zoos Directive and the DEFRA’s mandatory licence condition clearly consider that a zoo participating in any of the five options is already engaged in “meaningful” conservation, we are of the opinion that this is wrong. It would have been better if the question would have been left without the “either” qualifier, and letting the inspector to decide whether the conservation efforts are adequate in line with question 7.5, which seems appropriate.. We believe that the spirit of the EC Zoos Directive when addressing conservation in zoos required true conservation activity to be carried out, so question 7.1 in its current “either/or” form in not been helpful towards promoting a real conservation based modern zoo practice. On the contrary, we believe that the question may confuse the inspectors into believing that the conservation requirements are merely “tokenistic”, and as

long as you talk about conservation with someone from outside the zoo you are already a full conservation organisation, and do not need to do more.

The zoos themselves often do not shy away from the fact that conservation is not an important priority in their work. We only received 45 pre-inspection audits the zoos sent to inspectors, but in them there is information about the conservation work they claim they do. In those audits we received, 51% (n=45) of the zoos said that they were not involved in any ex-situ conservation activities, 22% not involved in any in-situ conservation, and 4% not involved in any other type of conservation activities. Although only a small sample not necessarily representative of all zoos, this already suggests that those zoos that say that do some conservation work, this is mostly “other” type of conservation, rather than “typical” types. Ex-situ conservation, which is the most archetypical type we would expect to find in zoos (through breeding endangered species in international captive breeding programmes), seems to be the least common found in English zoos.

Zoo standards

We have already seen that many zoos under-perform in terms of unsatisfactory issues found by inspectors, recurrent unresolved issues found over time, breaches of licence conditions, breaches (or unsatisfactory issues found) of EC Zoos Directive conservation conditions, etc. Overall we have seen all these signs of sub-standard zoo practice spread through all types of collections and, as can be seen in Figure 29 regarding variations over time, when we look at each variable separately it may appear at first glance that there is an improvement in conditions during some time, in reality the variations are very small and none of the individual variables in the graph shows statistically significant correlation with years.

Even if we do not count the year 2011 that has fewer inspections because it was an incomplete year in terms of the study, and which show values different than the apparent trend of the previous four years, the correlation is still not statistically significant, as can be seen in the Table 24 of linear regression analysis for the years 2005 to 2010. This means that, despite of some individual cases where a change of ownership, management or general collection strategy, involved a “turn around” of the standards of a collection according to the more recent inspection reports (as in BIR20, BRI32, FAR59, or RAR113), we can use all the information we have on a particular collection during the period studied to assess the standards of that collection since, although there have been variations over time in general they are not big enough to consider past versions of a collection as different collections as far as overall performance is concerned.

Overall some zoos may perform better than others for some of these variables, and worse for others, but if we want to gain an idea of how many sub-standard zoos there are currently in England, and therefore how effective or otherwise is the zoo licensing system in preventing the existence of sub-standard zoological collections, we have to find a method to use all this information together. There has not been any study so far that has done this sort of analysis, so we devised a scoring method using several variables to decide when a zoo could be called “sub-standard” (see Methods chapter).

Appendix I shows a table with the values of the averages of the variables used per zoo from which we had at least one inspection report, including the average score regarding standards per zoo using our scoring method. The average final score of all the inspections of all collections was 0.11, which is around the “minimal” standards value, as we would expect.

If we look only at the last inspection per zoo in order to gain an idea of the “current” situation, the value is 0.26. Calculating the averages per each zoo separately, we find that 22% (n=179) of the zoos can be classed as sub-standard following our definition. There are no zoos that, in all their inspections over the six years, scored “very bad” standards in all of them, but 11 collections that scored very good standards in all their inspections. The category with more cases is “unknown” standards.

However, this profile is actually quite misleading, since it is caused by the effect of the informal inspections that seem to “rubber stamp” the zoos and give them a good score, deforming the averages. We can see this by making the same analysis only with formal inspections in Table 26. Without the effect of local authority informal and special inspections we can see that the results now go towards the opposite direction. Now the majority of the zoos (54%, n=160) can be classed as sub-standard, almost twice the number of those that can be classed as over-standard, we have only two cases of zoos with excellent standards and five zoos with very bad standards, and the category with more cases is “poor standards”. If we calculate the average score for all collections now this is -0.72 (STD=1.358, n=160), close to “poor standards”. Appendix I also shows the score considering only formal inspections.

We can quantify the effect the informal inspections are having on the scoring of zoos regarding their standards of modern zoo practice. We can calculate the difference between the average score of all the average scores when using all the inspections, and then when only using formal inspections (all inspections score, minus formal inspections score). The value is +0.75. This indicates that there is a difference, since we would expect a value of 0 if there were none (any different individual zoo score would have eventually be evened out by another). If we calculate the average of positive and negative scores we can see in which direction this difference goes. We found an average score of -0.55 for negative score differences and +1.24 for positive score differences. If we had a situation where local authority inspectors are more lenient with the collections than DEFRA’s inspections, we would expect to find that the value would be smaller for negative score differences than for positive score differences. We find that positive score differences are almost three times bigger than negative score differences, so local authority inspections appear to distort the average score significantly.

If we only look at the last inspections per zoo (the current situation), the profile is even stronger towards poor standards. The overall average score value calculated is now slightly bigger (-0.73), but now 73% (n=160) of the zoos are sub-standard. Since we based the latest analysis in the known last formal inspections made for each zoo, the proportion of unknown cases has been almost eliminated (and there are no cases of “minimal” standards because this category was not recorded in individual inspections). This has revealed a higher percentage of sub-standard collections. This result suggests that the zoo inspection system has “broken down” with time, and has worsened in preventing the existence of sub-standard zoos, with three quarters of the zoos currently being classed as sub-standard, and more than one third being “bad”. However, this is just a snap shot of the last formal inspection made for each zoo, so we believe that the previous table is a better indicator of the “state” of the collections, since it covers more than one formal inspection per zoo (most of the time separated by three years), and we have avoided the informal inspections that do not normally cover all the possible issues to assess (and the local inspectors are less proficient in inspecting zoos).

If we compare different strata, we find that the average score on standards of modern zoo practice for zoos with full licences is -0.92 while in zoos with a 14.2 dispensation is -0.69, if we only look at formal inspections. These differences are statistically significant when comparing fully-licensed zoos and zoos with 14.2 dispensations through the Kolmogorov-Smirnov two-sample one-tailed test ($D=0.1386$, $p=0.0102$; $m=182$, $n=526$ using all inspections; $D=0.2656$, $p=0.0008$, $m=68$, $n=244$ using only formal inspections), which suggest that fully-licensed zoos score better than zoos with 14.2 dispensations, or that inspectors are more lenient with fully-licensed zoos.

Comparing different types of zoos, there are overall statistically significant differences on average scores (Kruskal-Wallis one-way ANOVA, $\chi^2=14.59$, $p=0.0416$) and Table 29 show us that aquaria and “other” collections have statistically significant differences with several other types of collection. It seems that aquaria and “other” collections score the highest, while herpetological zoos, farm parks and “invertebrate” collections the lowest, but the differences between all cases are small. Although the term “other” does have a characteristic “miscellaneous” tone that would, in itself, explain why such collections may behave a bit out of the ordinary (for instance, several of these are “animal sanctuaries” or “rescue centres” which have a much more animal welfare approach than other types of collections), the case of aquaria is interesting. Not only do aquaria show a high average score, but they are statistically different than bird of prey centres, farm parks, invertebrate collections, and “other bird” collections, as they have a much higher score than we would expect because of random variations. It may be that aquaria perform better than these collections, but we also would find the same results if inspectors were more lenient with aquaria because they do not consider them being under the same requirements than other types. Certainly the aquatic environment in a aquarium is quite different than the enclosures of an average zoo, so it is perfectly possible that inspectors are not properly trained or qualified to inspect these type of zoos, and they either do not see the problems that nevertheless exist, or they tend to ignore them if the animal involved is a fish as opposed to a terrestrial animal. In fact research on UK aquaria (Casamitjana, 2004a,b)⁴⁵ carried out just a year prior to the first year of this study, showed many irregularities and widespread poor practice that seemed to go either unnoticed by inspectors or was deliberately disregarded by them. This may allow us to rule out the hypothesis that aquaria perform better than other zoos, unless there has been a significant improvement in performance since then.

All the best and worst collections regarding standards using our scoring system have either 14.2 or 14.1.b dispensations, and represent all types of zoological collections (although we find a slightly higher proportion of “other” collections among the best scorers). Obviously the collections with 14.1.a dispensations would not score in either way since the lack of inspections would not allow an evaluation using our method, but it is interesting to notice the lack of full licence collections in either extreme of the scoring rank (perhaps suggesting that it is almost impossible for a big zoo, with the increased number of inspectors, to avoid many unsatisfactory problems be found by them, at the same time that it may appear that zoo operators may take their advice more seriously).

The realisation that the current situation regarding the standard of zoos seems worse than the average situation over the last six years, led us to study this issue diachronically in more detail. We divided the six year period in three phases (“phase a” 2005-2006, “phase b” 2007-

⁴⁵ <http://www.captiveanimals.org/wp-content/uploads/2011/02/Aquatic-Zoos.pdf>

2008, and “phase c” 2009-2010) and we found that 53% (n=147) of the zoos we had enough inspections over time to be able to compare had improved regarding general standards (as we defined them) comparing “phase a” and “phase c”, but 37% had worsened. If we only look at formal reports the percentages of either groups even themselves out.

Was this improvement or decline of standards constant during the six-year period? We found that, for the majority of the zoos, we have enough inspections to compare; there were variations of standards going up, down or staying the same through the three phases from 2005 to 2010. Only in 10% there was a constant decline and in 21% a constant improvement. If we look at the average score obtained with all inspections per year, we find that it seems to improve slightly from 2007 to 2010, but then falls sharply to even lower levels than in 2005, as can be seen in Figure 30.

We do not find that there is a statistically significant correlation between the average score and years (Kendall's Rank Correlation Coefficient, $Z=1.0513$, $p=0.2931$), although if we eliminate the year 2011 because of its small size, a significance does appear ($Z=2.4422$, $p=0.0175$) that suggest a slight improvement in performance. A further study including all the inspections for 2011 would be needed to find out if the data we found for this year that plums the score below the 2005 level is just a statistical aberration.

Although there may be a slight improvement of scoring in inspection reports over the years, this appears to be insufficient because we do not find data that supports the idea that the zoo inspection system has been working effectively in reducing the proportion of sub-standard collections in England. While some collections do seem to be on a constant path of improvement, others are going in the opposite direction, and most collections seem to vary as if there was no “direction” pointing them towards improvement. This suggests to us that the zoo licensing system, despite its original purpose, may be working more to maintain the status quo than towards improving the standards of modern zoo practice.

THE CURRENT SITUATION

Previous chapters have analysed the performance of different key players of the zoo licensing system using all of the information sent to us by the local authorities, covering a period of six years. We have already seen that, despite changes of some variables over time, such changes are not significant enough to consider that the collections performed very differently in the different years of the period studied. However, if any authority is going to use the findings of this study to assess if any enforcing or legal action is needed, the situation that counts is the current one.

We repeated most of the calculations we have made in previous chapters using only the most current formal inspections, which would give the most accurate picture of the current situation of the English zoo licensing system. We have used only formal inspections because the heterogeneity of the informal and special inspections would have distorted the current profile since, on this occasion, we only have one inspection per zoo, and not averages as we had in previous chapters.

As the local authorities did not send inspection reports for all of the collections selected in this study and, when reports were sent, some collections were missing formal inspection reports, the sample size of collections from which we will calculate most averages is now 161 instead of 207. Also, since now we only will use one inspection per zoo, there will no longer be separate results for inspection reports and zoos.

Because not all the last formal inspections we have from zoo refer to the same year, it should be noted that, when we refer to the “current” situation we do not mean the last half of the year 2011, but the situation based on the last formal inspection that was carried out, and that we have in our possession. In this new sample most of the inspection reports (71%) are from the year 2009, 2010, or 2011, but we also have some from 2008 (24%) and just a few from 2007 (4%).

Also, this process would have eliminated all collections with 14.1.a dispensations from which we do not have any formal inspection, but we still have two collections with 14.1.b dispensations.

For convenience, in previous chapters we have treated breaches of conditions derived from the EC Zoo Directive as “unsatisfactory issues” found on those conditions, because this is how often inspectors and authority officials treat them, but as can be seen in

Table 30 we have returned to our original interpretation – which we believe is the correct interpretation– which is that since such conditions were added to the ZLA in its new Section 1A, failure to meet any of those conditions can be seen as a “breach” of the legislation. Therefore, we will now stop using the euphemism of “unsatisfactory issue found on EC Zoos Directive conditions”, and we will use “breaches of EC licence conditions” instead, since, after all, section 1A has been directly translated into specific licence conditions (the mandatory conditions) which all zoos should have attached in their zoo licences.

From all the results seen above, the most important are those referring recognised breaches of licence conditions including breaches of those derived from the EC Zoos Directive, since theoretically collections with such breaches could be considered to have an invalid licence. Our data shows that currently, 43% (n=161) of the zoos in England may be illegally opened to the public due to a licence being invalidated as a result of recognised breaches of their own specific licence conditions that 89% (n=161) of the zoos are in breach of licence conditions derived from the EC Zoos Directive, which could render their licence invalid and make their continued operation a breach of legislation.

The current situation can then be summarised as follows: 95% of the formal zoo inspection reports contain important errors of judgement, at least 73% of the zoological collections in England appear to be sub-standard, and at least 89% of the collections could be said that are operating outside of the law. The zoo inspection system in England does not seem to be working.

EVALUATION OF THE DESIGN OF INSPECTION SYSTEM

We know how the zoo licensing system in England is comprised (see Appendix C) and, so far, we have looked at the performance of its components in the last few years. Our study suggests that such performance, from local authorities to DEFRA, appears to be quite poor, but it remains to be seen if this is the fault of the people and institutions involved, or due to the simple fact the system itself is inherently and intrinsically flawed. In the following chapters we will address the design of the inspection system, looking at it from a legal, practical, animal welfare and financial perspective.

Legal assessment

There are three legislative levels that inform the zoo licensing system in England⁴⁶: The EC Zoo Directive, the Zoo Licensing Act 1981 as amended (with the Secretary of State Standards of Modern Zoo Practice), and the local authorities licensing regulations (based on DEFRA's guidance). Therefore we have a relatively modern piece of primary legislation supported upwards and downwards with relatively modern European and local legislation. Legally speaking, the licensing system is well covered (see Appendix B).

However, do these different legislative levels interact properly with each other, and are they correctly interpreted and applied? We are not legal experts but on reading the different pieces of legislations involved, we can detect several points of concern:

1) The compatibility between the EU Zoo Directive and the ZLA

It could be argued that the EC Zoos Directive is not a very effective piece of legislation to guarantee the protection of wild animals. Article 1 of the EC Zoos Directive clearly spells out its purpose: "*The objectives of this Directive are to protect wild fauna and to conserve biodiversity...*" However, the sentence continues explaining how this objective can be met, specifically "...*by providing for the adoption of measures by Member States for the licensing and inspection of zoos in the Community, thereby strengthening the role of zoos in the conservation of biodiversity.*" It makes a big "assumption". It assumes that a licensing system for zoos is the best way to protect wild fauna, and also assumes that having a licensing system implies that the role of zoos in conservation will be strengthened. Section 3 states the conservation conditions the licensed zoos have to meet to be licensed, and Section 4 covers the licence system itself. However, Section 5 contradicts, to a degree, Section 1 as it suggests that if another option can be found to protect wild fauna better than a licensing system, then this is acceptable too. Specifically, it states "*Licensing requirements set out in Article 4 shall not apply where a Member State can demonstrate to the satisfaction of the Commission that the objective of this Directive as set out in Article 1 and the requirements applicable to zoos set out in Article 3 are being met and continuously maintained by means of a system or regulation and registration. Such a system should, inter alia, contain provisions regarding inspection and closure of zoos equivalent to those in Article 4(4) and (5).*" It appears the Directive maintains the role of "inspections" and "closing sub-standard zoos", but keeps the system of licences optional, at the discretion of the Commission.

⁴⁶ Although in this chapter we do a legal assessment of the UK zoo licensing system, we must stress that we are not legislation experts or qualified legal professionals.

Regardless the effectiveness of the EC Zoos Directive in achieving its goals, and ignoring the fact that it could be argued that the promotion of zoo licensing systems and conservation activities made by zoos is not necessarily the best way to protect wild fauna, the issue here is whether the EC Zoos Directive and the ZLA are compatible pieces of legislation, and whether the amendments made in the ZLA are sufficient to be able to assert that the UK Government has met the requirements of the EC Zoos Directive. Prior to the EC Zoos Directive the UK already managed a zoo licensing system under the ZLA, in which not even the provision of closing sub-standard zoos was contemplated, and in which there were not conservation requirements. The assumption that such system could comply with the EC Zoos Directive but just a few amendments to the ZLA may have been premature, since both pieces of legislation have very different purposes, and may not really be as compatible as they appear to be. The ZLA was created to “*Regulate by licence the conduct of zoos*” based on some minimum standards zoos had to meet. The EC Zoos Directive “*protect wild fauna and to conserve biodiversity*” not necessarily with zoos, but also “from zoos”. The EC Zoos Directive sanctions those zoos that do not keep wild animals properly by their closure and the removal of their animals. The old ZLA might fine those sub-standard zoos or revoke their licence preventing them to profit from visiting public, in the hope that this would improve zoo practices. The EC Zoos Directive does not find licensing as the only way to protect zoo animals, but it does find the inspection of zoos and the closure of the “sub-standard” ones indispensable.

The amendments to the ZLA that incorporated the conservation requirements and the closure provisions did not change the rest of the Act, nor its purpose. It remained a system to simply regulate zoo practice, not to protect wild animals and biodiversity. The new articles may have been forced “against the grain” of the Act, and since the rest of the system (Inspectorate, local authority control, etc.) did not change much (just to ensure that the conservation conditions were added to all licences, not necessarily to enforce them) it is not surprising that we found that 89% of the zoos do not meet the licence conditions set in the EC Zoos Directive, local authorities do not use the zoo closure powers of section 16A to 16G, and that 73% of the zoos appear to be sub-standard.

Perhaps legislators in the UK assumed that by adding the conditions defined in the EC Zoos Directive to all the licences the inspectors, the local authorities and even DEFRA would apply the “spirit” of the EC Zoos Directive, and would eliminate poor practice and transform entertainment zoos into conservation zoos. But this did not happen, because the assumption was incorrect. The UK licensing system was not designed for this task (protect wild fauna), and the few articles added in the amendment of the ZLA did not change the system, nor its players.

2) Difficult enforcement

There seems to be certain contradiction between the section 1A and 16A of the ZLA that makes enforcement difficult. Section 1A states “*The following are conservation measures to be implemented in zoos in accordance with this Act*”, so that the listed conditions are “*measures to be implemented in zoos*”. However, section 16A deals with the enforcement of the Act in a way that only if specific licence conditions that have been added to the zoo licence have been breached, and only if the licence

holder had the opportunity to be heard, the local authority can begin to act against those zoos that have not implemented the conditions. It seems to allow an intermediate loophole state where the measures are not being implemented (breach of section 1A) but no enforcement is possible because either the local authority has not assessed the conditions yet (even if witnesses have evidence that the conditions have not been met), it has not issued a licence condition regarding the conditions (perhaps waiting for the next formal inspection to do so), it has not interpreted that the condition has been breached based on an inspector that ignored the conditions (if the inspector has not been very explicit on his/her recommendations), or has not informed the zoo operator about the breaches (perhaps even waiting for an acknowledgement, or even an agreement, from the zoo operator).

Considering that in theory the zoos are inspected only once a year, this intermediate “loophole” state of illegality (measures not implemented according to section 1A) may be occurring almost continuously in a zoo, since for a non-implemented condition to be acted upon it has to be happening the day of the announced inspection, it has to be witnessed by the inspector (the zoo operator, having had plenty of time, may try to hide the practice), the inspector has to interpret it as an unsatisfactory issue, the inspector has to realise that such issue is a breach of an existing condition under section 1A, the inspector has to write a report and send it to the local authority, which then in turn has to decide if indeed a breach of the condition has occurred, it has then to inform the zoo operator, and only then it has the possibility to apply the enforcement action under section 16A of the ZLA, which in the end may involve simply warning the zoo operator regarding the condition and giving him/her more time to sort it out. Even then, the local authority may not necessarily check if the zoo has complied until the next inspection since the ZLA does not force them to act immediately, which if they wish –and there is no formal inspection scheduled soon– could be as late as a year after the discovering of the unsatisfactory issue.

The ZLA allows zoos to be in an almost permanent state of breaches of section 1A without the licensing authorities applying any enforcement measure, and even then they can continue staying in such state by extensions of deadlines, amendments of licence conditions, addition of new conditions, waiting for the next inspection, etc. It is not surprising that the current situation in England is that 89% of the zoos appear to be in breach of section 1A of the ZLA, but yet the enforcement measures under section 16A have hardly ever been applied.

3) *Difficult prosecutions*

Section 19(1) of the ZLA states that the zoo operator would be committing an offence if he/she operates a zoo without a licence, and section 19(2) that he/she will also commit an offence if he fails to comply with any licence condition. However, the Act indirectly allows some possible defences which could allow the zoo to operate an illegal zoo unpunished, because it relies too heavily on the local authority and zoo inspectors’ opinion rather than on objective evidence on whether a condition has actually been breached. In its section 1(1) the ZLA states “*it is unlawful to operate a zoo to which this Act applies except under the authority of a licence issued under this Act by the local authority*”, but if a zoo operator is under the impression that he does not need a licence because the local authority has not told them so, despite being in operation during a long time, and the authority has been aware, is he/she an offender

under section 1(1) of the ZLA? If a zoo inspector realises that there is a particular practice is a breach of section 1A of the ZLA, but then instead of reporting it immediately to the authority for immediate enforcing action it does not state in his/her inspection report that the breach has actually occurred, but instead recommends the zoo to modify its practice so it cannot be prosecuted under section 1A, is he/she also a co-offender by allowing the zoo operator to continue with the offending practice at his/her discretion? Could the zoo operator use as a defence that “the inspector did not notice the problem”, or “the local authority did not add this specific issue in the additional licence conditions”? Because the lack of prosecutions (perhaps because potential prosecutors have realised this weakness) there have been not landmark cases that could have helped to set legal precedent and prevent such defences, making the probability of a successful prosecution quite low. It is not surprising that despite the 30 years of existence of the ZLA, just a handful of prosecutions have been attempted.

4) ***The ZLA limiting inspections***

There is a contradiction with the general objectives of the EC Zoos Directive to protect wild animals by inspecting zoos that keep them, and section 10 and 12 of the ZLA, which specify how many periodical and informal inspections can take place in a zoo, and by how many inspectors. The contradiction is that by limiting the number of inspection assessments (by either limiting the number of inspectors and/or the number of times they can inspect a zoo) the ZLA is reducing the chances to detect poor practice, and therefore to protect wild animals. Section 11 does seem to compensate for this by giving unlimited possibilities to “special” inspections, but by labelling them as “special” they are making them “extraordinary”. As we have seen, such inspections are indeed extraordinary, only covering 10% of the inspections, and they tend to concentrate on a single issue (the average number of issues assessed in special inspections is over eight times smaller than the same average for periodical inspections), rather than go through all issues and animals. If there are administrative reasons to reduce the number and frequency of inspections and/or inspectors, that should be a matter of each individual administrator of the licensing system, in this case each local authority. It should not be the primary legislation role to limit the number of inspections and inspectors if their objective is to discover poor practice and eliminate it. The ZLA could have set the “minimum” number of formal and informal inspections and inspectors per inspection, but setting the maximum contradicts the purpose of the inspection process. We believe that the reason of this upper limit is to avoid charging the zoo operators too much, since they are the ones that need to cover the cost of the inspections, but this in itself is already a problem, since placing upon the “inspected” the burden of cost of the inspection would always lead to less scrutiny, and therefore less information for the decision makers. Since members of the zoo industry are in the ZEC and the Zoos Inspectorate, and even in the case of zoos owned by local authorities also in the licence authority, this would inevitably push towards fewer inspections and fewer inspectors, since otherwise the inspection system would cost the industry too much. This is what we see already with 51% of the collections having the wrong dispensation status (which means fewer inspections or fewer inspectors per inspection than they should have), and both local authorities and DEFRA being complicit in this.

5) *Dispensations and exceptions*

There is a contradiction between the objectives of the EC Zoos Directive and section 14 of the ZLA. This section allows some zoos to be inspected with fewer inspectors (section 14.1.b or 14.2) or have fewer inspections (section 14.1.a), based on the number and kind of animals kept. The EC Zoos Directive does not say that wild animals that are kept in smaller numbers in small collections should be less protected than those kept in bigger numbers in bigger collections. Nor does it say that some wild animals should be more protected than others. Therefore, the ZLA provisions that effectively reduce the capability of inspectors to scrutinise small collections may be for the benefit of the local authority and zoo operators who may save some time and money with dispensations, but they are not for the benefit of wild animals and biodiversity, as the EC Zoos Directive dictates. The fact that the immense majority (80%) of the zoological collections in England are under a “reduced” inspection regime, and that 36% of the zoo animals in England are under-inspected by design, shows how much section 14 of the ZLA has been abused at the expense of the zoo animals – which is not surprising since the zoo industry and local authorities, who are the ones that have been put “in charge” of the system, are the ones footing the economic and logistical burden of inspections.

Practical assessment

In addition of problems of a legal nature inbuilt in contradictions in the pieces of legislation that govern the UK zoo regulatory system, there are practical problems that arise from how the key players of the system interpret such legislation, and how they are using it or implementing it.

We mean “practical” as opposed to “theoretical”, in the sense that the problems are real and occurring after the zoo inspection system has been applied for many years (therefore no longer in its initial transitional application phase), as the results of this study show. We have detected the several practical issues of concern:

6) *Local Authorities’ power*

The ZLA places local authorities at the centre of the decision-making process regarding zoo licensing. An overseeing role is given to the Secretary of State, but all of the important decisions regarding a particular zoo are taken by the local authority. In addition to decision making power, the local authority inspectors are the inspectors that visit the zoos most often, and if a DEFRA inspector has given recommendations or suggested licence conditions, the authority has the last say about whether to add them to the licence and whether the zoo operators have met them. The experts on zoo practice are on the other side of the licensing system, the ZEC and DEFRA inspectors. This is an anomaly since the system places more decision making power in the hands of those with less expertise, and the result expected should be a discrepancy between experts and decision makers. As we have seen this is what we find, with a significantly difference performance of DEFRA inspectors compared to local authority inspectors, and with a situation where results in terms of detecting poor practice are very different between formal (DEFRA) and informal (Local authority only) inspections. Our study shows that local authority inspections have an effect of “rubber stamping” zoological collections. When DEFRA inspectors detect poor practice and create licence conditions to eliminate them, often local authority inspectors consider them already resolved, even if the following formal inspection still

detects the problem. The existence of two sets of inspectors, and the placing of most inspections and most decision power on the hands of the set with less expertise on zoo practice, is a defect of the ZLA which has real consequences in the detection and eradication of sub-standard practices.

The local authority decision-making power does not make sense either from the point of view of the objectives of the EC Zoos Directive – which should have been transferred into the licensing system– since protecting exotic wildlife does not have any “local” meaning. A tiger in one constituency would require the same care that another tiger in another constituency, and a seal in a city zoo would have the same requirements that the same seal in a remote zoo in the countryside. There is no advantage for the animals or the environments to have local inspectors instead of experts who are knowledgeable about the animals or about different types of zoos. The only advantage is administrative, but since local authorities have to deal with many types of issues and have to inspect many types of establishments, it is not surprising to see how they would neglect zoological collections. We have found this, with 61% of the local authorities having missed zoo inspections in the last six years, or 33% failing to obtain the current stocklist of the zoos they licence.

Members of the zoo expert committee and the ADAS report identified a good working relationship between local authorities and zoos as one of the key tools to ensure the zoo licensing regime runs smoothly. It is undeniable that good communication helps any system to function better but, this may not be the case when it comes to the local authority having to issue sanctions to those operators with whom they have built a relationship. Anecdotal evidence and correspondence has suggested as much – that local authorities are more lenient with operators that they know well –sometimes citing good character or a caring nature as a reason to avoid enforcement action. Animal welfare and conservation matters are not local matters, and recognition and enforcement of standards lie much better with experts than with local officers inexperienced in this area. The ZLA does use zoo experts and creates the Secretary of State’s Inspectorate to provide expert advice to the local inspectors, but gives these experts less no real decision-making power. An example of this is the case of BRE231, where DEFRA inspectors had identified overcrowding of the terrapin enclosure, but the local authority’s inspector disagreed and thought that numbers were fine, so during the following informal inspections the issue is effectively ignored.

The majority (73%) of zoos being sub-standard and the apparent widespread illegality (89% of zoos with breaches of licence conditions derived from the EC Zoos Directive) could be a direct consequence of the excessive power of local authorities on the zoo inspection system.

7) *Announced inspections*

One of the major problems with the UK inspection system is that relies on inspections that are announced with many days notice to the zoo operators, who could therefore try to hide any practice they think the inspectors may consider unsatisfactory. The ZLA does allow unannounced inspections, but only in the case of special inspections, which occur rarely (our study shows that only 10% of the inspections are special inspections, and many of these may still be announced prior to the visit). The ZLA requires the cooperation of the zoo operators, who have to provide the local authority

with documentation and have to accompany them through the inspections, showing them both the areas of the zoo open to the public and those that are not. This is why the formal inspection are arranged beforehand with the zoo operators; to ensure that in the inspection day the documentation needed will be ready and the staff needed to show the inspectors around the zoo will be available. However, this obviously has the consequence of giving the zoo plenty of opportunity to tidy up their zoo, and show to the inspectors a somewhat sanitised version of their operation. In our experience, information obtained from non-inspection days in the form of NGOs investigations or general public complaints is hardly ever treated seriously by the local authorities; they either do not organise special inspections to check the allegations as they should, or do not tend to uphold the complaints, so the official perception the whole zoo system has from each particular collections is arguably a sanitised version of it, defeating the purpose of inspections in the first place.

Also, as we can see prior to the inspection, zoo operators can also object to particular inspectors they know from previous inspections, who happen to be too picky on an issue they may not agree with, which is another way distorting the objectivity of the process. Considering this advantage zoo operators have, finding that 73% of the collections in England are sub-standard (according to our definitions) shows how inefficient the zoo inspection licensing is –if inspections were unannounced this percentage could easily reach over 90%.

8) Self-regulation

When addressing how a practice should be regulated, normally three options arise: banning the practice, regulation by the government, and self-regulation by the practitioners themselves. The UK parliament chose government regulation to address the issue of zoos (national, devolved and local governments), presumably because it believed that there was indeed poor practice among zoos that would put animals, the general public and the environments in danger, and the zoo industry could not eradicate such poor practice by itself because their commercial drive would not allow them to do so. However, upon in-depth analysis of the UK zoo licensing system, a considerable degree of self-regulation can be detected, some of it already built in the ZLA.

For instance, the ZLA give more decision power on zoo matters to the local authorities, who are themselves part of the zoo industry, since they own zoos. As we have seen, at least 14% of the zoos in England are owned by local authorities, and although in such cases the ZLA provisions shift the decision power regarding such zoos towards the Secretary of State, not all power is removed from the local authorities, since they continue doing most inspections (informal and special inspections) on their own zoos, they continue to hold responsibility for the issue of licences and attaching conditions for them, and they are the main source of information to DEFRA which would depend almost entirely on them when they have to make decisions about their collections. As far as the rest of zoological collections are concerned, a local authority that owns a zoo is actually playing the role of overseer of other zoos, which not only may be problematic because most zoos are business that may be competing with each other for visitors or rare “specimens” (especially if they are in the same constituency), but clearly is a good example of archetypal self-regulation, since both regulators and “regulates” belong to the same

industry in the same capacity. The ZLA, instead of specifying that local authorities can no longer own zoos, or if they do cannot be the licensing authorities of any other zoo, explicitly allows such cases and only slightly changes their regulation (section 13).

Another example of self-regulation is the Zoos Inspectorate, which have many members belonging to the zoo industry. Not only have many DEFRA inspectors have been zoo operators themselves, but several still are, which not only should create an automatic conflict of interest, but would make their inspections biased towards the types of collections they work in and the types of practices they undertake in their zoos. EC Zoos Directive objective to protect wild animals includes to protect them from sub-standard zoos that may be keeping them in bad conditions or removing them from the wild to display them for profit, so any zoo inspection system aimed to meet the Directive objectives cannot contain inspectors that belong to the very same zoos that may be involved in such practices (regardless if they actually do). The ZLA does not specify that the zoo inspectors have to be members of the zoo industry, but does not forbid it either, as it should.

The third example of a self-regulated trade is the fact that the majority of the members of the Zoos Forum and the ZEC are also members of the zoo industry, many of them still active in it. The presence of impartial outsiders in these expert groups has been always minimal, and therefore the technical guidance and advice that informs the system and determines the basic parameters from which the rest of the key players can operate, is decided by the zoo industry itself, although not officially since each member of these groups is supposed to act as an individual expert not representing any organisation or industry federation. Nevertheless, their ideas and opinions would still be coming from members of the zoo industry, and quite possibly their loyalty to such industry remains intact.

Therefore, we have a system in which the rules to define a zoo; which animals are exotic; what constitutes conservation; what is poor practice as well as rules that need to be applied by inspectors, recommendations made to licensing authorities are all defined and delivered, to a certain extent, by active members of the zoo industry. The overall effect would be a system based on “improving” the products the zoo industry sells (any industry would strive to do that) rather than to protect third parties which are affected by the activities of the industry (in this case zoo animals, the visiting public and the environment). This is far more self-regulation than first meets the eye.

9) *Frequency of inspections*

The ZLA stipulates that zoos should be inspected at least once a year, and that they should have a formal inspection at least every three years. We assert that this is far too few. Until recently dangerous wild animals kept privately would be inspected once a year under the Dangerous Wild Animal Act 1976. It seems only logical that the same type of animals should be inspected at least as frequently, especially if kept in establishments open to the public. However, the annual (now biannual since 2010) inspection under the DWA is the “formal” inspection, while the formal inspections under the ZLA occur every three years. It does not make any sense that establishments that are bigger, more complex, are open to the public, and may have

many different types of animals, are inspected formally less often than a private dwelling that may contain only one dangerous animal.

In addition to this, we already have seen that many local authorities (43%) do not even undertake the compulsive informal inspections, missing them altogether (77% of the missed inspections since 2005 were in fact informal inspections). This means that in addition to an insufficient inspection regime, we have to add a poor application of such regime that reduces further the actual number of inspections made. When we consider the case of collections with 14.1.a dispensation, the inspection regime often means no inspections whatsoever, even if animal husbandry or public safety problems may occur as frequently as any other type of collection.

10) Number of zoos

If the number of zoos in the UK is very high it may be that the zoo inspection system cannot cope with it. The number of experts DEFRA inspectors is limited, so if there are many zoos to inspect it may be that the Zoos Inspectorate may have to choose less experienced inspectors, or may have to rely too much on inspectors from the zoo industry itself –since there may not be other more independent proficient inspectors available. Equally, if the number of zoos is large this means that it is likely that most local authorities would have at least one in their jurisdiction, or even that a local authority may need to deal with many zoos. This would strain the resources and may lead to cutting corners, which is consistent with the results we have found

The UK is one of the most heavily zoo-populated countries in the world and in 2004 it was reported that there were approximately 250,000 animals in over 400 collections⁴⁷, so there are reasons to believe that it is over capacity, which may explain the high level of sub-standard collections, reduction of inspection regimes and poor quality inspections. We have seen through the chapter above that all key players of the zoo inspection system are in fact underperforming. We have argued that this could be caused by an inherent design flaw in the system, but it could simply be because it cannot cope with that many collections. This situation could have been changed if the opportunity provided by the EC Zoos Directive to close sub-standard zoos was not being grossly underused. As we have seen, local authorities hardly ever have close a sub-standard licensed zoo as a method to enforce the ZLA, and although some zoos do close by themselves for financial or other reasons, as many new zoos are licensed by the authorities every year, so the number of zoos has been kept more or less constant since at least 2004.

11) Number of animals

Our study shows that there are currently at least 190,000 animals kept in recognised zoological collections in England. This represents an average of almost 700 specimens per zoo. The more animals there are in captivity in zoos, the more difficult is the task of the inspectors to inspect every one of them and ensure that they are kept in the appropriate conditions.

⁴⁷ BFF (2004). Memorandum submitted by the Born Free Foundation 23 August 2004. Select Committee on Environment, Food and Rural Affairs Minutes of Evidence. House of Commons.
<http://www.publications.parliament.uk/pa/cm200405/cmselect/cmenvfru/52/4091508.htm>

In the year 2000, a study carried out on UK zoological collections (Casamitjana & Turner, 2001) was based on visiting 104 zoos and filming all signs, all visible specimens and talks or education events, in order to assess the zoos' performance on a number of different topics. Since everything was recorded on tape, a calculation could be made of the amount of time that took to do all this. The result showed that the "unofficial" inspector spent an average of 2.5 minutes per specimen to cover all visible animals and events at the zoo. All observations that led to the study's report were made from the tapes themselves, so this was as fast as one could go to "inspect" a zoo (especially because there was pressure to do every zoo in a single visit). However, if notes had to be taken and no video recording would be available to aid the inspection, the average time per specimen could easily have reached 5 minutes. Considering this average time per specimen and the average number of specimens of zoos today, it would take over 8 full working days for a single inspector to inspect each animal with sufficient time (and this is without counting any time checking records of inspecting out of display areas). An official inspector could not conceivably go through all animals and events faster than the investigator of the 2001 study, but if he used a video recording device as well, and used it at least as fast, still it would take an average of 4.2 days per zoo.

Neither the ZLA nor any other regulation of the zoo inspection system puts any limit to the number of specimens a collections can keep while, clearly, if the number is too high an inspector team may not be able to do its job properly with one or two days of inspections. Since there is pressure to reduce the number of inspectors and inspections because the zoos are the ones paying for them, the tendency would be to neglect specimens in big collections without actually increasing the number of days or inspectors. This is what we believe is happening, since most of the inspection reports we have obtained indicate that the inspection happened in a single day, and never with more than five inspectors (even with collections with over 3000 specimens).

Despite this obvious mathematical problem, the system is not really doing anything to reduce the number of captive animals in zoos. For example, the collection WET155 had 84 animals in 2006 and 36 unsatisfactory issues had been reported by the inspectors, including three breaches of licence conditions. In 2007 the collection grew to 86 specimens, 95 in 2007 and 133 in 2009, the year that a formal inspection still found 33 unsatisfactory issues but now including six breaches of licence conditions. In 2010 the collection reached 139 specimens. Another example is the case of LON261 which kept 14606 specimens in 2007, which increased to 18499 in 2010, despite the collection still scored -2 in the standards scoring system used in this study, and had never left negative scoring in the four inspection reports we were allowed to analyse.

12) Number of inspectors

The ZLA stipulates an upper limit of number of inspectors per formal inspection, which cannot exceed five. Considering that there is no limit of size of zoological collections, nor of the number of animals they can display or keep, such limit does not make any sense, since obviously the bigger the collection the more inspectors would be needed. This is, of course, unless the intention of the legislation was that the team remains the same but the time taken to inspect increases. Our data shows

that, if this were the case, it is not followed as inspections rarely take more than one working day regardless of whether the team is assessing 18,000 animals, or 80. Research on other fields aimed to ascertain the optimal number of inspectors in inspections (Boodoo et al., 2000) has shown such optimum number cannot normally be found since it depends on many variables. We doubt that a study of this type was made at the time of deciding that five would be the maximum number of inspectors on zoo inspections, but the huge disparity in size between collections that would qualify for a full licence suggests that, if such study had been made, it would not have found any optimum number that would work in all cases.

This anomaly may be explained by the fact that the ZLA was created not to inspect each individual specimen, but to inspect the general 'practices' of the zoo operators. However, since its amendment in 2002, the ZLA now has to deal with each individual specimen as indicated by the EC Zoos Directive (which does not make exceptions nor suggest that inspectors should only look for particular species or general procedures), but the limit of number of inspectors was not amended, leaving them with the impossible task to inspect each animal in big collections. The result is that they simply do not inspect them, and they can of course miss individual problems and cannot possibly answer with a YES or NO to the questions in DEFRA's ZOO2 forms that refer to each specimen (although they answer them anyway).

Since we know how many inspectors carried out each inspection, and how many animals were in each collection at the time, we can calculate the average number of animals each inspector had the opportunity to inspect: 506. However, as we know zoo inspectors do not divide the zoos among themselves to each inspect different animals. They all inspect the same animals together, so in reality the "team" has an average of 700 specimens to inspect per zoo. Since they tend to inspect the collection in a single day, assuming a non-stop seven hour inspecting session they would spend an average of 36 seconds per specimen, without any time to talk to staff, read signs, attend educational events or check documentation (in the collections with the biggest number of specimens found, it would be 1.4 seconds). The only way around would be to spend many days inspecting the zoo since this is not limited by the ZLA, which they of course do not do because the zoo operator would complain about the cost. The zoo licence system in England makes almost impossible the task to inspect zoos considering the spirit of the EC Zoos Directive and any animal other animal welfare legislation.

13) Taxa lists

Part of the zoo licensing system is the existence of lists of taxa (species, sub-species, etc.) from which licensing decisions can be made: the list of animals not-normally domesticated in the UK from (with which the status of "zoo" can be determined for any particular collection of animals), the list of taxa considered conservation sensitive, and the list of taxa of hazardous animals (both needed to assess dispensation status). DEFRA is responsible for providing such lists, with the advice of the ZEC.

The problems of using these lists is that they change over time, and therefore one collection that is a zoo one day may no longer be one the next day, or one collections that has a dispensations may suddenly need to have a full licence as a result of such

changes. Although this is not bad in itself, the system does not include a periodical “review” of classification of collections considering the variation of such lists, so once a collection has been categorised it may not be changed even if it does not longer fit in the initial category due to a change in the lists. Some of these lists may rarely change (such as the list of animals not-normally domesticated in the UK), but the conservation status of taxa does change continuously as can be seen with the updated lists published every year by international conservation organisations, so the dispensation status of the zoological collections should be also reviewed every year, not only based on inspections but also on the continuous changes of taxa’s conservation status.

The other practical problem in relation to these lists is that the few changes that DEFRA and the *Zoos Forum* have made so far have been towards the same direction (which we believe is the wrong direction): reducing the inspection requirement of zoological collections. For instance, in 2004 DEFRA changed the list of animals not-normally domesticated in the UK by removing llamas and alpacas, so those farm parks that kept them and were inspected as zoos because of their presence, were no longer considered zoos so no inspectors have been carried out since⁴⁸. Some of these collections did not even receive a 14.1.a dispensation which should have granted at least an informal inspection every year, but simply dropped off the local authority radar, as it were. This is in spite of still being open to the public (although they may have had Health & Safety inspections).

On the other hand, the system could benefit with another list that is absent: animals that should not be kept in zoos. Evidence –some of it produced by members of the ZEC– strongly suggests that some animals, such as elephants, polar bears and dolphins⁴⁹, are particularly unsuitable to being kept in confined spaces in zoos (Clubb & Mason, 2002; Clubb & Mason, 2003; Clubb, 2008; Harris et al., 2008), so it is surprising that such a “black list” does not already exist and the presumption is that any animal, no matter how sensitive to captivity it may be, or how difficult the required environment for its wellbeing may be to reproduce “ex situ”, can be kept by any zoo if it so wishes.

Therefore, we have seen that changes on such lists are another way that the zoo industry, with its influence the system itself by reducing inspection and scrutiny at the expense of the animals involved, whilst showing no evidence of increasing the protection of any wild animal in the spirit of the EC Zoos Directive. For instance, in the January 2010 *Zoos Forum*’s meeting⁵⁰, it was discussed whether birds of prey should be considered animals normally domesticated in the UK, at the request of Birds of Prey centres that wanted to be exempt from the requirements of the ZLA. Fortunately, this time the ZF decided that captive-bred birds of prey could not be considered to be “domesticated”, as they are behaviourally and physiologically very

⁴⁸ DEFRA (2004). 2004 Update to Government Circular 02/2003 – llama and alpaca. Department of Environment, Food and Rural Affairs. London

⁴⁹ BFF (2004). Memorandum submitted by the Born Free Foundation 23 August 2004. Select Committee on Environment, Food and Rural Affairs Minutes of Evidence. House of Commons.

<http://www.publications.parliament.uk/pa/cm200405/cmselect/cmenvfru/52/4091508.htm>

⁵⁰ <http://archive.defra.gov.uk/wildlife>

like their wild ancestors, but the pressure from the industry will, presumably, continue.

14) *The exception is the norm*

A major anomaly of the zoo licensing system is that it has created a population of zoos where the immense majority are theoretical exceptions to the norm. The ZLA was created to deal with zoos, and in addition to this to also deal with zoo-like establishments that, for whatever reason, do not fall in the full definition of a zoo –but shared a significant amount of characteristics with zoos that warranted scrutiny under the act. However, the way that local authorities and DEFRA are interpreting the legislation (and their own criteria to define types of collections) has resulted in the majority of zoos being classified as zoo-like, and only a minority as “full zoos” (only 16%, the collections have a full licence). We have also seen that if DEFRA’s own criteria for granting dispensations was applied to the letter, this situation would not have occurred, and in fact fully-licensed zoos would make up 48% of the collections, being the highest represented type of collection.

Therefore we found two major problems here: the ZLA allows the existence of second, third and fourth “class” zoos with the creation of the four dispensation status only based on number and type of specimens (which in itself it is not a good way to guarantee the wellbeing of the animals and visiting public of these collections since “lower” class collections are therefore less inspected) and the criteria to determine which collection should be placed in which class is totally ignored by the local authorities and ultimately by DEFRA (since it is its responsibility to grant dispensations), so most collections are classified in a “lower” class they should be (51% of the collections have the wrong dispensation status, all of them placed in a “lower” class they should be). The end result is a population of zoos where 84% of the collections do not have full licences.

15) *Seasonal variation*

In most cases, the maximum number of inspections a local authority makes per zoo is one per year. However, due to the fact England lies in a temperate region of the world, the environmental conditions during the four seasons vary greatly, especially considering the natural climate that, some arctic, equatorial or tropical species may be adapted to. Therefore, having only one inspection per year is not going to provide the inspectors with an accurate picture of the conditions the animals have been kept during the four seasons, since an inspection in summer where all the animals may be outside enjoying the good weather may give a very different impression than if it was made in winter, when many animals may spend all day indoors, and be more vulnerable to welfare issues.

The same problem occurs when we consider that not all the zoos are open to the public during the whole year, so the experience for the animals may be very different during open and closed seasons, and the inspector may not be able to see all public safety matters if the zoo is close during the inspection. Over the years, a local authority could compensate for this problem by trying to inspect the collection on a different season than the previous inspection.

Figure 32 shows the frequency of inspections made since 2005 with regard to the seasons of the year, for all the collections together. We can notice that there are variations, with higher frequencies from September to November, but these differences are not statistically significant (Chi square goodness-of fit test for equal number of inspections per season, $\chi^2 = 3.271$, $p=0.351$). However, when we look at each individual collection separately, we do notice that they are not always inspected at different months. If the local authorities tried to spread the dates of their inspections over the 12 calendar months, and try to avoid repeating a month until inspections have been made on all the months of the year, the average month of inspection per collection at any given period –such as the six years of this study– would approximate June (specifically the number 6.5, using the scale from one to twelve months). The frequency of different months (in numeric form) where the inspections are made would be following a normal distribution with 6.5 as a mean. If we check the actual distribution of average inspection's calendar month per collection to see if it does approximate this distribution, we see that it does not (difference that is statistically significant, $\chi^2 = 39.2694$, $p < 0.0001$). As can be seen in Figure 33, the observed mean is shifted towards December, so inspectors have a tendency to visit the collections more towards the second half of the year than the first.

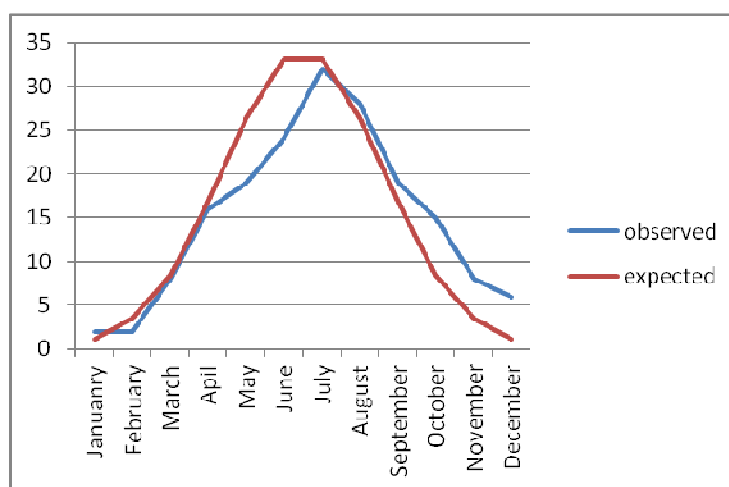


FIGURE 33: Comparison between the observed distribution of frequencies of calendar months where inspections have taken place in England since 2005, and the theoretical distribution if local authorities avoided repeating calendar months.

Therefore, the data does not show any effort for part of the local authorities to spread their inspections in different months so they can observe the collections under different seasons or opening status, and in consequence their impressions of the collection will be incomplete. This, although theoretical, has turned out to be a real issue in some of the collections of our sample. For instance, in WOB280, the renewal inspection made in July 2007 completely missed problems with the indoor quarters of the lion enclosure because the lions were mainly outside. The following inspection in July 2008 did not detect them either. Neither did the next one in May 2009. Not until a special inspection was made in January 2010, as a consequence of a complaint, that the problem was witnessed by the inspector, who upheld the complaint accepting that he had not seen the indoor quarters before. Another example is the inspection made on 26/01/2005 at FAR59 when the inspector suggested that the

following inspections should be made when the collection is opened to the public, since the recent inspections had been made when it was closed, and that did not help them to assess the overall performance to the zoo.

16) Mixed collections

Although the ZLA defines clearly what constitutes a zoo, both DEFRA and the local authorities not always found it easy to deal with collections that have a mixed nature, either because they may be different types of establishments joined together, or because they may be part of a bigger establishment that operates in different constituencies in a coordinated way (such as a “chain” of zoos working under the same parent company/organisation).

For instance, the ZLA defines zoos as establishments that are not pet shops or circuses, but what happens if a pet shop or a circus is “attached” to a zoo, and run by the same operators?. Are they separate establishments with different licences or should they be licensed together? If the latter applies, under which licence (Performing Animals licence, Zoo licence or Pet shop licence)? Or the case of chains where the headquarters zoo is in one constituency and other satellite zoos are in another, and activities such as conservation are only undertaken in the headquarter zoo (as often happens with chain aquaria). In such case, can it be said that the satellite zoo has fulfilled its conservation requirements?

In these cases DEFRA has often referred the dilemma to the *Zoos Forum*, which in theory should try to “rule” in one direction or another. For instance, in the 2009/2010 Zoos Forum’s meeting⁵¹, after discussion on these issues prompted by an Inspectors training seminar, they arrived to the following conclusions:

“Establishments with a ‘parent’ and ‘satellite’ bodies. Some raised the question as to whether ‘satellite’ bodies could rely on the education and contribution made by their ‘parent’ body to fulfil the requirements of section 1A of the Act. The Forum noted that the interpretation of the legislation is a matter for the Courts, but section 5(2A) requires that ‘a licence shall be granted subject to conditions requiring the conservation measures referred to in section 1A to be implemented at the zoo’. Any assessment of the contribution made by ‘satellite’ bodies, as with any other licensed zoos, should have regard to proportionality...

Establishments with ‘mixed use’. How should the ZLA be applied in establishments having mixed use (e.g. farm parks with exotic animals)? Paragraph 4 of page 66 of the Circular provides guidance. The Forum believed that this would be a matter of judgement, having regard to the extent of the ‘meaningful separation’, including in a bio-security sense. The Forum suggested that AH should consider whether this should be an issue for Secretary of State zoo inspector training, to aid consistency in their approach in these circumstances...

⁵¹ <http://archive.defra.gov.uk/wildlife>

Zoos and pet shops. Should the guidance in the Secretary of State's Standards of Modern Zoo Practice ('the Standards') relating to the disposal of zoo animals (paragraphs 4.5 and 4.6 of Appendix 4) apply to the sale of animals through pet shops in zoos? The Forum noted that it was for local authorities to decide whether the ZLA or the Pet Animals Act 1951 provisions should apply in relation to the sale of zoo animals. Zoos and Local Authorities should liaise closely on the provisions of the two Acts to determine which is the most appropriate in a specific instance; and regarding, as a matter of good practice, application of the spirit of the Standards to pet shops associated with zoos. Any zoo having a pet shop linked with its activities should give consideration to this through its ethical review process."

As can be seen, the ZF did not actually rule in these cases, and passed the responsibility to the local authorities, which would of course interpret the legislation as they would see fit, not really helping to promote consistency. When the obvious solution would have been to discourage operators to run mixed establishments or not to treat subsidiary zoos as "incomplete" zoos that would depend on their parent organisation, instead the flexible approach chosen by those running the zoo inspection system creates inconsistencies, and allows the proliferation of mixed and franchised collections with problematic practices and enforcement difficulties.

An archetypical example of how far the acceptances of mixed collections can go, is the case of the collections KNO79: in 2005 breaches of licence conditions had already been found, and they were found again in 2007, so no progress had been made. Instead of issuing direction orders and "toughen" the enforcement of the ZLA, in 2008 the local authority "agreed" to accept the division of the zoo into two, an animal farm and a bird of prey centre, so the former was not going to be inspected at all under the ZLA (in theory because it would not keep exotic or wild animals), and the latter would be a more manageable zoo (although in fact the conservation work of one may be claimed by the other). It should have been a special inspection made and fresh licence issued because the significant changes created, but these changes were made simply through informal inspections by the local authority. In 2010, DEFRA's inspector look at both parts as a single zoo, to see if they could be kept separate, and instead advising against it he made recommendation about how to achieve a proper separation (separate entrance, removal of deer and tortoise from the park, etc.) as, at that point, the separation was not obvious enough. However, the uncertainty about which part carried out conservation efforts was not resolved. Needless to say that this division approach could be applied to many sub-standard collections, separating the sub-standard section from the standard section, if by chance the type of animals involved in one part could justify re-naming that section as a separate zoo – which of course would make a mockery of the entire zoo inspection system.

Animal Welfare assessment

From the perspective of animal protection the most important aspect of an assessment of a licensing system is to see how it affects the welfare of the animals involved. Following are some of the issues of concern related to animal welfare that this study has identified:

17) Animal welfare expertise

The basic requisite to be an inspector that has to assess the animal welfare of an animal is to be qualified to do so, and have the relevant experience required to do so. We know that, although some of DEFRA's inspectors are indeed vets, and that the local authority may use vets for their own inspections, many inspectors both from DEFRA and from the local authorities are not qualified veterinarians. However, they in theory could be qualified on other disciplines that would allow them to make proper judgements on animal welfare matters. In reality, though, many of the inspectors that are not vets do not have any qualification at all regarding the assessment of animal welfare, particularly local authority inspectors who undertake informal inspections who are often only qualified to do Health & Safety inspections. Since the local authority inspections are the most common, and informal and special inspections are also run exclusively by them, it can be said that, in the majority of inspections there is no individual present who is sufficiently qualified to make any informed animal welfare assessment.

The other requisite beside qualification is experience. Not all the vets would be able to assess the welfare of animals of species they have never encountered or have ever studied. Many vets are not experts on fish and aquatic invertebrates, and yet they are asked to make all of the animal welfare judgements with regard to these animals when they visit a general-purpose zoo or an aquarium. According to the questionnaire-based study of Greenwood et al. (2003), zoo inspectors "*may not be fully cognisant of the special needs of all species*". The authors of this study also state that the zoo inspector may also use the inspection to encourage the zoo to aspire to standards higher than the minimum requirement and in many cases, to do so the inspector's own breadth of knowledge must necessarily be greater than the zoo's. However, in many occasions the zoo's vets present during the inspection is more experienced and has higher expertise in a particular animal welfare than the vet inspector, which would inhibit proper scrutiny and would leave the inspector at a disadvantage when questioning the welfare of any animal in disagreement with the collections' vet.

18) The welfare of individual animals

The EC Zoos Directive has as its objective the protection of wild animals in (or from) European zoos. The ZLA (as amended) regulates zoological collections in the UK to guarantee the welfare of the animals kept is of a minimum standard, protect the public that visit them, as well as to protect the environment around them. This protection is both from a conservation point of view and an animal welfare point of view, and as such includes all species, all sub-species, but also all individuals. This is not only clear in both pieces of legislation, but also in the actual wording of the DEFRA forms, in which the questions the inspectors have to answer are formulated with terms such as "each animal", "all animals", etc. The zoo inspection system, therefore, needs to inspect zoos to guarantee that none of the animals kept in zoos receives a sub-standard treatment that puts its welfare at risk. However, it does not do that.

In order for the inspection system to ensure that no animal is "left behind" and all individuals are not kept in sub-standard conditions under poor husbandry practices, it needs to inspect each and every animal with sufficient time to ensure that it has good

health, it has received the best possible treatment, is kept in adequate enclosures with the right environment, is properly fed, is free from fear and distress, and expresses normal behaviour, all according to its species, gender, age and social status. If the individual is sleeping or not visible, the inspector needs to return to check it when it is active, which may take some time. Considering that, as seen in the chapter about number of animals above, just seeing all “visible” animals in a zoo takes an average of 2.5 minutes per animal (Casamitjana & Turner, 2001), at the very least you will need five minutes to find and observe each individual (visible and out of display) to ascertain if it behaves properly and does not show signs of disease, fear, distress, or malnutrition. In addition to this, the inspector also needs to check all the records for that individual, to ensure that it is receiving the appropriate diet at all times (not just the day of the inspection) and has been properly treated (for all health problems it has encountered while in captivity), and to check any history of social problems with other animals in the enclosure. Talking to the keepers and reading notes about the social relationships between the individuals the animal has access to will also be necessary to determine if it is kept in the right social environment. Since all vet and daily records from the time of the last inspection must be checked –and most formal inspections occur every three years, so potentially over 1000 daily notes– all this may take at least another five minutes per animal. It is difficult to imagine how all this can be achieved properly with less than 10 minutes spent per individual, and yet our study tells us that the average time an inspector team takes per individual (assuming that it uses all 7 working hours checking one individual after another without doing anything else) is 36 seconds.

The best way to illustrate how the restrictions of time and inspectors of the UK inspection system cannot possibly allow for an adequate inspection of all the animals to assess whether their welfare has not been compromised by sub-standard practices, we can use as example the collection in our sample with most specimens. This is LON261, with 18,499 specimens according to its 2011 stocklist. The local authority only sent us four of the six inspections they should have had since 2005, and in two of them the inspection team consisted in 5 inspectors, whilst the other two consisted of 3 and 2 respectively. Reading the correspondence that was sent to us, we can ascertain that the inspections in 2008 and 2009 only lasted one day. There is no information to tell us how many days the inspections of 2007 and 2010 lasted (the two with five inspectors, the former being a special inspection and the latter a periodical), but we can assume that it lasted two full working days of seven hours each. This means that, in the inspections with more days the inspector team could spend no more than 2.72 seconds per animal, 220 times less time than the minimum we consider feasible to assess properly each individual. Even if the five inspectors, aware that they are facing a very big collection and they cannot increase the number of inspectors because the ZLA only accepts a maximum of five, decide to split the zoo among them and inspect separately different animals each, the time per animal would only be 13.6 seconds. This is the maximum the “system” would allow for a two-day inspection. In fact the inspector of the special inspection made the 16/10/2007 did express in his reports that the next inspection should last a minimum of three days, so they seem aware of the problem. If the local authorities agreed that this is an issue, and it would decide to extend the inspection to as many days as would be necessary (and charge the zoo for all the cost no matter what), it would take almost

two years (22 months, five days a week, seven hours a day) to do it giving the ideal minimum of 10 minutes per individual required. Clearly the zoo inspection system is not suited for this collection.

Is LON261 an exception? For LON260 it would be 16 months, for BLU26 it would be 4 months, for WOB280 it would be 3.8 months, for CHE246 it would be 3.7 months, etc, etc. If we look at all collections with a full licence they keep an average of 2145 specimens, so it would take an average of 2.6 months. For an average collection with a 14.2 dispensation it would take 12 days. In fact, if we look at it from the other side, to see which number of animals collections should have to be able to dedicate 10 minutes to each individual in a 7 hour inspection day, it would be no more than 42 animals. Only 10% of the zoological collections would have no more than this number of specimens, so the licensing system is unsuitable to inspect the welfare of animals of at least 90% of the zoos in England with a single day inspection, which is the most common. Figure 31 shows the average number of 7-hour working days necessary for the ideal inspection scenario, per type of zoo and stratum. We can see that only collections specialising in reptiles and amphibians would “qualify” for a single day inspection. The average for all these results is 14.23 days.

The way the zoo licensing authorities deal with this inadequacy is to forget to inspect each individual animal and simply inspect a few animals - those that are most convenient. When the ZOO2 inspector form asks inspectors questions such as “*Do all the animals in display to the public appear to be in good health?*” they tick nevertheless YES, even if they did not check them all, because they could not possibly have enough time, access or knowledge to do so. This “erroneous” answer is passed to the local authority which rubber-stamps it before passing it to DEFRA, which will do the same. This is how the welfare of individual animals in zoos is ignored, and zoos that may be failing in providing them the minimum standards of care are licensed year after year unchallenged.

19) *The forgotten animals*

If UK parliamentarians knew that the zoo licensing system they enacted many years ago in order to guarantee the proper care of zoo animals cannot cope with the amount of animals involved, perhaps they would try to amend the ZLA to ensure that large teams of inspectors can inspect zoos over as many days as it takes. However, in this unlikely event, would such mega-teams be able to cover all individuals? They would not, because the prerequisite to be able to inspect an individual and check its records is that each individual have to be able to be easily recognisable by the inspector. Not only some sort of marking would be necessary so the inspector does not need to rely on the information of a keeper that may try to avoid presenting the animals that are in poorest condition, but, at the very least the keepers themselves should be able to tell apart each individual from each other. This does not happen in many cases.

The difficulties that inspectors face when having to observe individual animals kept in semi free-range conditions (such as safari parks or big walkthrough enclosures) or crowded enclosures (such as big tanks in aquaria) are considerable. Finding a specific animal, or telling one animal from another, may become very difficult, if not almost impossible in some cases. In some cases, not even the keepers would be

able to tell each animal apart from others sharing the same enclosure, let alone inspectors that may have never seen them before, and who have no way of ensuring that they are not being directed to the wrong animal. And if the animals can be identified, perhaps they cannot be observed long enough, or close enough, to make a proper evaluation of their welfare, if proper observing facilities are not available at the zoo (CCTV, hides, viewing platforms, etc.) or visitors may be unwillingly interfering with the inspector's work.

We can use as example the same collection we used in the previous chapter, LON261. From the 18,499 specimens showed in the last stocklist, 95% of them are marked as "unknown", and not even the gender can be determined (let alone which individual is which); in the case of WOB280, 27% of the specimens are also marked as "unknown". CHE246 operators do not even know how many "unknown" specimens they keep, and they just write an "X" in their stocklist sub-total. These "unknown" qualifications are not the result of lazy zookeepers that did not bother to check the animals, but are in fact unidentifiable animals, according to the international rules of zoo recording data (Earnhardt et al. 1998). The reality is that in many zoos the zoo operators cannot tell one individual apart from another in many of the species they keep, which would make impossible the task of inspectors who would not be able to tell them apart either, nor would be able to find records of the individuals to check for their medical and husbandry history.

In addition to this, we have already seen that some collections are reluctant to send their stocklists to the local authorities, some of which are, in turn, reluctant to send them to anyone else, and destroy them immediately after seeing them. The fact that zoo operators cannot really compile a proper stocklist and cannot keep track of the animals that are born or die may be a good explanation for this behaviour, especially if we consider the case of aquaria where the task of identifying individuals may be impossible in many cases.

The nature of zoological collections aimed to display as many animals of as many types as possible to appeal to the paying public is not conducive to good animal welfare, so one would expect that in the biggest collections where it is difficult to identify individual animals and keep track of their lives, many animals are forgotten by the keepers, by the inspectors and by the local authorities, and the zoo inspection system have failed them because it is not fit to ensure their welfare.

20) *Discrimination against animals' location*

Not all animals that could be identified and tracked would be able to receive the same amount of attention, because the UK inspection system discriminates against some animals for being kept in particular types of collections.

Because of the system reduces the amount of inspection by reducing either the number of inspections or the number of inspectors depending of the size and composition of the zoo, and animal of a particular type will received a different amount of inspection depending on where it is kept. We can see as an example the case of Eagle Owls, which are kept in 32% of the zoological collections (n=207). Because of the dispensation status of the collections where they are kept, theoretically 3% of these animals would only receive one informal inspection per year

because they are in collections with a 14.1.a dispensation, but in real terms, because often local authorities tend to fail in inspecting 14.1.a collections annually (88% of the local authorities that have zoos with 14.1 dispensations in England missed half or more of the minimum inspections required in the period from 2005 to 2010), the chances are that these animals will not received the minimum number of inspections they should. In fact, the Eagle owls in collections with a 14.1.a dispensation in our sample that keep them (BAN174 and WEL228) should have received at least six inspections since 2005, and in one collections they received four, and in the other only two. 84% of the Eagle owls, for belonging to collections with 14.2 dispensations, would have received fewer inspectors per inspection (and therefore fewer eyes to detect problems). These also should have received at least 6 inspections per year, but in average they received 4% fewer inspections than they should, since local authorities missed 16 inspections of collections with 14.2 dispensations and Eagle owls since 2005. On the other hand, 13% of the Eagle owls theoretically received as many inspections and inspectors they could, for belonging to collections with a full licence (although one inspection was missed in one collection).

This means that since 2005 an individual owl in one type of collection would have received 30 inspectors, in another type 18 inspectors, and in another 6 inspectors. A five times difference in inspection depending on which collection the Eagle owls are kept, even if the species are exactly the same and so are their husbandry requirements. In consequence, for an individual Eagle owl kept in a zoo in England, if kept in a collection with a 14.1.a dispensation the probability of an inspector spotting an animal welfare problem is five times smaller than it should be if kept in a full licensed zoo of the same size, and two times smaller if kept in a collection with a 14.2 dispensation instead a full licensed zoo of the same size.

However, this has not taken into account the number of specimens kept in the zoo, since the bigger the number the less time inspectors would have to observe the owls and its records, so in a very big zoo the time per inspector per owl will be considerably shorter than in a smaller zoo. Considering this, and looking at the actual number of specimens and inspectors since 2005, an owl in STO131 theoretically would have received 6.36 minutes of inspector's time, while an owl in BAN239 would have received 0.7 seconds of inspector's time, only because of the type of collection they were kept in.

In conclusion, the UK zoo inspection system discriminates against particular animals only for being kept in one type of zoo rather than another, which goes against the spirit of the EC Zoos Directive or any relevant wild animal welfare legislation which do not give any exception regarding which wild animals should be protected.

21) *Unanswerable animal welfare questions*

Even if there was no discrimination for any animal, and the zoo licensing system guaranteed the same number of inspection attention for all individual animals kept in zoos, could they really guarantee that their animal welfare had not been compromised because of the practices of the zoo operators since the last inspection? This goes to the core of the question of whether inspections *per se* are a good way to assess animal welfare.

There are a number of issues in this regard. Firstly, the fact that animal welfare is a variable state, while inspections are only good in assessing the true state of a variable if they are frequent and random so the natural variations of state can be detected by the inspectors. The welfare of an animal may be sub-standard most of the time with the exception of the day of the inspection. If the inspections are random, frequent and unannounced the chances of the inspectors picking on the exception rather than on the norm are considerably reduced. However, we know that this is not what happens in the zoo inspection system, where we find that, normally, no more than one inspection per year, which is announced well in advance.

The second point is that the inspector must be able to assess the animal welfare state of the animals with a simple observation, which is not easy. For that, they have their own eyes and experience observing the appearance and behaviour of the animals, but also the records kept by the zookeepers of the daily activities of the animals since the last the inspection. The problem is that there is no way for the inspector to check that the records kept by the zoo operators are accurate and complete. Inspectors also could consult the veterinary practitioner that the collection uses. However, the vets may not be totally aware of the state of all the animals because they may only visit the collection occasionally, or only when specific problems occur.

The third point is that, even with accurate and complete records, honest and well informed zoo vets, and plenty of time for the inspector to observe the animals, some of the questions the inspectors are required to answer to assess whether the animal welfare of the animals is sound cannot really be accurately answered. For example, in DEFRA's ZOO2 form we find the following questions:

- Q1.1 *"Is each animal provided with a high standard of nutrition?"* In order to ascertain if the nutrition provided is of high standard for each animal, nutritional tests should be part of the inspection process since not every animal has the exact same physiology, and not any animal may take the same amount of food than any other animal in the same enclosure, since there may be social competition for food. These tests of course are not made, so the inspector would never be able to conclude that the nutrition each animal receives from the food provided is of high standard.
- Q2.6 *"Is the cleaning of the accommodation satisfactory?"* This could only be answered regarding the day of the inspection, since each enclosure will get dirty every day, so the fact that it is properly cleaning during the inspection day (announced inspector day) does not mean that it has been properly cleaned any other day.
- Q3.1. *"Is each animal provided with a high standard of animal husbandry?"* To be able to assert that high standard of animal husbandry has been given the inspector would need to have comprehensive information on interaction between keepers and animals that have occurred since the last inspection, including feedings, moves, cleanings, treatments, etc, and in the social and environmental circumstances the animals have been exposed to, information

that not only is not available, but if it was, the inspector would not be able to process it in a single inspection setting.

- Q3.4. *“Do all animals receive prompt and appropriate attention when problems are noted?”* To be able to answer this, the inspector should have information on each event when a problem occurred. If the problem was not noted by lack of experience of the keepers, or was ignored because of incompetence or negligence, no trace in the records would be left, so the inspector would only be able to assess the appropriate attention of the cases which received some attention, and records were kept, not the cases where such attention was absent. As such, there is the opportunity to identify best practice but no guarantee that poor practice would ever be detected.
- Q4.1 *“Does accommodation appear adequately to meet the biological and behavioural needs of the animals?”* Although this could be answered regarding the species (if the inspector is knowledgeable about all the biological and behavioural needs of all the species that could be kept in captivity) it cannot be answered regarding the “animals”, since each individual will have different behavioural and biological needs depending to their exact genetic, physiological, developmental and behavioural background. A complete life history (not only history in the collection) of each individual animal should be in the possession of the inspector to be able to make this judgement, which of course it is not possible. In the same way that a social worker dealing with a case would not be allowed to “extrapolate” the welfare of his/her client based on his/her race or ethnic origin, an inspector cannot extrapolate the welfare of an individual based on the species it belongs to.
- Q5.1, *“Are the animals handled only by or under the supervision of appropriately experienced staff?”* To answer this question the inspector should have been present during each occasion the animals were handled, or records should have been kept for each handling situation reflecting which members of the staff were present, and which experience they had at that moment relative to the handling in question, which of course does not happen.
- Q5.2, *“Is physical contact between animals and the public consistent with the animals’ welfare?”* The only cases where this could be answered is if the zoo is designed so to avoid completely any physical interaction between the public and the animals. In the rest of the cases, the question cannot be answered without a specific study that would look at how such interactions have affected the welfare of the animals, which it is unlikely to have been made with appropriate control subjects.
- Q5.3. *“Are interactions between the animals such that they are not excessively stressful?”* Whether an interaction is excessively stressful cannot be answered with observation because the physiological consequences of a stressful situation cannot be measured unless done experimentally. Besides, in order to answer this question the inspector would have to be present during such interactions, or the keepers should have been recording each and every

interaction that has occurred between the animals, which of course does not happen since most of the time most animals are kept at their own devices unobserved.

22) *The use of the Animal Welfare Act 2006 in zoos*

Recently the UK parliament passed one of the most modern pieces of animal welfare legislation in the form of the Animal Welfare Act 2006. This Act, among other things, allows prosecutions for animal negligence, when the way an animal is kept is likely to cause it harm, even if it has not caused it yet. This would apply perfectly to the case of vertebrates in zoos (since the Animal Welfare Act only covers vertebrates) as it is recognised by DEFRA in its own website⁵². Therefore, if zoo operators are keeping their vertebrate animals in sub-standard conditions that may lead to welfare problems, they could be prosecuted under the AWA and not the ZLA. However, this has never happened, despite the fact that, in our study, we found that, since 2005, inspectors identified 2113 unsatisfactory animal welfare issues in zoos in England.

The reason is that it would be very difficult to have successful prosecutions, since the accused could use the inspectors as a defence, claiming that if they did not prompt the local authorities to prosecute, this probably was because they did not consider the problems were severe enough. The ZLA and the licensing system effectively inhibits any AWA prosecution by providing official expert “complicity” which would be very difficult to overcome by NGOs such as the RSPCA, which is the organisation that tends to take on most AWA prosecutions. In other words, the lack of prosecutions under the ZLA, and the lack of enforcing actions from local authority officials after inspectors have identified poor practice in zoos of any kind (related to animal welfare or otherwise), have the effect of “shielding” zoo operators from AWA prosecutions, creating a situation of “double standards”, where a person that privately keeps a tiger in poor conditions could easily be prosecuted for animal neglect, but if the same person opens his/her doors to the public more than seven days in a year (therefore becoming a zoo), then he/she would be almost impossible to prosecute for the same offence (unless is the local authority that prosecuted him/her in the first place when the conditions were first discovered, which never happens). Therefore, in practice, in England wild animals in zoos are less protected than the same animals kept in other establishments.

Financial assessment

Keeping a zoo costs money, as does keeping a zoo licensing system up and running. We do not have the accounts of the entire system so we cannot make a proper assessment of whether its finances are sound, but we can make some estimations, and explore some speculation of how much would the cost increase if some of the problems identified in previous chapter were corrected.

23) *Charging zoos for the cost of the inspections*

Section 15 of the ZLA stipulates that the cost of the inspections can be charged to the zoo operator. Specifically it states “*the authority may charge to the operator of the zoo such sums as they may determine in respect of reasonable expenses incurred by them—*”

⁵² <http://www.defra.gov.uk/wildlife>

(a) In connection with inspections in accordance with section 9A and under sections 10 to 12;

(b) in connection with the exercise of their powers to make directions under this Act;

(c) in the exercise of their function under section 16E(4) of supervising the implementation of plans prepared under section 16E(2); and (d) in connection with the exercise of their function under section 16E(7) or (8)." The key word in this section is "may". Local authorities could choose not to charge the zoos for any of these costs, and it would be up to DEFRA if it wants to subsidise the cost of zoo inspections by providing funds to the local authorities to cover them. But neither of them does, so effectively the zoos themselves pay for their own inspections. This may cause a triple effect: firstly, the zoo industry influencing the zoo licensing system decision makers (through their presence in the ZEC, Zoos Inspectorate and local authorities) towards reducing the number of inspections and the number of inspectors; secondly, inhibiting local authorities to undertake many inspections because this may lead to the zoo operators to object to them and to be less collaborative; thirdly, local authorities avoiding prosecuting zoo operators after a series of inspections have uncovered recurrent poor practice, since it may be perceived that paying for the "extra" inspections that had to be made by addressing the unsatisfactory issue, may be "punishment enough". As we have already seen this has led to 80% of the collections having reduced inspection regimes, 51% of the collections having the wrong dispensation status leading to be under-inspected, 63% of the collections having had fewer inspections than they should (even under the reduced inspections rules of their erroneously given dispensations), and hardly any prosecutions under the ZLA despite that at least 43% of formal inspection reports explicitly report recognised breaches of existing licence conditions.

24) Inspection costs

The ZLA allows local authorities to charge zoo operators for the cost of the inspections, and all of them do charge them for at least renewal and periodical inspections. Part of these costs are fees of DEFRA's inspectors while another part are inspectors' expenses. Section 8(6) of the ZLA states that fees for Inspectorate inspectors must be set by the Secretary of State, and the current amounts set by DEFRA for inspectors' fees and expenses follow⁵³:

FEES

Persons on Part 1 and Part 2 of the list:-

01-04-2011 until further notice £72.53 per hour

Wasted visit fee £23.13 per hour

Fees for services are subject to a maximum of 8 hours per day. The rate is applicable during travelling time on the day or days of the inspection. An extension of the 8 hour day will be permitted if it results in overall costs being reduced, e.g. by avoiding the necessity of extending the inspection by a

⁵³ DEFRA (2011). Zoo Licensing Act 1981 Fees for Services and Expenses for Persons on the Secretary of State's List. Department of Environment, Food and Rural Affairs. London

further day. The rate can also be claimed for the paperwork associated with the inspection.

EXPENSES

(a) TRAVEL The following may be claimed as appropriate:-

(i) Cost of standard class rail travel.

(ii) Mileage allowance is payable at 45p per mile

(iii) Travel by air (economy class) - for journeys or part journeys where travel by either rail or road is not possible; or for journeys where travel by air is likely to result in a saving on the overall bill to be presented to the local authority because of the shorter travelling time involved.

(iv) Ferry fares.

(v) Toll charges.

all plus VAT where applicable.

(b) DAY SUBSISTENCE 'actuals' ceiling

One meal (5 hour) - £5

Two meals (10 hour) - £10

Three meals (12 hour) - £15

24 hour ceiling - £20

(c) NIGHT SUBSISTENCE 'actuals' ceiling

For London - £115

For outside London - £75

In addition to the DEFRA's inspectors' fees, local authorities may also charge for other fees, from their own informal inspections to administrative fees. Following is an example of the case of Barnet Council in 2008 charging to a zoo an amount which includes all fees of the six-year zoo licence:

*Defra – Inspection by -----
£764.97*

*Corp. of London – Inspection by -----
£255.00*

Corp. of London charges for the annual routine inspection over the next 6 years

*£185 + inflation per year at 3%
\$1,232.46*

Barnet Council Officer – Inspection plus admin costs for processing, liaising and checking routine annual reports over next 6 years
£109.04

Barnet Council Admin. Officer – Process of initial renewal application plus processing of routine annual reports over next 6 years
£18.72

Total = £2,380.19

How much zoo operators have to pay for the formal inspections of their zoos will depend on the number of inspectors, the number of inspection hours, how far the inspectors travel, and whether the local authority also charges for informal inspections or administration. Some of the correspondence acquired for this study showed the actual cost of some inspections and licences fees, so we can roughly estimate some of the total costs using averages. The average cost of a formal inspection turns out to be £560 (n=19), and the average cost of other charges is £142 (n=3) per year. These values together (considering two formal inspections per license) give us an average cost of about £1,966 for a six-year licence. Since theoretically zoos should have an inspection per year (formal or informal), the average cost per inspection of any kind is £328. Therefore, we can estimate it costs an average of about £100,000 annually to inspect/licence all zoos in England. This amount is paid by the zoo industry via the local authorities, who then pay inspectors and officials.

Extrapolating the number of animals in the collections studied with the total number of licensed zoos, we estimate that the zoo industry in England keeps about 192,000 individual animals (95,000 in full licensed zoos and 97,000 in the rest). Using the figures for each type of zoo we can calculate that the zoo industry pays £0.24 per animal in full licensed zoos, and £0.78 per animal in licensed zoos with dispensations, for their inspection and licensing. This is interesting because even paying for the extra inspectors it appears that, other things being equal, in average, it is more cost effective for a zoo to have a full licence than a dispensation.

However, we have already seen that the current inspection regime is insufficient to cover all the captive animals in zoos, so we could calculate how much it would cost if this was corrected, with our ideal scenario of a minimum of 10 minutes inspection time per animal. We will do that using two different methods.

Considering the official fees set out by DEFRA, a seven hour work would cost £507.51 to one inspector, slightly less than the average value we found, which also includes expenses. This means that the average inspection lasts less than a 7-hour working day, as expected. Assuming that it lasts one day (regardless of how many hours), as we have seen in the chapter about the welfare of individual animals above, it should last 14 days in average (giving a minimum of 10 minutes per animal), so the ideal time is 14 times the current time. Therefore, since the cost of inspection is more or less proportional to time inspecting, the ideal inspection system would cost 14 times more than the current system. This is £1,260,000 annually.

The second method uses more information, in particular the difference between full licensed zoos (with more inspectors, and therefore more expensive) and the rest, so it should be more accurate. If we consider that as an average inspections last 5 hours of observation of animals and their individual records (while the other two hours of a working day may be used doing other inspection work not linked to individual animals), and that inspection teams inspect the collection together instead splitting the collection among themselves, we have an average of inspection time per animal per inspection of 8.4 seconds for full licensed zoos and 32.2 seconds for dispensed zoos. This is 72 and 19 times less than the minimum amount of time per animal we consider acceptable (10 minutes per animal), respectively. We also can calculate how much full licensed and dispensed zoos are paying per individual animal in the current time (see above), and since the inspector cost is more or less proportional to time spent inspecting, we can then extrapolate these numbers with the actual cost per animal and conclude that the ideal annual cost per animal should be an average of around £17 for full licensed zoos and £15 for the rest. We can therefore estimate that the total cost for the industry should be about £3,025,519 annually, under our 10 minute per animal scenario.

If neither the zoo industry nor the government would be willing to pay these amounts, we could say that inspection of zoos, if applied so all animals are given sufficient inspection time, would not be affordable. In consequence, the financial pressure of the zoo licensing system is to reduce inspection while keeping zoos, which is conducive to poor performance and spreading of poor practice.

25) *Supervising costs*

The inspections are not the only cost of the zoo inspections system. DEFRA/AH would also incur in their own departmental costs, including the cost of running the ZEC, which it has been suggested is equivalent to the cost of running the *Zoos Forum*⁵⁴. Information on the actual expenses in supervising the zoo licensing system cannot be extracted from DEFRA's annual reports⁵⁵.

However, some expenses can be estimated. Several inspectors training seminars have been organised by DEFRA/AH, and this will have a cost we can calculate. We know that in 2009 DEFRA invited 439 zoo licensing officials from all around England to their two-day training seminar, and that the delegate fees to cover the costs of the event was £240. In the end 172 (39%) delegates attended⁵⁶, so assuming that fees covered all the cost, the event cost around £40,000 (we know that the two-day training seminar run by DEFRA in 2002 cost a total of £18,492.81⁵⁷). In order to train the remaining zoo officials, further training events would be needed, costing more. In total, for all the potential delegates being trained in one seminar each, the cost would be £105,360. This would be paid by the delegates themselves, and therefore often by the local authorities since many of the attendees may be their zoo licensing officers.

⁵⁴ <http://www.onevoice.officeoverload.com/HofCommonsWeeklyUpdate29042011.htm>

⁵⁵ <http://www.defra.gov.uk/publications/files/defra-annual-report2011.pdf>

⁵⁶

[http://animalhealth.defra.gov.uk/about/publications/cites/performance/Report%20of%20the%20Zoo%20Seminar%202009%20final%20\(03%2008%2009\)%20.pdf](http://animalhealth.defra.gov.uk/about/publications/cites/performance/Report%20of%20the%20Zoo%20Seminar%202009%20final%20(03%2008%2009)%20.pdf)

⁵⁷ http://randd.defra.gov.uk/Document.aspx?Document=WC04002_1287_EXE.doc

Since the training seminars are not compulsory, many inspectors and officials may choose not to attend.

We have seen that the performance of inspectors and local authorities, even with the existence of training seminars for already a few years, is not very good, so more training would be needed to get them up to standard. Therefore, each zoo licensing officer would need more than one training seminar, perhaps as much as one per year to be able to go through all possible issues, and any changes of guidance that may be occurring from time to time. Therefore, we could use the figure of £100,000 as an annual figure.

In the last chapter we saw that in the hypothetical scenario of giving 10 minutes of inspection time per animal the cost of all the inspections will approach £3 million annually. However, we did not include any “supervising” cost. We could now add the cost of the hypothetical annual training seminars for all inspectors and officials, and rounding it up to consider any DEFRA/AH staff and administrative costs the overall results could easily approach £3.5 million annually. Following the current system most of this amount would not be covered by the central government despite the fact that the EC Zoos Directive gives the responsibility to the UK government, not the zoo industry or local governments, to implement the zoo regulation system.

Therefore, because DEFRA passes the cost of the zoo licensing system to others, there is financial pressure from both the zoo industry and the local government to reduce inspections, number of inspectors and their training, and in consequence to deliver an effective zoo inspection system, which explains why we see so few inspections, so few inspectors per inspections, and so few zoo licensing officials attending training.

26) Economic burden of closures

If a zoo were to be closed by the local authorities through the ZLA, the cost would be covered by the local authority (not by DEFRA), if the zoo operator is not disposing of his/her animals properly. Section 16E (9) of the ZLA states: *“Subject to section 16G, for the purpose of giving effect to arrangements under subsection (7) or (8) the authority may—(a) care for any animal on the premises of the zoo; or (b) remove any animal found on the premises of the zoo and either retain it in the authority’s possession or dispose of it.”* Dealing with these animals would cost the local authority money, and since a forced closure for poor practice is likely to involve a non-collaborative attitude from the zoo operator, who may claim lack of funds for the sub-standard conditions of the zoo (and the ZLA does not oblige him/her to cover the cost of authority directed closures), it is more likely than not that the local authority would have to carry some of the costs.

This of course puts pressure on the local authorities to avoid any forced closures, which would lead them to become too lenient and to avoid acknowledging or reprimanding any severe poor practice that could justify such closures. Inspectors may report on the poor practice anyway, but the authority would tend not issue Direction Orders about them since then they might need to issue Closure Orders if they are repeatedly ignored. This is what we see, a high incidence of reported poor practice and a low incidence of issuing Direction Orders.

The EC Zoos Directive does direct the UK government towards closing sub-standard collections, and in consequence an amendment was added to the ZLA in 2002 to accommodate this. However, the burden of the cost of such closures was given to the local authorities, which inspect the zoos and decide when a zoo should be closed. It is an anomaly that the cost of the “punishment” (since a closure could be interpreted as much as a method to protect the animals as a punishment for severely sub-standard poor practice against negligent zoo operators) is partially charged to the “punishing” agent. This would undoubtedly lead to such punishment not being applied, and cheaper options used instead. This explains why we do not see closures of severe sub-standard zoos in England despite the fact re-incidence over the years and chronic poor practices are not unseen among zoological collections.

5. CONCLUSIONS

Does the official zoo inspection system in England work?

To answer this question we chose to investigate the system over the six-year period 2005-2011 using information provided by the key players of the system. We chose not to compare it with other similar systems or to test it to quantify its efficiency. In this regard, this study has been introspective, trying to find the weakness of the system “from within”, against the background of the EC Zoos Directive.

The main reason for having chosen this method was to avoid an *ad hominem* criticism of its conclusions. Since this study has been commissioned by the Captive Animals' Protection Society which has traditionally hold an ethical position against the existence of zoos on the grounds of animal cruelty, any study produced by it could erroneously be labelled as “biased” against zoos, and dismissed beforehand not only by the zoo industry itself (understandably), but also by the public bodies regulating it (worryingly). If CAPS had applied their own “unofficial” inspection system on the same subjects for the same period of time and had shown to produce completely different results than the “official” one, it would not be surprising to see the particular ideology of the organisation held responsible for that difference. However, if the study is made in a replicable form from information coming from official sources alone –instead of unofficial ones– it would be more difficult to justify such prejudgement. Having had experience of this type of situations (Casamitjana, 2004a,b), this new introspective approach seemed more robust –incidentally, this was in fact the main reason for having chosen only England and not all of the UK, since the only “official” list of zoos currently in existence is the one for this country.

Nevertheless, despite the fact that the study was designed to be as objective as possible, there is no denying that the author (and commissioning organisation) already has a position regarding what the perceived outcome would be, albeit such position was never imposed in the collection of data or calculation of the results. In the same way that most researchers approaching a problem do not begin from a *tabula rasa* scenario but from a specific hypothesis to reject, the author began with the “null” hypothesis that the English zoo inspection system “works”, trying to find evidence to reject it. This explains why more efforts were made in detecting weaknesses and failures to the system than to find strengths and successes, in the same way that a “product tester” in charge to see if a product really works would set experiments within normal parameters to find ways to break it or make it fail. Such tester is not “biased” against the product, and a good product will defeat any tester.

Using only information obtained from the local authorities, DEFRA/AH, the EC Commission and the zoo operators themselves, to the method was to try to “defeat the tester”. The system may not work and yet the information provided by its own key players might not demonstrate this, but if such information, using the very same rules of the system, already reveals sufficient inconsistencies, errors, omissions, misinterpretations, and misclassifications, to a degree that the system shows that its objectives are consistently not been met, then this allows us to reject the null hypothesis that the system works, in favour of the alternative hypothesis that it does not. This is precisely what we have found.

We assessed the performance of the individual key players of the zoo inspection system as well as the efficacy of the design of the system itself, and as we have seen we managed to obtain enough data to be able to arrive to strong results with powerful significance. All key players showed poor performance, and the design of the system appears to be flawed from many perspectives.

Since 2005 the performance of each of the key players in the zoo inspection system (local authorities, DEFRA/AH/ZEC, inspectors, and zoos) is disappointing. The catalogue of failures is comprehensive:

1. The majority of the **local authorities** –The majority of the local authorities have missed inspections of the zoos under their jurisdiction, local authority inspectors show worse performance than the DEFRA inspectors in most areas and zoos operated by local authorities show poorer standards than those that are privately owned (despite the councils' role in enforcing the system). Direction orders designed to ensure zoos reach recognised standards are hardly ever used, sub-standard zoos are not closed down and apparent offenders are not prosecuted under the Zoo Licensing Act 1981, despite there being significant opportunity, and indeed obligation, to do so.
2. DEFRA/Animal Health granted the wrong dispensation status to almost half of the zoological collections, causing a situation where the minority of zoos have a full licence, and more of a third of the animals kept in zoos in England are already under-inspected by design from the start; they also allowed the zoo industry to excessively influence the system through the *Zoos Forum* and the Zoos Inspectorate in what in essence approximates a state of self-regulation.
3. When writing zoo inspection reports the majority of inspectors failed to address identified unsatisfactory issues in their recommendations or additional licence conditions, showed inconsistencies in their inspection reports, and made apparent errors of judgement” in most of them. At the same time about a quarter of the inspectors failed to recommend refusing a licence in the cases where they themselves had recognised that the existing licence conditions had not been met.
4. The majority of the zoological collections can be classed as sub-standard regarding recognised standards of modern zoo practice. Inspectors found persistent failure to meet the conditions set out by the EC Zoos Directive on animal welfare matters in the majority of inspections with recurrence of such issues over subsequent years. More than a third of the inspections reported breaches of licence conditions set out by the EC Zoos Directive on Conservation, Education and Research matters.

This weak performance is not the product of a “bedding in period” whereby zoos are gradually adapting to the new concept of “modern zoo”, and it is improving its performance slowly. On the contrary, the current state is worse than the average situation since 2005, and we see a continuous increase over time of frequency of breaches of mandatory licence conditions derived from the EC Zoos Directive. Currently, 90% of inspection reports show unsatisfactory issues not added as additional licence conditions compared with 68% for the whole six years; 95% of the inspectors currently make errors of judgement when writing reports compared with 61% for the six years; 73% of the current zoos are considered sub-standard compared with 54% for the six years; 89% of current inspection reports show breaches of the licence conditions defined by the EC Zoos Directive compared with 64% for the six years.

Effectively, the fact we extended our investigation over a six-year time period, and we have added more sources of information such as informal/special inspections and local authority

inspections, has had the effect of “softening” the results, and exposed what could be described as the “common misperception” of the system: that the UK zoo licensing system works. Unless some quantification is made, the general perception may be that, overall, the system works, problems are solved, and the standards of zoos are improving. However, when we take a quantitative “snap shot” of the opinion of current expert inspectors, we find that very few elements in the system seem to work, and poor performance and poor practice are widespread. Even when we cover such revelation with all the data we can obtain since 2005 (trying to find ways to stop the rejection of our null hypothesis), we still find that the problems reach percentages above the 50% mark, making them clearly systemic, not incidental.

The current situation is not worse by accident. Our observations regarding the gradual increase of unsatisfactory issues on EC Zoos Directive conditions found over the years (and the most likely explanation that this is due to a decrease of standards of modern zoo practice) are the tail signs of a system breaking down since, from all possible variables, the occurrence of sub-standard conditions is the most indicative of the health of the system.

Regarding the design of the zoo inspection system, we identified 26 issues of concern, which range from the legislation that frames the system to the cost of implementing it, as well as policy and interpretation of the executives and the practicalities and applications of the executors. The combination of all of these factors taking effect over the 30 years since the ZLA was implemented can easily explain why the percentage of poor performance we have found now often passes the 90% threshold.

Poor performance and bad design are not mutually exclusive. In fact, with time the former would fuel the latter, creating “cultures” where underperforming becomes the norm, and it is not longer flagged up –and therefore not corrected. Perhaps the most striking example of this is the culture of “YES, but”. Table 13, Figure 14, and Figure 15 show how common this phenomenon has become, and although it seemed it had slightly improved over some years, it remains very high. An inspection design that poses questions that cannot be answered accurately with a simple YES or a NO and yet only offers these as response options is bound to produce many “YES, but” and “NO, but” answers. As we can see in the chapter about “Unanswerable animal welfare questions” many important questions in the inspectors’ forms designed by DEFRA fall into this category. However, we only find cases of “YES, but”, because another design flaw of both the forms and the inspectors’ approaches is that they favour testing the zoos for “passes” rather than for “fails”. The “default” position of the pre-inspection zoos is a “pass”, so the attitude of inspectors is to check whether such status can still be kept.

We believe this is the wrong approach. In the same way that we look for weaknesses of the zoo inspection system to see if it works, zoo inspectors should look for weaknesses of the zoos they are inspecting to see if they have to “fail” them. The very design of the ZLA, with its reliance on local authorities, its low frequency of inspections, its restrictions on number of inspectors, its delayed enforcement methods and its discriminative exceptions, was originally aimed to keep as many zoos as possible in the “pass” side by licensing them. This is why DEFRA allowed representatives of the zoo industry to populate the Zoo Forum and the Zoos Inspectorate. However, when the EC Zoos Directive was enacted, we believe that a certain mismatch between it and the ZLA created an amended ZLA that, despite the changes, remained mismatched. The new ZLA still uses the same licensing system, but in theory now

it should be based on inspections looking for “failures”, not “passes” (and those zoos that would fail the most would need to be closed down). This is because the EC Zoos Directive has as its objective the protection of wild animals, not the preservation of zoos, and has the closure of zoos as an obligation for sub-standard collections, while the licence of zoos is not in fact an obligation to ensure that their animals are sufficiently protected. The original ZLA broadly stated that “all zoos should be licensed”; the EC Zoos Directive broadly states “bad zoos should be closed, and good zoos should be licensed” Inspectors seem placed in the middle of this mismatched design, so their way out may be their “YES, but” answers. “Is this zoo good enough to avoid closure?”...“YES, but”.

It appears that over the years the “YES, but” answer has become so routine that does not arouse any reaction to licensing officials or DEFRA. It seems that it has become the “culture” of zoo inspections, which has the effect of inhibiting enforcement action on the part of the authorities. The end result may be a spread of poor practice and a high percentage of sub-standard collections, which is the opposite result of a zoo inspection system that works.

The UK zoo inspection system does not only appear flawed from an “approach” point of view, but at a more fundamental level too. Under this system it is impossible to effectively assess conditions for each animal, and the system does not favour the differentiation between standards of care for different species or groups of animals. It treats the animals in the zoo as “collections”, and although in theory should consider all individual animals, in practice it does not. The inspection forms are not designed to enter information of each species or individual, but of the “collection” as a whole, as if the inspector, in a few hours, could make an accurate summation of all the issues applied to all the individual animals since the last inspection (often three years back), sometimes in collections that keep thousands of animals (many of which the inspector may have very little knowledge of). It is not surprising that we find so many inconsistencies and errors of judgement in inspectors’ reports, because, in fact, the system asks them to do the impossible given the sheer number of animals that inspectors are charged with assessing in such a short period of time. In fact, our data shows that for only 10% of the zoos in England would an inspection team have time to give sufficient attention to all the animals in the allocated time for inspection in order to effectively assess their health. This clashing between the inspectors’ capabilities and what the system asks them to do may be what drives its supervisors to minimise inspections. Not only is it that case that little seems to be done to prevent the high percentage of missed inspections, but the local authorities and DEFRA are granting more and more dispensations to collections that do not meet the criteria to warrant them; effectively reducing the number of inspections and the number of inspectors for those zoos. The system therefore operates under a culture of exceptions (84% of zoos have dispensations) rather than norms (only 16 % of zoos have full licences), which would not be the case had DEFRA correctly applied its own criteria for granting dispensations. The Zoos Forum has also contributed to this reduction of potential inspections by what appears to be a gradual caving to the pressure of the zoo industry (including their newcomers, such as the open farms) towards reducing the list of animals that would qualify a collection as a zoo. With less inspections we have less scrutiny, less inconsistency between inspections, and less contradiction within inspections. It is not to say that there is a conspiracy for reducing inspections in which all players are part of but that it is simply a design flaw that naturally leads to this situation by creating the inspector “disparity” that everyone tries to avoid, coupled with the high cost that inspections

generate which, as seen in the chapter on Financial Assessment, could become prohibitive if an effort were made to inspect all the animals properly.

Poor performance and bad design may be symptoms of a deficient system that could be corrected with a few changes, but the damage seems far too deep and widespread. For a zoo licensing system to work, it should approximate achieving all the following objectives:

- a) All zoos have been licensed.
- b) All zoos are being inspected.
- c) No mandatory inspections are being missed.
- d) All sub-standard zoos are not allowed to be open to the public.
- e) There is no discrimination between zoos or animals.
- f) All animals kept in zoos are protected and with good standards of animal welfare following the “five freedoms” principles.
- g) All visiting public are protected following sound Health and Safety principles.
- h) The environment around the zoo is protected by preventing animal escapes or biological contamination.
- i) All conditions set by the EC Zoos Directive, including conservation, education and research conditions, are being met by all the zoos all the time.
- j) Fail check mechanisms of the system are effective.
- k) Inspectors and licensing officials are properly trained and proficient at their jobs.
- l) All enforcing tools and mechanism are utilised appropriately, proportionally and effectively.
- m) Self-regulation by the zoo industry has been avoided.
- n) The system is cost-effective.

Throughout this study we have seen that the current system has failed in achieving each and every of these objectives and most of them fall a long way short. This is not a temporarily lapse. This is serious systemic failure.

A failing zoo inspection system has serious consequences on the welfare of animals kept in zoos. Table 21 shows us that currently 86% of the inspections show unsatisfactory issues related to the EC Zoos Directive animal welfare conditions. We have also seen that inspectors cannot possibly inspect all of the animals in big zoos and that in average they only spend less than a minute per each animal, which effectively makes the system useless for those animals that were missed, which may be suffering clear welfare problems that could remain undetected throughout their whole life. Some of the animals may be completely forgotten simply because they are not easily identifiable or because they belong to collections that the system allows diminished inspection. Some of the animal welfare issues that may be caused by captivity cannot be properly assessed within one or two working

days, or with any number of inspections for that matter, especially considering that zoo operators would always have the possibility to cover up poor practice thanks to the reliance of the system on inspections announced well in advance. Even other pieces of legislation that could be used to protect some zoo animals –such as the Animal Welfare Act 2006– seem rendered powerless under the “rubber stamping” influence of the system.

One of the most important consequences of this situation is not only that the system is failing to protect wild animals, zoo visitors and the environment, but that it may be creating unlawfulness. Table 19 shows the high percentage of inspections where inspectors recognised that specific licence conditions added previously had not been met, and, in consequence, such licences may no longer be valid and the zoos may be operating outside the law. Currently almost half of the formal inspections showed this. However, if we look at Table 20 this value grows to 89% when we consider that not meeting licence conditions derived from EC Zoos Directive, even if this has not been explicitly recognised by the inspectors, also could equate to invalidating the zoo licence, and therefore breaking the law if continuing being open to the public. This is an astonishingly high percentage that remains at 64% when we look at the entire six-year period including informal inspections and local authority inspectors. Theoretically these zoos could be closed down, and since recurrence of unsatisfactory issues and breaches of conditions are very common (see Table 18), this would not necessarily be a very draconian measure to take on many of the zoos. Indeed, as Table 26 and Table 27 show, most collections can be classed as sub-standard based only in the information obtained from official inspection reports on number of unsatisfactory issues, breaches of licence conditions and lack of compliance, and according to the Zoo Licensing Act sub-standard zoos should be closed.

There is a second legal implication of the failure of the zoo inspection system other than allowing the proliferation of apparently illegal zoos. It could be argued that using the failing system itself is an illegal act, in this case against the EC Zoos Directive which, although it has no legal power over individual zoos or local authorities, it does have power over the UK state. Although the UK government has indeed adapted its zoo licensing system to the requirements of the EC Zoos Directive, it could be argued that if it is not ensuring that the changes are implemented properly and effectively amending the legislation is not by itself enough to meet such requirements. With all the information we have uncovered we can say that from 2005 to today the UK Government has been failing to implement the EC Zoos Directive properly –at least in England– by allowing the majority of zoological collections to breach licence conditions that were defined by the EC Zoos Directive to prevent sub-standard zoo practice, and effectively by failing to sufficiently protect the wild animals involved in zoo practice. The UK zoo licensing system allows zoos not to be licensed or be under-inspected because their size and types of animals they keep, allows zoos to keep animals in an unsatisfactory manner for a considerable time without any effective enforcing action against them, and it does not close down most sub-standard zoos. The UK is one of the European countries with the most zoos in operation – England is possibly the country with the highest density of zoos in Europe– and in consequence may be the European country where the most animals are suffering from unacceptable zoo practices.

In summary, the zoo licensing system in England does not work, in its present form is unworkable and unreliable, and therefore makes the effective guarantee of protection of all animals held in zoos impossible. What can be done about it very much depends on the general approach the stakeholders have on the issue of captivity itself.

Although changes could make the current system more workable this does not mean that making such changes would actually work. Some of the changes may be difficult or too expensive to apply (see chapter on financial assessment), they may be considered impractical by those currently running the system, and in some cases they may border the unfeasible (especially considering that each animal in zoos should receive equal attention from inspectors). Therefore, it would not be unreasonable to choose the more practical option of phasing out zoos, very much in line with those animal protection organisations with abolitionist principles based on an ethical objection of the keeping of wild animals in captivity. There are plenty of arguments that can be used to defend the phasing out of zoos for ethical and moral reasons, as well as for environmental and economic reasons, (Snyder et al., 1996; Jamieson, 2003; Walter, 2005; BFF, 2007a, 2007b; Mulder et al., 2009; Withey & Finn, 2010; Redmond, 2010), often challenging the claims that the zoo industry uses to justify their existence (WAZA,2005; Reagan, 2005; Stern, 2008; Mee, 2010).

The phasing out of zoological collections can be achieved without the need for an overnight outright zoo ban. In fact, a different zoo inspection system could be instrumental to succeed in such phasing out, if it was designed under the 3Rs policy (Reduction, Refinement, Replacement) that currently governs the issues of animal experimentation (Russell & Burch, 1959; Balls,1994; Farnaud, 2009). This policy is grounded in the premise that animals should be used only if a scientist's best efforts to find a non-animal alternative have failed, and that when animals are needed, only the most humane methods should be used on the smallest number of animals required to obtain valid information⁵⁸. In the context of zoos, the idea would be applicable when considering whether there are better alternatives for Conservation, Education, Research and Entertainment to the displaying of captive wild animals, and if so (as many animal protectionists believe) use such alternatives instead. Even if one may not accept that such alternatives exist, there is still a case for the use of the most humane zoo practices on the smallest number of animals possible.

Refinement policies are not alien to the concept of modern zoo practice, especially through issues such as behavioural and environmental enrichment, which are already being applied (Swaigood & Shepherdson, 2005; Adams, 2007), although they should be developed more. Replacement options for the Conservation, Education, Research and Entertainment role of zoos are quite obvious: "in situ" conservation and habitat protection (Robertson, 2000; Balmford et al., 2003); education through documentaries and virtual reality (Allison & Hodges, 2000; Wright, 2010); observational research of wild animals in the wild (Goodall, 1986, Helweg & Herman, 2010); and family sports, animal-free circuses and cruelty-free theme parks (Babinski, 2004) .

What may be new would be "Reduction" policies, and this is where a different zoo licensing system could prove vital. Using "the smallest number of animals required" as part of a zoo licensing policy means two things: reducing the number of zoos and reducing the number of animals in zoos. Reducing the size of the zoo population will also reduce the cost not only in inspecting zoos but also of protecting animals, since it can be argued that it costs more to protect animals in "ex situ" captive environments that is to protect them "in situ" in the wild (Balmford et. al, 1995; Redmond, 2010). If one of the roots of most of the problems with the current zoo licensing system in England is that it is not fit for purpose with a population of

⁵⁸ http://www.ccac.ca/en/CCAC_Programs/Guidelines_Policies/POLICIES/ETHICS.HTM

about 300 zoos keeping about 200,000 animals, a reduction of these two figures could be a good step towards finding a better alternative.

For those who object to the concept of keeping wild animals in zoos, and for those that do not, but want to improve the conditions of zoos and replace the current zoo licensing system with one that works, the 3R approach may be a method they all can agree with.

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APPENDICES

Appendix A: Zoological collections

In this study the term “Zoological collection” refers to any group of wild animals exhibited to the general public in a particular fixed site (if it is done in a mobile site it will be a “circus” instead), but not for the purpose of selling them (that would be a “pet shop” instead). The person owning and running a zoological collection is called the “zoo operator”, and the animals exhibited are often referred as “specimens”. However, in the UK any of such collections will constitute a “zoo” only if it falls within the legal definition of a zoo. In consequence, in the UK only those collections that keep any animal “*not normally domesticated in the UK*”, and that at the same time are open to the public “*on more than seven days in any period of 12 consecutive months*” can be considered zoos.

The Government has issued⁵⁹ a list that indicates which animal species are not normally domesticated in the UK (see Appendix D), and the last revision occurred in 2004 when llamas and alpacas changed status and became normally domesticated⁶⁰. In 2006 the Government also published guidance to help to resolve those border line cases where it is more difficult to judge if the definition applies. For instance, this is what DEFRA, in consultation with the *Zoos forum*, has to say about what is not a zoo⁶¹:

Collections that are not zoos:

- a) *Wild animals visible to the “public”, but not “kept for exhibition”:*
 - i. *Private collections visible from a public road or adjoining land.*
 - ii. *Animals held for conservation breeding or habitat management grazing in an area where public access is possible e.g. adjacent to a public right of way.*
- b) *Wild animals “kept for exhibition”, but not to the “public”:*
 - i. *Collections that can only be viewed by members of a club or association, where that membership is restricted to a meaningful degree so that it is not considered to be open to the public.*
- c) *Wild animals not “kept for exhibition” and not visible to the “public”*
 - i. *Private collection on private premises viewable only by the owner, family, staff and friends.*
 - ii. *Restricted access premises holding wild animals that are visible to visitors who enter for reasons other than viewing the animals, e.g.:*

⁵⁹ DEFRA (2003). Circular 02/2003. Zoo Licensing Act 1981 (as amended by the Zoo Licensing Act 1981(Amendment)(England and Wales) Regulations 2002)(“the 2002 Regulations”). Department of Environment, Food and Rural Affairs. London

⁶⁰ DEFRA (2004). 2004 Update to Government Circular 02/2003 – llama and alpaca. Department of Environment, Food and Rural Affairs. London

⁶¹ <http://archive.defra.gov.uk/wildlife-pets/zoos/documents/zoo-exhibit-guide.pdf>

- A private collection in business premises (where the operator can demonstrate that visitors only enter the premises for business purposes, including “de minimis” examples such as a fish tank in a restaurant or dentist’s waiting room).
- A college which keeps animals for educational purposes involving its students, but where the animals are not exhibited to the wider public.
- A centre for falconry courses (where the operator can demonstrate that visitors only enter the premises by pre-arranged appointment for training).

Guidance on some unusual cases, “grey areas”:

- a) Pet shops with disproportionately large exhibit areas, i.e. specimens not for sale, exempted by Pet Shop Licence.

Section 1(2) of the Zoo Licensing Act states that a zoo ‘means an establishment where wild animals are kept for exhibition to the public ... otherwise than in a pet shop’. A ‘pet shop’ is ‘premises for whose keeping as a pet shop a licence is in force, or is required, under the Pet Animals Act 1951’. If the animal is kept for exhibition to the public in premises that has a pet shop licence then no zoo licence is required. In the first instance, however, it will be for the local authority to make a decision on which legislation is applicable and keep that decision under review.

- b) Collections where animals are only viewed by web-cam or live CCTV. Are the animals “kept for exhibition to the public”?

The ordinary meaning of the word exhibit is that the item be actually produced for show. Where something is only available to the public through the medium of CCTV / web cam or recording it cannot easily be said to be ‘exhibited’ and therefore the ZLA might not be considered applicable.

- c) A licensed collection where some animals can be excluded from the ZLA on the basis that they are not “kept for exhibition”, i.e. trout in a trout farm that also holds wild mammals, birds etc., but the trout are only kept for fishing, i.e. not an exhibit in an aquarium.

These sorts of collections need to be judged on a case by case basis depending on whether there is a clearly different purpose other than exhibition to the public for keeping certain animals in the collection and they were meaningfully separated from the zoological collection so as not to be included in inspections and the other requirements of the Act.

- d) Definition of “kept”. If wild animals are brought onto premises for exhibition to the public for seven or more days in a year but removed every night, e.g. a travelling falconry display, is this an “establishment where wild animals are kept”?

The word ‘kept’ is the qualifying factor on this issue. If animals are displayed at one establishment and then removed at night to another premises (their

permanent home) the animals are considered as being 'kept' at the latter and so the ZLA would not apply. Issues like this need to be considered on the basis of proportionality, bearing in mind the facts of the particular case. If the scenario is that the animals stay at an establishment, where they are displayed, for the vast majority of the 24 hours in a day, are fed and cared for there, and that this continues on a constant basis for a long period of time then the argument that the animals are being "kept" there is stronger.

Where animals are clearly not on exhibition except when on display (i.e. sea lions that are only on display during a show, but are not on general display to the public other than for the performances) it would appear that the display meets the definition of a circus and neither the ZLA nor (if applicable) the Dangerous Wild Animals Act 1976 would apply, but the collection would need to register with its LA under the Performing Animals (Regulation) Act 1925.

e) Where a collection is exempted from the ZLA on the grounds that it is only viewable by members of an association, is guidance needed on what is a "member"?

The definition of what is a "member" should be meaningfully restricted so as not to be equivalent to the general public. Beyond this the definition should be down to the discretion of the local authority and these types of collections need to be treated on a case by case basis.

It is estimated that there are as much as 530 zoological collections in the UK⁶². However, it is considered that some of these have not been licensed yet. Research by the Born Free Foundation in 2004 uncovered that at least 131 zoological collections around the country did not have a licence as required by law.⁶³ The estimation of "licensed" zoological collections in the UK recognised as such by the authorities in 2004 was over 400, but there has not been any official list of zoological collections compiled for the whole of the UK, since zoo licensing is administered locally and each Devolved Authorities supervises it separately.

The only devolved country that has an official list of zoos is England. DEFRA's *Animal Health* holds a database of zoos currently operating in England, from information obtained from the local councils who have responsibility for administering the Zoo Licensing Act 1981 (as amended). This list is updated approximately every 6 months. For the purpose of this study such list was requested to *Animal Health* at the beginning of 2011, and it contained 280 zoological collections. However, after having selected a random sample of them for study, we discovered that such list is not completely up to date, since six of the selected collections happened to be permanently closed. Therefore, the most accurate official list of zoos in England is comprised of at least 274 zoological collections.

Types of zoological collections

Zoological collections can be classified into different types according to various criteria. DEFRA uses two classifications, one based on type of animals they keep (such as invertebrates, farm animals, aquatic animals, birds, etc.), and another regarding the type of "dispensation" the collections holds. The former has no real legal implications, but the latter

⁶² <http://www.bornfree.org.uk/campaigns/zoo-check/zoos/zoos-in-the-uk/>

⁶³ Bond, M (2004). Licence 'failures' in animal charity investigation. Newquay Voice. **15/09/2004**
<http://newquayvoice.co.uk/news/5/article/1981/>

does. According to the current legislation, if a collection is small and does not hold many hazardous or conservation sensitive specimens, it can be dispensed of some or all the legal requirement under the Zoo Licensing Act. The smallest collections hold a **dispensation under section 14.1.a** of the Act, which basically “exempt” them of all the requirements of the Act (this is why this type of dispensation is also called an “**exception**”). Slightly bigger collections may hold a **dispensation under section 14.1.b** of the Act which considerably reduces the number and status of inspectors that each inspection has to have, and bigger collections (but not big enough to require a “full licence”) may hold a **dispensation under section 14.2** which reduces less the number and status of inspectors (see next chapter on legislation). It must be noted that the only change of the requirements of collections under dispensations 14.1.b or 14.2 are type and number of inspectors, not type and number of inspections, or any other issue.

Following are DEFRA’s criteria to grant dispensations (and “exceptions”, which are in fact a type of dispensation although they are rarely referred as such by the local authorities) to zoological collections as expressed in Appendix D of their 2003 Government circular (Circular 02/2003⁶⁴):

Appendix D

Zoo Licensing Act 1981 (as amended) Dispensations/Exemptions

Although each case is considered on its merits, and other situations may qualify, it may help to know that directions will normally be made when zoos fall into one of the following categories.

Section 14(1)(a) Direction on application from the Local Authority

(i) traditional deer parks

(ii) collections of llamas and alpacas not exceeding 5⁶⁵

(iii) collections, excluding those of wild mammals, of small, non-hazardous and on conservation sensitive wild species not normally exceeding 120 specimens.

Section 14(1)(b) Direction on application from the Local Authority

(i) collections of llamas and alpacas not exceeding 10⁷

(ii) collections of non-hazardous and non-conservation sensitive wild species, excluding wild mammals, not normally exceeding 200 specimens.

⁶⁴ DEFRA (2003). Circular 02/2003. Zoo Licensing Act 1981 (as amended by the Zoo Licensing Act 1981(Amendment)(England and Wales) Regulations 2002)(“the 2002 Regulations”). Department of Environment, Food and Rural Affairs. London

⁶⁵ A 2004 update of this DEFRA’s 2003 circular declared that llamas and alpacas are no longer “animals normally domesticated in the UK”. Therefore, collections that only hold these animals (or hold them only with domestic animals) are no longer zoos, and they do not even need an exception with a 14.1.a dispensation.

Section 14(2) Direction on application from the Zoo Operator

Small collections not included in 14(1)(a) and 14(1)(b) where the hazardous and/or conservation sensitive species component of the collection not normally exceeds 50 specimens

ANY CHANGES TO ANIMAL COLLECTIONS MAY AFFECT THE DISPENSATION STATUS.

Notes

1. *“Hazardous” means any species listed in categories 1 and/or 2 of Appendix 12 of the Secretary of State’s Standards of Modern Zoo Practice.*
2. *“Conservation sensitive” means any species listed in Appendix A of Commission Regulation (EC) No. 2307/97 and listed in the Red List of IUCN (all categories other than “least concerned”).*
3. *Any establishment that keeps wild animals for display to the public, taking account of the guidance in paragraph 4 of this Circular, is likely to be considered a zoo and will need to be licensed accordingly. Such establishments will be considered for exemptions or dispensations in accordance with the above guidance.*
4. *In a farm park, if wild animals are integrated into the domestic collection, and not separated in a meaningful way, then the domestics will have to be included in the inspection. Such an increase in numbers of animals and facilities may well take the collection as a whole into a higher category, or out of dispensation and into full inspection.*
5. *A “traditional deer park” is a stand-alone collection, on view to the public, holding Red and/or Fallow and/or Roe deer and/or Sika deer in an enclosed area of no less than 50 hectares. If the collection changes by adding other species of deer, or other wild animals, or by making the public enclosures smaller (for example to ease public viewing) then the collection would not be suitable for a 14(1)(a) dispensation.*
6. *If an establishment has a 14(1)(a) or (b) dispensation, introducing hazardous or conservation sensitive wild species for the purpose of display or demonstration may call into question the appropriateness of the dispensation or exemption. Local authorities are advised to check with Defra if they are concerned about a particular introduction.*
7. *An establishment not displaying wild animals could take and display wild animals for up to a maximum of six days in any twelve-month period. Any more days would mean the collection was caught by the provisions of the Zoo Licensing Act 1981 (as amended).*

The majority of the collections of DEFRA’s list (having removed the known closed collections) are classed as “Mixed Collections”, followed by “Farm Parks” and “Bird of Prey Centres”. The majority of the collections hold some sort of dispensation from the Zoo Licensing Act, in particular dispensations under the section 14.2 of the Act. Figure 34, Figure 35 and FIGURE 36 show the profile of zoological collections in England regarding type of collection and type of dispensation (n=274):

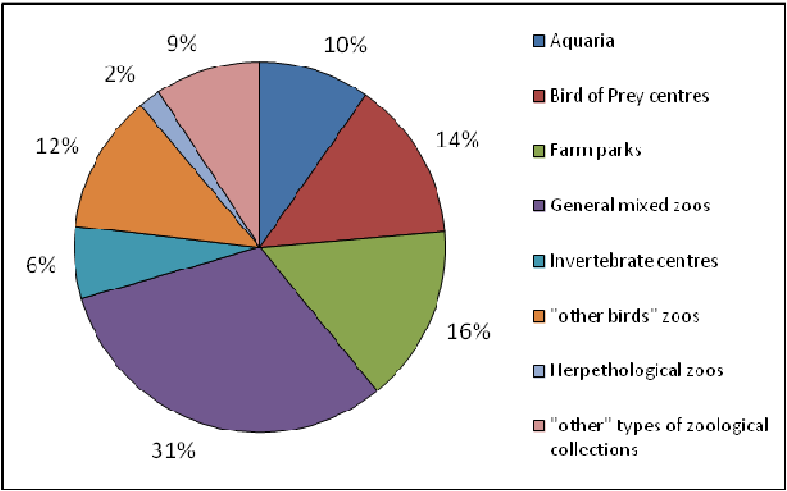


FIGURE 34: Relative frequency of types of zoological collections in England.

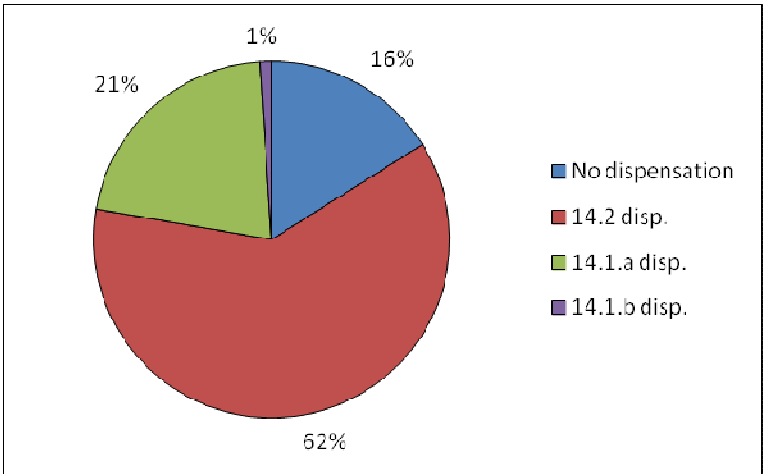


FIGURE 35: Relative frequency of dispensation status in zoological collections in England.

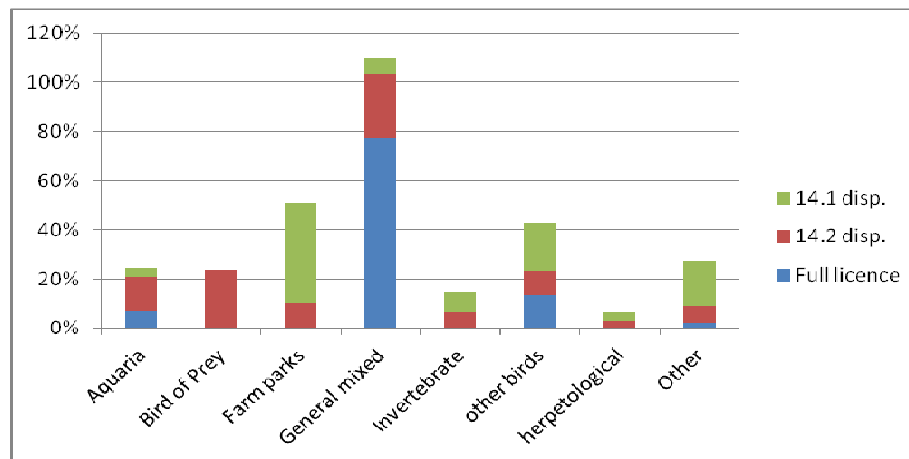


FIGURE 36: Relative frequency of dispensation status in zoological collections in England per type of zoo.

Appendix B: Relevant Legislation

The **Zoo Licensing Act 1981** is the main piece of legislation that regulates by licence the conduct of zoos in England, Wales, and Scotland (Northern Ireland has its own legislation). This is designed to ensure that zoos are safe for the public to visit, that high standards of animal welfare are maintained and that zoos make a contribution to conservation of wildlife. It is also supposed to implement the European Council Directive 1999/22/EC in the UK.⁶⁶ It was amended and regulated by the following Acts⁶⁷:

- The Zoo Licensing Act 1981 (Amendment) (England and Wales) Regulations 2002
- The Zoo Licensing Act 1981 Amendment (Scotland) Regulations 2003
- The Zoo Licensing Act 1981 (Amendment) (Wales) Regulations 2003
- Statute Law (Repeals) Act 2004
- Fire and Rescue Services Act 2004
- The Fire (Scotland) Act 2005 (Consequential Modifications and Amendments) Order 2005
- The Regulatory Reform (Fire Safety) Order 2005
- The Fire (Scotland) Act 2005 (Consequential Modifications and Savings) Order 2006
- Animal Welfare Act 2006
- The Animal Health and Welfare (Scotland) Act 2006 (Consequential Provisions) Order 2006
- The Animal Welfare Act 2006 (Commencement No. 1) (Wales) Order 2007

Therefore, in England the only major change the Act has undergone was in 2002, and no significant legislative change has occurred since 2005. Regarding any government's guidance to interpret this legislation, the last official legislative guidance was issued in 2004 (which was an update to the Government 02/2003 circular). This means that the legislative "landscape" of the zoo licensing system has been constant during the period researched in this study (considering that the Animal Welfare Act 2006 has not had a real impact in the zoo licensing system itself, although it still could have in prosecutions of animal neglect in zoos).

The main section of the Act is section 1, which states:

1(1) Subject to this section it is unlawful to operate a zoo to which this Act applies except under the authority of a licence issued under this Act by the local authority for the area within which the whole or the major part of the zoo is situated.

⁶⁶ <http://www.defra.gov.uk/wildlife-pets/zoos/>

⁶⁷ <http://www.legislation.gov.uk/changes/affected/ukpga/1981/37>

1(2) In this Act “zoo” means an establishment where wild animals (as defined by section 21) are kept for exhibition to the public otherwise than for purposes of a circus (as so defined) and otherwise than in a pet shop (as so defined)

1(2A) This Act applies to any zoo to which members of the public have access, with or without charge for admission, on more than seven days in any period of 12 consecutive months.

Section 21 helps to clarify terms with the following definitions:

“animals” means animals of the classes Mammalia, Aves, Reptilia, Amphibia, Pisces and Insecta and any other multi cellular organism that is not a plant or a fungus and “wild animals” means animals not normally domesticated in Great Britain;

“circus” means a place where animals are kept or introduced wholly or mainly for the purpose of performing tricks or manoeuvres at that place;

...

“pet shop” means premises for whose keeping as a pet shop a licence is in force, or is required, under the Pet Animals Act 1951;

Regarding the inspections regime, this is what the ZLA has to say as far as England is concerned:

5.Period and conditions of licence

(1)An original licence granted under this Act shall be granted for a period of four years beginning with the date specified in the licence as that on which it is granted or any later date specified in the licence as that on which the licence is to commence.

(2)A fresh licence granted under this Act to the holder of an existing licence shall be granted for a period of six years beginning with the end of the period of the existing licence.

(2A)A licence under this Act shall be granted subject to conditions requiring the conservation measures referred to in section 1A to be implemented at the zoo.

(3)Any licence under this Act may be granted subject to such conditions as the local authority think necessary or desirable for ensuring the proper conduct of the zoo during the period of the licence, including conditions relating to the following—

(c)insurance against liability for damage caused by animals.

(4)In deciding what conditions to attach to a licence, a local authority shall have regard to any standards specified by the Secretary of State under section 9 and sent by him to the authority.

(5)The Secretary of State may, after consulting the authority, direct them to attach one or more conditions to a licence, and the authority shall give effect to such a direction.(5A)But he may not direct the authority to attach a condition which is inconsistent with the implementation at the zoo of the conservation measures referred to in section 1A.]

(6)The authority shall not attach to a licence any condition inconsistent with one they are so directed to attach.

(7) The authority shall not attach to a licence a condition which relates only or primarily to the health, safety or welfare of persons working in the zoo.

6. Renewal of licence.

(1) Where application for the renewal of an existing licence is made to the local authority not later than six months before the end of the period of the licence or such shorter time as the local authority may in special circumstances allow the local authority may either—

(a) extend the period of the existing licence; or

(b) direct the applicant to apply for a fresh licence in accordance with section 2.

(1A) Before extending the period of an existing licence under subsection (1)(a) the authority shall—

(a) make arrangements for an inspection to be carried out in accordance with section 9A (subject to subsection (2) of that section); and

(b) consider the report made to them pursuant to that inspection.

(2) Where application for a fresh licence is made by the holder of an existing licence, the existing licence shall, if the application is made before the end of the period of that licence or within six months after notice of a direction given to the applicant under subsection (1)(b), continue in force until the application is disposed of or withdrawn and, if the application is refused, for a further period of six months.

(3) Any extension of the period of an existing licence under subsection (1)(a) shall be granted for a period of six years beginning with the end of the period of the existing licence; and the local authority shall take reasonable steps to secure that the holder of the licence is notified in writing of the extension.

(4) The local authority shall give notice to the holder of any licence granted by that authority, not later than nine months before the end of the period of the licence, of the latest date on which application for renewal may be made under this section.

[...]

9A. Procedure relating to inspections before the grant, refusal, renewal or significant alteration of licences

(1) This section applies where an inspection is to be carried out as mentioned in sections 4(1A), 6(1A) and 16(2B) and (3A).

(2) Where an inspection under section 10 falls to be carried out within the period of 12 months beginning with the date on which a local authority become required to make arrangements for an inspection to be carried out as mentioned in subsection (1)—

(a) the authority need not arrange for an inspection to be carried out in accordance with this section; and

(b) if they do not, subsections (10) to (13) of this section apply in relation to the inspection under section 10 as they would have applied in relation to an inspection in accordance with this section.

(3)Where—

(a)an application has been made under section 6(1) for renewal of a zoo's licence and the authority propose to extend the period of the licence; and

(b)one or more inspections of the zoo are required by section 16,

the authority may combine those inspections with the inspection which is required by section 6(1A)(a).

(4)Where more than one inspection is required under section 16, the authority may combine the inspections.

(5)Subject to subsection (6), where in the course of an inspection under section 10 or 12 or in accordance with this section it becomes apparent to the inspectors that a significant alteration to the licence is likely to be needed, they shall—

(a)consult the holder of the licence about that alteration;

(b)consider whether any new conditions they consider will be needed to secure that alteration are likely to be met if the licence is altered; and

(c)include their findings and recommendations in a report.

(6)Subsection (5) does not apply where the inspection is an inspection before the significant alteration of a licence, and the significant alteration the inspectors consider likely to be needed is the same or substantially the same as that which the authority propose to make or the Secretary of State proposes to direct the authority to make.

(7)An inspection required by section 4(1A)(b) or 6(1A)(a) (including an inspection required by section 6(1A)(a) which is combined with another inspection) shall be conducted by one or more inspectors nominated, after consultation with the authority, by the Secretary of State from the list.

(8)An inspection required by subsection (2B)(b) or (3A)(b) of section 16 (including such an inspection which is combined with another such inspection, but not including such an inspection which is combined with an inspection required by section 6(1A)(a)) shall be conducted by one or more persons who appear to the authority to be competent for the purpose and who are authorised by the authority to conduct the inspection.

(9)Before carrying out an inspection in accordance with this section, the authority shall, after consultation with the applicant or operator of the zoo (as the case may be), give him at least twenty-eight days' notice of the date on which it is proposed to carry it out.

(10)Except in the case of an inspection carried out before the grant or refusal of an original licence, the inspector shall consider whether the conditions attached to the licence are met.

(11)In the case of an inspection carried out before the grant or refusal of a licence, the inspector shall consider whether the conditions proposed by the authority under section 4(1A)(a) are likely to be met if the licence is granted.

(12) In the case of an inspection carried out before the period of an existing licence is extended, the inspector shall consider whether the conditions attached to the licence are likely to be met if the period of the licence is extended.

(13) In the case of an inspection carried out before the significant alteration of a licence, the inspector shall consider—

(a) whether any new or varied conditions proposed by the authority under section 16(2B)(a) or by the Secretary of State under section 16(3A) are likely to be met if the licence is so altered; and

(b) whether the conservation measures referred to in section 1A will be implemented at the zoo if the licence is altered as proposed by the authority or the Secretary of State (as the case may be).

(14) Except in the case of an inspection carried out before the grant or refusal of an original licence, the inspector may require the production of all records kept by the holder of the licence in pursuance of conditions requiring the conservation measures referred to in section 1A(f) to be implemented at the zoo, and the holder shall produce the records.

(15) The inspector shall send his report to the authority, and within one month after receiving the report of the inspection the authority shall send a copy to the applicant or operator (as the case may be) and give him an opportunity to comment on it.

10. Periodical inspections.

(1) The local authority shall carry out periodical inspections in accordance with this section of any zoo for which a licence granted by that authority is in force.

(2) Before any such inspection the local authority shall, after consultation with the operator of the zoo, give him at least twenty-eight days notice of the date upon which it is proposed to carry it out.

(3) Inspections under this section shall be made at the following times—

(a) in the case of an original licence, during the first year and not later than six months before the end of the fourth year of the period of the licence;

(b) in the case of a renewed licence or fresh licence granted to the holder of an existing licence, during the third year and not later than six months before the end of the sixth year of the period of that licence.

(4) The following provisions apply to any inspection to be carried out under this section:—

(a) the inspection shall be conducted by the following inspectors, namely—

(i) not more than three appointed by the local authority, being persons who appear to the authority to be competent for the purpose, at least one of whom shall be a veterinary surgeon or veterinary practitioner; and

(ii) two nominated after consultation with the local authority by the Secretary of State from the list, one from the first part of the list and one from the second;

and the names of all persons inspecting shall be notified to the operator of the zoo;

(b)the operator may give notice to the local authority of objection to any one or more of the inspectors, and the local authority or the Secretary of State as appropriate may if they think fit give effect to any such objection;

(c)representatives of the operator not exceeding three in number may accompany the inspectors on the inspection; and the inspectors may require the attendance of any veterinary surgeon or veterinary practitioner employed in or retained by or for the purposes of the zoo;

(d)the inspection shall extend to all features of the zoo directly or indirectly relevant to the health, welfare and safety of the public and the animals, including measures for the prevention of the escape of animals;

(e)the inspectors shall require the production of all records kept by the operator in pursuance of conditions of the licence requiring the conservation measures referred to in section 1A(f) to be implemented at the zoo, and the operator shall produce the records.

(5)The inspectors shall send their report to the local authority, and the report may include advice on the keeping of records and recommendations for any practicable improvements designed to bring any features of the zoo up to the normal standards of modern zoo practice; and for this purpose the inspectors shall have regard to any standards known to them which have been specified by the Secretary of State under section 9.

(6)Any disagreement between the inspectors over recommendations to be made in their report relating to the welfare of the animals or any of them may be referred to the Secretary of State, who may, after consultation with such persons on the list as he thinks fit, give such guidance as he thinks proper in regard to the recommendations to be made.

(7)Within one month after receiving the report of the inspection the local authority shall send a copy to the operator of the zoo and give him an opportunity to comment on it.

11. Special inspections.

(1)The local authority may at any time carry out a special inspection of a zoo for which a licence granted by them is in force if they consider it appropriate to do so having regard to—

(a)any periodical report on the zoo made to them pursuant to section 10; or

(b)any representations made to them on behalf of a properly constituted body concerned with any aspect of the management of zoos or the welfare of animals; or

(c)any report on the zoo made to them pursuant to an inspection in accordance with section 9A or under the provisions of section 12; or

(d)any other circumstances which in their opinion call for investigation.

(2) A special inspection under this section shall be conducted by persons who appear to the local authority to be competent for the purpose and who are authorised by the authority to conduct the inspection.

(3) Where the purpose of the inspection relates to the health of animals, the inspectors shall include (or, if one, the inspector shall be) a veterinary surgeon or veterinary practitioner with experience of animals of kinds kept in the zoo.

(4) On appointing persons under subsection (2), the authority shall communicate to them and to the operator of the zoo the purpose and scope of the inspection.

(5) Paragraphs (c) to (e) of subsection (4) and subsections (5) to (7) of section 10 apply to a special inspection as they apply to a periodical inspection except that the references in subsections (4)(d), (4)(e) and (5) to features and records and improvements are references only to features and records and improvements relevant to the purpose and scope of the special inspection.

[...]

12. Informal inspections.

(1) Without prejudice to sections 10 and 11, the local authority shall make such arrangements as they think fit to ensure that any zoo for which a licence granted by that authority is in force is inspected informally by an inspector once in any calendar year in which no inspection is made under those sections.

(2) The inspector shall be appointed by the authority and shall be a person appearing to the authority to be competent for the purpose of the inspection.

Regarding dispensations and exemptions for small zoos, the ZLA states:

14. Dispensation for particular zoos.

(1) Subject to subsection (1A), if the local authority with power to grant a licence for a zoo inform the Secretary of State that in their opinion a direction should be made under this subsection because of the small number of animals kept in] the zoo or the small number of the kinds of animal kept there, he may, after consulting such persons on the list as he thinks fit, direct—

(a) that this Act shall not apply to that zoo; or

(b) that sections 10 and 11 or either of them shall not apply thereto.

(1A) The Secretary of State may only make a direction under subsection (1) where he is satisfied that it is not prejudicial to the protection of wild animals and the conservation of biodiversity to do so.

(2) If the operator of a zoo informs the Secretary of State that in his opinion a direction should be made under this subsection because the number of inspectors provided for by section 10(4)(a) is too large for the zoo (having regard to the small size of the zoo or the small number of the kinds of animal kept there), the Secretary of State may, after consulting the local authority with power to grant a licence for the zoo and such persons on the list as he thinks fit, direct—

(a) that in the application of this Act to the zoo, section 10(4)(a) and (b) shall not apply; and

(b)that, instead, any inspection to be carried out under section 10 shall be conducted by such inspector or inspectors as the Secretary of State appoints.

(3)Subject to subsection (3A), any direction made under subsection (1) or (2) may be revoked or varied by a further direction of the Secretary of State made after he has consulted the local authority and such persons on the list as he thinks fit.

(3A)The Secretary of State may only vary a direction made under subsection (1) where he is satisfied that it is not prejudicial to the protection of wild animals and the conservation of biodiversity to do so.

(4)While a direction under subsection (1) has effect, this Act, or sections 10 and 11, or either of them, shall not apply to the zoo (depending on the terms of the direction and any variation made by a further direction under subsection (3)).

(5)While a direction under subsection (2) has effect, this Act shall apply to the zoo with the modifications specified in the direction (subject to any variation made by a further direction under subsection (3)).

(6)The Secretary of State shall take reasonable steps to secure that the local authority and any person who operates the zoo are notified in writing of any direction made under subsection (1), (2) or (3).

Prompted by the 1992 Rio de Janeiro's Convention on Biological Diversity, the **Council Directive 1999/22/EC** relating to the keeping of wild animals in zoos was given force of law in 2003 by the countries of the United Kingdom. By way of background the Directive required Member States to licence and inspect zoos to ensure good standards of animal care, and set the framework for the participation of zoos in conservation and education. In particular, the Directive requires the following:

1.2 The Directive required Member States to ensure that all zoos:

- 'participate in research from which conservation benefits accrue to the species, and/or training in relevant conservation skills, and/or the exchange of information relating to species conservation and/or, where appropriate, captive breeding, repopulation or reintroduction of species into the wild;'*
- 'promote public education and awareness in relation to the conservation of biodiversity, particularly by providing information about the species exhibited and their natural habitats;'*
- 'accommodate their animals under conditions which aim to satisfy the biological and conservation requirements of the individual species, inter alia, by providing species specific enrichment of the enclosures; and maintaining a high standard of animal husbandry with a developed programme of preventive and curative veterinary care and nutrition;'*
- 'prevent the escape of animals in order to avoid possible ecological threats to indigenous species and preventing intrusion of outside pests and vermin;'*
- 'keep up-to-date records of the zoo's collection appropriate to the species recorded.'*

One significant addition to the regulatory regime that stemmed from the EC Zoo Directive is the provisions for the closure of a zoo. Whilst revocation of a licence was no longer an option under the new legislation, this now provided for partial or full closure in the case of breach of conditions, and for the closure of an unlicensed zoo. Local Authorities were now required to approve any arrangements made for the welfare or disposal of animals following the closure of a zoo.⁶⁸

Due to the requirements of this Directive, in 2002 an amendment to the ZLA added the following section after section 1:

1A Conservation measures for zoos

The following are conservation measures to be implemented in zoos in accordance with this Act—

(a) participating in at least one of the following—

- (i) research from which conservation benefits accrue to species of wild animals;*
- (ii) training in relevant conservation skills;*
- (iii) the exchange of information relating to the conservation of species of wild animals;*
- (iv) where appropriate, breeding of wild animals in captivity; and*
- (v) where appropriate, the repopulation of an area with, or the reintroduction into the wild of, wild animals;*

(b) promoting public education and awareness in relation to the conservation of biodiversity, in particular by providing information about the species of wild animals kept in the zoo and their natural habitats;

(c) accommodating their animals under conditions which aim to satisfy the biological and conservation requirements of the species to which they belong, including—

- (i) providing each animal with an environment well adapted to meet the physical, psychological and social needs of the species to which it belongs; and*
- (ii) providing a high standard of animal husbandry with a developed programme of preventative and curative veterinary care and nutrition;*

(d) preventing the escape of animals and putting in place measures to be taken in the event of any escape or unauthorised release of animals;

(e) preventing the intrusion of pests and vermin into the zoo premises; and

(f) keeping up-to-date records of the zoo's collection, including records of—

- (i) the numbers of different animals;*
- (ii) acquisitions, births, deaths, disposals and escapes of animals;*
- (iii) the causes of any such deaths; and (iv) the health of the animals.*

⁶⁸ <http://archive.defra.gov.uk/wildlife-pets/zoos/documents/zoo-standards/app1.pdf>

In addition of the ZLA, vertebrate animals kept in zoos are also subject to protection under the **Animal Welfare Act**⁶⁹

⁶⁹ <http://www.defra.gov.uk/wildlife-pets/zoos/>

Appendix C: The UK Zoo licensing system

In England zoos are licensed and inspected with a system that has been in operation since the early 1980s, and which involves several stakeholders at different hierarchical official and unofficial levels which makes it quite complex.

Currently, responsibility for administering the licensing and inspection of zoos under the Zoo Licensing Act 1981 rests with local authorities, which constitute the “lower” component of the official zoo inspection system, but the most important. Above these, in England the Local Authorities’ zoo licensing work is overseen by DEFRA through *Animal Health*, its Executive Agency, which runs the *Zoos Inspectorate* that manages and maintains a list of Secretary of State’s Zoo Inspectors (DEFRA, 2010b), who are qualified to inspect zoos in England and have a higher “status” than the local Authorities’ own inspectors. They constitute the “middle” components of the system. Above these, the *Zoos Expert Committee (ZEC)* is a consulting body of “independent” experts that give technical advice to the different levels of government on zoo matters, and in consequence plays a symbolic “upper” role in the zoo inspection system although it does not really have executive or legislative powers. Therefore, Local Authorities have the real operational, enforcing and logistical power of the system; DEFRA’s agencies have the supervising and policy power of the system; whilst the *ZEC* has only a very general advisory role in technical matters, but holds the strongest “authoritative” opinion.

In the past the Government department in charge of overseeing zoo matters was the Department of Environment, Transport and the Regions (DETR), and the consulting body of experts was until very recently the *Zoos forum*, which was more independent from the Government than its current counterpart. The *Zoos Expert Committee* replaced the *Zoos Forum* on 1st February 2011 and now provides UK Ministers with authoritative technical advice to support policies on zoo matters. This new body has a closer relationship with DEFRA and is more policy focused.⁷⁰

This complex system is supposed to work in the following manner: anyone in England who keeps animals not normally domesticated in the UK and decides to exhibit them to the public, may be putting at risk the animals, the public and the environment in doing so. Therefore, the “government” should ensure that he/she does not, and this can be done paying a visit to the zoo and inspecting it, to ensure that everyone is safe. If it is, the relevant authority “licenses” the zoo operator to operate the zoo for a particular period of time, and periodically inspects the zoo again to check that it continues being safe; if it is not, it gives the zoo operator advice about what needs doing in order to fulfil the minimum requirements to be licensed, and if the zoo operator follows the advice the zoo is licensed, but if it does not after a reasonable time and without an acceptable excuse, no licence is granted and the zoo is closed (it must no longer be open to the public and the animals must then be relocated), and the zoo operator could even be prosecuted. If the zoo operator considers that either the advice, the refusal of licensing his zoo, or its obligatory closure are unfair, he/she has the right to appeal and the superior levels of “the system” will review the decision. To ensure that a zoo does not become sub-standard once it has passed an inspection, it is periodically

⁷⁰ ZF (2011). Minutes of the Zoos Forum Meeting, Thursday 27 January 2011, Conference Room 3, Bristol 11 am. Department of Environment, Food and Rural Affairs. London

inspected by different types of inspectors in different numbers, depending of the size of the zoo and the types of animals it keeps, and on when was last time inspected and by whom. To ensure that all inspectors are fair and that the standards are uniformly applied, the “supervising” part of the system trains inspectors, publishes documents and guidance about which are the minimum standards the zoos have to meet and how the zoos may improve them, and oversees when and by whom inspections take place to ensure that no inspection is missed and that the inspectors are properly qualified to do their job. If an issue arises that the inspectors are not sure how to deal with (or are dealt differently by different inspectors), the “supervising” body consults experts on zoos in order to find a solution, which then will be passed on to the inspectors. Special inspections can also be triggered by concerns expressed by members of the public.

In theory, if the system works, the end result should be that, over time, sub-standard zoos disappear, the average standards of operating a zoo increase over time, and the zoo animals, the zoo visitors, and the environment are safer and better protected. Since the standards should improve over time, “sub-standard” zoos that do not turn themselves around should be eventually closed down and it should be more difficult for anyone to start a new zoo, which should lead to a reduction of the number of zoos and an increase in their “quality”. It should also be noted that the local authority has the right to refuse a licence if it feels the establishment is not capable of meeting standards.

According to DEFRA, with fewer exemptions (for example when a zoo is owned by a local authority), local authorities main responsibilities on zoo matters include⁷¹:

1. determining whether a collection falls within the definition of a zoo;
2. considering whether the zoo should be exempted from the provisions of the Act and if so, applying to DEFRA for a Secretary of State direction on behalf of the establishment;
3. applying for dispensations from the Act on behalf of smaller zoos, and monitoring them subsequently to ensure that the level of dispensation remains appropriate;
4. arrange for zoos to be inspected and licensed in accordance with the provisions of the Act (section 12 of the Act requires the local authority to carry out an informal inspection in any calendar year in which there is neither a periodical nor a special inspection).;
5. checking compliance with conditions attached to zoo licences;
6. taking action against zoos should they fail to comply with the terms of their licence or operate without a licence.

Some Local Authorities are themselves zoo operators, since they may have zoos in their land which may be run by them. These tend to be aviaries or petty farms in public parks, or parks with semi-captive deer, but on occasions are fully fleshed big traditional zoos. The Zoo Licensing Act has provisions to deal with such cases, which basically removes some of the responsibilities of the inspection from the Local Authority and passes them to DEFRA.

⁷¹ <http://www.lacors.gov.uk/lacors/upload/18232.doc>

The Department for the Environment, Food & Rural Affairs (DEFRA), in behalf of its Secretary of State, currently uses *Animal Health and Veterinary Laboratories Agency* (AHVLA)⁷² to deal with zoo matters, including running the *Zoos Inspectorate*. AHVLA is an executive agency working on behalf of DEFRA, Scottish Government and Welsh Government. The agency was formed on 1 April 2011, following the merger of *Animal Health* (AH)⁷³ and the *Veterinary Laboratories Agency*, but since our study precedes this merge, and before the creation of AH in 2007 other departments of DEFRA dealt with zoos in England, in this report we will use *Animal Health*, DEFRA, or DEFRA/AH as interchangeable terms referring to this central governmental department role.

The *Zoos Inspectorate* consists of a small team based in Bristol situated alongside the *Wildlife Inspectorate*, and in accordance with section 8 of the Zoo Licensing Act 1981 (as amended) it manages and maintains a list of Secretary of State's Zoo Inspectors who are qualified to inspect zoos in England.⁷⁴ The Zoo Inspector list is made up of two parts: The first part contains the names of veterinary surgeons and practitioners who have experience of the kinds of animals which are kept in zoos, and are competent to advise on the implementation in zoos of the conservation measures referred to in section 1A of the Act. The second part contains names of persons competent to inspect animals in zoos, to advise on their welfare and on keeping them, and to advise on the implementation in zoos of the conservation measures referred to in section 1A of the Act, and finally to advise on the management of zoos generally.⁷⁵

The Zoos Inspectorate nominates suitable inspectors on behalf of local authorities to carry out zoo inspections required under the Act. The zoo inspectors are not employed by *Animal Health* rather they are contracted by individual local authorities to carry out zoo inspections and as such inspectors' expenses are paid by the licensing authority, and recharged to the owner of the zoo. *Animal Health* is responsible for setting the fees.

Inspectors are expected to refer to the *Secretary of State's Standards of Modern Zoo Practice* (SSSMZP)⁷⁶ when carrying out inspections, which as a document created by DEFRA –as a requirement of the ZLA– from direct advice of the *Zoos forum*. The *Zoos Forum* also provided guidance in its *Zoos Forum Handbook* on zoo issues such as how conservation and education requirements are to be assessed. These two documents have different statutory powers, since the ZLA does mention specifically the former (section 9) but not the latter. Therefore, any zoo is expected to follow the SSSMZP, and inspectors should use them when drafting their licence conditions and recommendations.

The Zoo Licensing Act takes account of the fact that zoos will vary greatly in size, from a farm park exhibiting a handful of exotic species right up to major zoological collections with many species exhibited. This is achieved through dispensations and exemptions, whose purpose is to relax the requirements of the Act on collections that the Secretary of State,

⁷² Before the creation of *Animal Health* other departments of DEFRA dealt with zoos. *Animal Health* became part of the *Animal Health and Veterinary Laboratories Agency* (AHVLA) on 1 April 2011.

⁷³ Launched on 2 April 2007, formerly the State Veterinary Service

⁷⁴ <http://animalhealth.defra.gov.uk/cites/zoos-inspectorate.html>

⁷⁵ <http://animalhealth.defra.gov.uk/cites/zoos-inspectorate.html>

⁷⁶ <http://archive.defra.gov.uk/wildlife-pets/zoos/standards.htm>

after appropriate consultation, considers suitable. The *Zoos Inspectorate* is responsible for considering exemptions and dispensations from the Act.⁷⁷

The *Zoos Inspectorate* holds biennial training seminars for licensing officers and inspectors. A variety of issues are looked at including, for example, conservation and education activities in zoos, as well as the more obvious issues such as the roles and responsibilities of zoo inspectors. The outcome of any outstanding issues raised at the seminars were recorded in the minutes of *Zoos Forum* meetings, when this was still in operation. Previous seminars were held in Bath (2002), Lancaster (2004) and Lincoln (2006). The most recent seminar was held in Cheltenham in March 2009 (DEFRA, 2010b).

Animal Health employs particular officials to be in charge of zoo matters. Although the delivery function of zoo licensing moved to *Animal Health* in August 2008, overall policy responsibility for zoos work, including in relation to the *Zoos Forum/ZEC*, remained in DEFRA's officials. On occasion "guidance" is issued to the local authorities or the inspectors through official circulars which help them to "standardise" practices and resolve outstanding issues or irregularities. The latest official circular was *Government Circular 02/2003*⁷⁸, which cover a wider range of subjects, including the criteria for considering an organisation as a zoo, or for granting dispensations. After advice from the *Zoos forum* updates to such circular have been sent in later dates, such as one sent in 2004 about no longer considering llamas and alpacas to be "wild animals" for the purposes of the ZLA.⁷⁹

The first body of experts to advice government on zoo issues was the *Zoo Forum*, but in 2011 it was substituted by the *Zoos Expert Committee* (ZEC), which as its predecessor advises DEFRA and the Devolved Authorities on zoo matters. Its remit is to encourage the role of zoos in conservation, education and scientific research; to keep the operation and implementation of the zoo licensing system in the UK under review; and to advise or make recommendations to DEFRA and the Devolved Authorities of any legislative or administrative changes that may be necessary.⁸⁰

The current ZEC is composed by five members employed (or previously employed) by zoos in senior capacities, one academic expert in Conservation, one independent vet expert in wildlife, two NGO members (one of a conservation organisation and another of an animal welfare organisation), and one member of local authorities.

Zoo Inspections

Every time that an official inspector visits the zoo premises in his/her inspector capacity such visit constitutes an inspection. However, in some cases the inspections can be informal or limited to a singular issue, while in others can be very formal covering a wide range of issues, and involving several inspectors. "Formal" inspections shall extend to all features of the zoo directly or indirectly relevant to the health, welfare and safety of the public and the animals, including measures for the prevention of the escape of animals. Following are the different types of zoo inspections there are based on the requirements of the ZLA:

⁷⁷ <http://animalhealth.defra.gov.uk/cites/zoos-inspectorate.html>

⁷⁸ <http://www.defra.gov.uk/wildlife>

⁷⁹ DEFRA (2004). 2004 Update to Government Circular 02/2003 – llama and alpaca. Department of Environment, Food and Rural Affairs. London

⁸⁰ archive.defra.gov.uk/wildlife-pets/zoos/documents/zoos-expert-committee.pdf

Formal Inspections

First inspections (also known as “licence” inspections)

These inspections are defined by sections 4(1A) and 9A of the ZLA. These inspections are made before granting or refusing to grant a licence for a new zoo that has applied for a licence for the first time. Therefore, they are normally made prior the zoo opening its doors to the public.

First inspections should be conducted by **one or more inspectors nominated, after consultation with the local authority, by the Secretary of State from the list**, and the inspectors shall consider whether the conditions proposed by the authority under are likely to be met if the licence is granted. If the collection has already been granted a dispensation from the ZLA, then the inspectors can be from the local authority instead DEFRA appointees.

DEFRA’s form ZOO3 is used for this type of inspection.

Fresh licence Inspections (also known as “significant alteration inspections”)

These inspections are defined by sections 5, 16(2B), 16(3A) and 9A of the ZLA. They occur **at any time** after the granting of a licence when the local authority needs to make a significant alteration to the licence (which now will be a “fresh license”) if in their opinion it is necessary or desirable to do so for ensuring the proper conduct of the zoo during the period of the licence –because the zoo has changed significantly from the time that the current licence was issued. They may also occur when the Secretary of State may, after consulting the authority, direct the local authority to alter significantly the licence or make any of such inspections.

Inspections for fresh licences should be conducted by **one or more persons** who appear to the **local authority** to be competent for the purpose and who are authorised by the authority to conduct the inspection. However, if such inspection is combined with a renewal or periodical inspection, then it should be conducted by **no more than three inspectors appointed by the local authority**, being persons who appear to the authority to be competent for the purpose, at least one of whom shall be a veterinary surgeon or veterinary practitioner, and **two nominated inspectors after consultation with the local authority by the Secretary of State from the list**, one from the first part of the list and one from the second. If the collection has already been granted a 14.1.b dispensation under the ZLA, then the inspectors can be only one competent local authority appointee instead of any DEFRA’s inspector. If the collection has already been granted a 14.2 dispensation under the ZLA, then it can be inspected by one instead of two DEFRA’s inspectors.

No more than three representatives of the zoo may accompany the inspectors on the inspection; and the inspectors may require the attendance of any veterinary surgeon or veterinary practitioner employed in or retained by or for the purposes of the zoo.

DEFRA's form ZOO3 is used for this type of inspection when not combined with a renewal or periodical inspection.

Renewal Inspections (also known as "renewal periodical inspections")

These inspections are defined by sections 6.1A, 9A and 10 of the ZLA. These inspections should take place when an application has been made under section 6(1) for renewal of a zoo's licence and the authority proposes to extend the period of the licence. They should take place no later than six month before the end of the **fourth year** after granting an original licence or no later than six month before the end of the **sixth year** after granting renewal licence or a fresh licence.

Renewal inspections should be conducted by **not more than three inspectors appointed by the local authority**, being persons who appear to the authority to be competent for the purpose, at least one of whom shall be a veterinary surgeon or veterinary practitioner, and **two nominated inspectors after consultation with the local authority by the Secretary of State from the list**, one from the first part of the list and one from the second. If the collection has already been granted a 14.1.b dispensation under the ZLA, then the inspectors can be only one competent local authority appointee instead of any DEFRA's inspector. If the collection has already been granted a 14.2 dispensation under the ZLA, then it can be inspected by one instead of two DEFRA's inspectors.

No more than three representatives of the zoo may accompany the inspectors on the inspection; and the inspectors may require the attendance of any veterinary surgeon or veterinary practitioner employed in or retained by or for the purposes of the zoo.

DEFRA's form ZOO2 is used for this type of inspection.

Periodical Inspections (also known as "interim periodical inspections")

These inspections are defined by section 10 of the ZLA. These inspections should be made during the **first year** for an original licence, or during the **third year** in the case of a renewed licence or fresh licence granted to the holder of an existing licence.

Periodical inspections should be conducted by **no more than three inspectors appointed by the local authority**, being persons who appear to the authority to be competent for the purpose, at least one of whom shall be a veterinary surgeon or veterinary practitioner, and **two nominated inspectors after consultation with the local**

authority by the Secretary of State from the list, one from the first part of the list and one from the second. If the collection has already been granted a 14.1.b dispensation under the ZLA, then the inspectors can be only one competent local authority appointee instead of any DEFRA's inspector. If the collection has already been granted a 14.2 dispensation under the ZLA, then it can be inspected by one instead of two DEFRA's inspectors.

No more than three representatives of the zoo may accompany the inspectors on the inspection; and the inspectors may require the attendance of any veterinary surgeon or veterinary practitioner employed in or retained by or for the purposes of the zoo.

DEFRA's form ZOO2 is used for this type of inspection.

Special formal Inspections

These inspections are defined by section 11 and 11A of the ZLA. These inspections can be made **at any time** because of any representations made to the Local Authority on behalf of a properly constituted body concerned with any aspect of the management of zoos or the welfare of animals, or any report on the zoo made to it pursuant to an inspection in accordance with section, or under the provisions of section 12, or any other circumstances which in their opinion call for investigation. These include inspections made to closed zoos.

Contrary to "non-special" inspections, these can be undertaken without prior announcement to the zoo operator.

A special inspection should be conducted by **persons** who appear to the **local authority** to be competent for the purpose and who are authorised by the authority to conduct the inspection, and **any nominated inspector after consultation with the local authority by the Secretary of State from the list**.

Where the purpose of the inspection relates to the health of animals, the inspectors shall include (or, if one, the inspector shall be) a veterinary surgeon or veterinary practitioner with experience of animals of kinds kept in the zoo.

DEFRA's form ZOO2 is used for this type of inspection.

Informal Inspections

Routine Informal Inspections (also known as "annual" inspections)

These inspections are defined by section 12 of the ZLA. They should be made **once in any calendar year** in which no First, Fresh, Periodical, Renewal or Special inspections are made. They should be

undertaken by a **Local authority's inspector** on zoos for which a licence granted by that authority is in force.

The inspector shall be appointed by the authority and shall be a person appearing to the authority to be competent for the purpose of the inspection.

DEFRA's form ZOO2 can be used for this type of inspection, but often it is not.

Special informal Inspections

These inspections are defined by section 11 and 11A of the ZLA. These inspections can be made **at any time** because of any representations made to the Local Authority on behalf of a properly constituted body concerned with any aspect of the management of zoos or the welfare of animals, or any report on the zoo made to it pursuant to an inspection in accordance with section, or under the provisions of section 12, or any other circumstances which in their opinion call for investigation. These include inspections made to closed zoos.

Contrary to "non-special" inspections, these can be undertaken without prior announcement to the zoo operator.

A special inspection should be conducted by **persons** who appear to the **local authority** to be competent for the purpose and who are authorised by the authority to conduct the inspection.

Where the purpose of the inspection relates to the health of animals, the inspectors shall include (or, if one, the inspector shall be) a veterinary surgeon or veterinary practitioner with experience of animals of kinds kept in the zoo.

DEFRA's form ZOO2 can be used for this type of inspection, but often it is not.

Considering the timings of all the types of inspections described above, each zoological collection should be inspected every year by at least one inspection, since during the years that no periodical, renewal or special inspections occur there must be at least an informal inspection.

In years where special inspections have occurred and no periodical or renewal is due, then an informal is not needed (although the local authority may choose to do one anyway).

The local authority charges the cost of the formal inspection (and sometimes also the informal inspections) to the zoo operator once the inspection has been made, but the fee DEFRA inspections can charge for their service is set up by *Animal Health* and not by the local authority. Therefore, the licensing cost for operating a zoo is the fee for the licence (normally to be paid every six years) and the inspection fees and expenses of any formal

inspection (normally to be paid every three years). Sometimes, though, local authorities charge these fees in advance.

Reports

Since the inspection system relies on “supervision” from central Government, “appealing” rights of the zoo operators, and up to a degree on “checking” and “complaining” from the general public (including animal protection organisations), it will be a requirement that inspectors record their findings and opinions in inspection reports. The requirement of creation of such “reports” is explicit in the Zoo Licensing Act 1981. For example, subsections 5 and 6 of section 10 on periodical inspections state:

(5) The inspectors shall send their report to the local authority, and the report may include advice on the keeping of records and recommendations for any practicable improvements designed to bring any features of the zoo up to the normal standards of modern zoo practice; and for this purpose the inspectors shall have regard to any standards known to them which have been specified by the Secretary of State under section 9.

(6) Any disagreement between the inspectors over recommendations to be made in their report relating to the welfare of the animals or any of them may be referred to the Secretary of State, who may, after consultation with such persons on the list as he thinks fit, give such guidance as he thinks proper in regard to the recommendations to be made

Subsections 15 of section 9A on first, renewal, and fresh inspections states:

(15) The inspector shall send his report to the authority, and within one month after receiving the report of the inspection the authority shall send a copy to the applicant or operator (as the case may be) and give him an opportunity to comment on it.

Subsections 5 of section 11 on special inspections states:

(5) Paragraphs (c) to (e) of subsection (4) and subsections (5) to (7) of section 10 apply to a special inspection as they apply to a periodical inspection except that the references in subsections (4)(d), (4)(e) and (5) to features and records and improvements are references only to features and records and improvements relevant to the purpose and scope of the special inspection.

However, there is no explicit reference of “reports” in the ZLA as far as “informal” inspections are concerned, although since the justification for the existence of reports in these cases is the same, it should be assumed that their requirement is “implicit”. Otherwise, a zoo operator would not be able to appeal against the inspector’s opinion expressed in an informal inspection, DEFRA/AH would not be able to check whether an informal inspection was conducted appropriately, and future inspectors would not be able to check on the findings and recommendations of previous inspectors to see if the zoological collection has been previously informed or reminded on an issue or is in compliance.

Equally, since the authorities’ decisions (both the local authority and Animal Health) regarding licensing matters will rely on the “previous” record of compliance of the collection

and on whether issues identified by inspectors are recurrent or amount to a non compliant attitude by the zoo operator, it would be expected that local authorities keep zoo inspection reports for a few years (and due to the fact that standard licences run for six years, one would expect that at least six years worth of zoo inspections would be kept). It is then not surprising that DEFRA advises to local authorities that *“it is strongly recommended that a report of the inspection is compiled”*⁸¹ and that the Secretary of State’s Standards of Modern Zoo Practice⁸² state *“The arrangements for, and conduct of, an informal inspection are for the local authority to decide, but it is recommended that a written report is made, as the local authority may need to arrange a special inspection as a result of the inspector’s observations*

Over the years DEFRA/AH has issued inspection forms to be used by zoo inspectors, with the aim of standardise the inspection process and guarantee that inspectors do not miss to check for specific issues. Currently there are three main DEFRA’s forms that can be used for any type of inspection:

- ZOO1 form pre-inspection audits
- ZOO2 form for periodical, renewal, special, and informal inspections (see Appendix E)
- ZOO3 form forms first and fresh “significant alteration” licences (see Appendix F)

Local authorities and inspectors may choose not to use these forms, or to issue their own forms, but the zoo2 form has been used for most periodical and renewal inspections since it was issued around 2004.

The two forms that are used for the actual inspection reports have in common that are based on a “YES-NO-N/A” tick system. Obviously each for begins with general information on the inspection (such as name of the collection, dates of this and previous inspections, type of inspection, names and roles of inspectors, etc.). Although there is room for written initial remarks at the beginning, brief notes in the middle and conclusions (including recommendations and licence conditions) in the end, the bulk of the rest of the reports is base on a series of questions hierarchically distributed in “subjects” from which the inspector can tick “Yes”, “No” or “N/A” as an answer. By each of these tick boxes there is always a “notes” box where the answer can be briefly qualified, and the ZOO2 form also allows for qualifying the “yes” answer with a number code (1=Excellent, 2=Good, 3= Adequate and 4 = Barely acceptable), although these are rarely used.

The main difference between the form ZOO2 and ZOO3 is that in the former the questions refer to states that are actually happening, while in the later to states that “are likely” to happen. This is because ZOO3 is mainly used in inspections for new zoos before they are actually open to the public. Naturally, ZOO2 also cover many more issues than ZOO3, since more issues can be checked in a fully operational zoo.

In total the form ZOO2 has 102 “tick box” questions. Most questions are written in such a way that an answer “NO” would imply a “deficiency” or “under-performance” of the zoo (i.e. “do animal enclosures have sufficient shelter?” or “is captive breeding properly managed?”), so by a quick glance of the form one can assess whether the collection is sub-standard if it

⁸¹ <http://archive.defra.gov.uk/wildlife-pets/zoos/documents/zoo-licence-template.doc>

⁸² <http://archive.defra.gov.uk/wildlife-pets/zoos/standards.htm>

has many “NOs” ticked in the inspection report. The only exception is question 1.6 which asks “is feeding by visitors permitted?”, since a “No” answer does not necessarily have any negative connotation –on the contrary. Another type of exemption is question 7.1 which offers five (or four in old versions of the form) options to choose regarding things the zoo is doing on Conservation. This question has to be treated differently than the others because although a “no” of each of the options does show certain “deficiency” of the zoo in the sense that it is a less “good” thing the zoo is doing, legally speaking the EC Zoos Directive and the ZLA only requires the zoo to do at least one of the five options to be in compliance with the Conservation condition.

It is also important to notice that questions about animals refer to “all the animals” of the zoo, and not “most of them” or “some of them”. For instance “*Is each animal provided with a high standard of animal husbandry?*” or “*do all animals receive prompt and appropriate attention when problems are noted?*”. This is because the legislation (both ZLA and the EC Zoos Directive) does not exempt any animal, and there is no justification for reducing the standard of animal welfare of an individual animal if kept in a zoological collection that is bigger than others.

The ZOO3 form has a similar structure, but the questions are structured in the form of “future conditions” that would be attached to the licence if the inspector grants it. The first condition refers to conservation; the second to education; the third to the accommodation, husbandry and health care of the animals; the fourth to escapes; the fifth to pest control and the seventh to records. The rest of the form gives space for any additional conditions that the local authority or the Secretary of State may want to add.

Licences

The licences to operate a zoo are always issued by the local authority, and therefore they are solely responsible about what they write on them. Although they of course have to base them on the finding of the zoo inspectors, they can add or not the conditions the inspectors recommend, and alter them in any way they see fit. In fact, the actual format of the licences varies considerably among local authorities, but at least they contain the name of the licence holder, the name and address of the zoological collection, the first and last date the licence is valid for (four years if it is a first licence and six years if it is not), the date the licence was issued, and any conditions that the licence may have.

Although initially the ZLA did not specify any “standard” condition that all zoo licences should contain, the amendments of the Act made DEFRA issue specific guidance to local authority that in effect forces them to add some “standard conditions” to any of the licences they issue, in addition to any other condition that the local authority wishes to add. These conditions that DEFRA suggest should be added are divided in conditions that must be added to comply with the new amended ZLA (“Mandatory conditions”), and conditions that should be added to ensure that the zoo falls within the standards set up with the *Secretary of State’s Standard of Modern Zoo Practice* (“Discretionary conditions”). Therefore, often (but not always) licence conditions are added to licences in two or three different sections, one called “Mandatory conditions”, another “Discretionary Conditions” and another “Additional conditions”. This may be confusing since could make people think that the additional and discretionary conditions are not all “mandatory”. They all are; the difference is the ones titled as “mandatory conditions” are mandatory for the local authority to add them in the licences they issue, while they can choose not to add the “discretionary conditions” if they so wish,

but all conditions in a licence, including the additional conditions, are mandatory for the zoo operator to comply with.

Following are the DEFRA's **mandatory conditions** as expressed in Appendix B of their 2003 Government circular (Circular 02/2003⁸³):

Appendix B

Please Note: In some cases the suggested model condition may need to be adapted for the

circumstances of the zoo in question. The breeding of wild animals in captivity, or the repopulation and/or re-introduction activities should be applied only where it is appropriate to the zoo. Where it is appropriate, more tailored or specific text might be more suitable.

Local authorities may, of course, vary and adapt the text of any part of the model condition, or design their own condition, but the condition must in all cases meet the requirements of new section 1A of the Act.

Authorities are reminded that under section 16(2) of the Act they are required to give licence

holders an opportunity to make representations before altering a zoo licence.

Example condition

[Name of zoo] must:

- *promote public education and awareness about biodiversity conservation. In particular, provide information about the species of wild animals kept in the zoo and their natural habitats.*
- *accommodate and keep the animals in a manner consistent with the standards set out in the Secretary of State's Standards of Modern Zoo Practice.⁸⁴*
- *prevent escapes and put in place measures to be taken in the event of any escape or unauthorised release of animals.*
- *introduce practical measures designed to prevent the intrusion of pests and vermin into the premises of the zoo.*
- *keep up-to-date records of the animals, including numbers of different animals, acquisitions, births, death, disposals and escapes, causes of deaths and the health of the animals.*
- *Participate in at least one of the following:*
 - *Research which benefits the conservation of wild animals*
 - *Training in relevant conservation skills*
 - *Exchanging information about the conservation of wild animals*
 - *Breeding of wild animals in captivity*
 - *Repopulating an area with wild animals, or re-introducing wild animals*

[zoo] must keep information to show how it has complied with this condition and supply it to the local authority upon request.

Following are the DEFRA's **discretionary conditions** as expressed in Appendix C of their 2003 Government circular (Circular 02/2003):

⁸³ DEFRA (2003). Circular 02/2003. Zoo Licensing Act 1981 (as amended by the Zoo Licensing Act 1981(Amendment)(England and Wales) Regulations 2002)("the 2002 Regulations"). Department of Environment, Food and Rural Affairs. London

⁸⁴ including-(i) providing each animal with an environment well-adapted to meet the physical, psychological and social needs of the species to which it belongs; and (ii) providing a high standard of animal husbandry with a developed programme of preventative and curative veterinary care and nutrition;
(<http://archive.defra.gov.uk/wildlife-pets/zoos/documents/zoo-forms/mandatory-conditions.pdf>)

Appendix C

Discretionary conditions commonly attached to licences

Discretionary conditions must not conflict with the mandatory conditions giving effect to the conservation measures in section 1A of the Act. But these conditions can complement them if the local authority believe they are necessary to ensure the proper conduct of the zoo.

Insurance

- 1. Within one month of the date of the licence and one month of the date of renewal of the policy, where applicable, a copy of the zoo's current public liability insurance policy, and of subsequent renewals thereof, to be sent to the licensing authority.*

Hazardous Animals

- 2. The licensing authority to be notified in writing, at least one month in advance, of the proposed addition of any animal listed in category 1 of the Hazardous Animal Categorisation (see Appendix 12 of the Secretary of State's Standards of Modern Zoo Practice), which is from a taxonomic family of which Category 1 species have not previously been kept in the zoo.*

Temporary Removal of Animals from the Zoo

- 3. The licensee/s to notify the licensing authority before the temporary removal from the zoo (other than for veterinary attention or inter-zoo movements) of any animal listed in category 1 of the Hazardous Animal Categorisation of Secretary of State's Standards of Modern Zoo Practice. Such notification to be given as early as possible and, in any case, no later than 12 hours before the removal, unless the zoo operator and licensing authority mutually agree a shorter period. When giving notification, details of the destination and method of transportation of the animal and of the arrangements for its well-being, as well as for the safety of the public whilst it is away from the zoo, to be provided.*

Escapes

- 4. In the event of any non-domestic animal escaping from the confines of the zoo, notification shall be made to the licensing authority as soon as possible, and, in any case, not later than 24 hours following the escape.*

Note 1. These conditions are attached to the licence without prejudice to the application, where relevant, of the Secretary of State's Standards of Modern Zoo Practice specified in accordance powers conferred under section 9 of the Zoo Licensing Act 1981 (as amended)

Note 2. The grant of this licence does not imply that the requirements of any other legislation have been met.

The Following discretionary condition was added in 2004⁸⁵:

Stock Records

5. An annual stocklist of all animals must be kept and a copy must be forwarded to the local authority no later than 1 April of the year following that to which it relates and the stock list must include the information and in the format indicated in Section 9.5 of the Secretary of State's Standards of Modern Zoo Practice (September 2004).

In theory, if inspectors detect a problem in a zoo that is not covered by any of the conditions that are already attached to the licence, they could then suggest to the local authority an additional condition to be added to the licence, and word it at the end of the inspection report as they think it should be written. This often involves the specific activity the zoo has to do, and the deadline by which it should be done. However, some inspectors may consider that the zoo's "fault" is not that "grave" to involve an additional condition to be added to the licence. In these cases inspectors may choose to issue a "recommendation" instead. Each local authority, inspector and indeed zoo operator may have different interpretations of how "legally binding" is any written comment from an inspector that is not translated into a specific licence condition attached to the licence. This can generate enforcing problems, especially if "recommendations" are also attached to the licence as if they were other type of conditions, but different to mandatory, discretionary or additional conditions, which together with Direction Orders are the only legally binding instructions that the ZLA recognise.

According recent (2010) DEFRA/AH's guidance⁸⁶, if a licence condition is being broken or is not being complied with in the time specified the local authority should, after giving the licence holder the opportunity to be heard, make a direction under section 16A(2) of the ZLA to require steps to be taken by the licence holder to ensure that the condition is met within a specified period of time not exceeding two years; and specifying whether the zoo or any part of it must be temporarily closed to the public for a specified period of time. If the conditions remain not being met, the authority should, after giving the licence holder the opportunity to be heard, make a zoo closure direction under section 16B(2) or (4) of the ZLA requiring the zoo or part of it to be closed.

⁸⁵ <http://archive.defra.gov.uk/wildlife-pets/zoos/documents/zoo-forms/discretionary-conditions.pdf>

⁸⁶ <http://archive.defra.gov.uk/wildlife-pets/zoos/documents/zoo-licence-template.doc>

Appendix D: Animals normally domesticated in the UK (from Government circular 02/2003)

Circular 02/2003 – Zoo Licensing Act 1981

Annex E

Animals considered normally domesticated or not normally domesticated for the purposes of the Zoo licensing Act 1981

The Secretary of State is not in a position to give an authoritative statement on which animals fall into the "normally non-domestic" and "normally domestic" categories as interpretation of legislation is a matter for the Courts. However, an informal view on the more common cases that have caused uncertainty is set out below.

To explain the thinking, the two categories have been sub-divided into the following five sub-categories. Species not in categories 1 to 4 will almost certainly be in 5. Hybrid species should be treated as not normally domesticated if one of the parents is from sub-categories 3 to 5. Where there is doubt about a species, local authorities, inspectors or operators may check with Defra who may seek views through the Zoos Forum:

Species normally domesticated in Great Britain and therefore not "wild animals" for the purposes of the ZLA.		Species <u>not</u> normally domesticated in Great Britain and therefore to be considered "wild animals" for the purposes of the ZLA.		
1. True domestic breeds of species that have been kept in this country for so long, and in such large numbers, that their status as "normally domesticated in Great Britain" is clearly justified (exotic domestic breeds of the same species as those listed here are included, eg. Vietnamese pot-bellied pigs).	2. True domestic breeds, and selectively bred wild species, introduced to this country relatively recently, but now so commonly kept outside zoological collections as to justify regarding them as "normally domesticated in Great Britain".	3. True domestic breeds of species introduced to this country relatively recently, and kept in relatively low numbers, and that therefore should be regarded as "not normally domesticated in Great Britain" (exotic domestic breeds of species in list 1. are included in that list).	4. Wild species, commercially farmed or widely bred by hobbyists (including some species which have been selectively bred and therefore may be considered domestic), but where this is so recent as to render the species "not normally domesticated in Great Britain".	5. True wild species, where domesticity is not seriously suggested.
Examples: horses/ponies, donkeys, cattle, sheep, goats, pigs, dogs, cats, ferrets, rabbits, pigeons/doves, chickens, turkeys, ducks, geese.	Examples: guinea pigs, hamsters, gerbils, rats, mice, chinchillas, budgerigars, canaries, guinea fowl, peafowl, goldfish, koi carp, golden orfe.	Examples: llamas, alpacas, camels, water buffalo, Ankole cattle, yak, reindeer.	Examples: deer, ostriches, wild boar, American bison, aquarium and pond fish (excluding those in 2.), cage and aviary birds (excluding those in 2.), waterfowl (excluding those in 1.), giant African land snails.	Examples: All species not listed in 1. to 4.

**Zoo Licensing Act 1981 (Amendment)
(England and Wales) Regulations 2002**

Inspection Report

Name of applicant or current licence holder:

Name and address of zoo:

Telephone number (incl. national dialling code):

Fax number (incl. national dialling code):

Licence Number:

Date of last inspection:

Timing of next inspection:

[Reset form](#)

Appendix 1

defra
Department for Environment
Food and Rural Affairs

Type of inspection **Statutory composition of inspection team**

Section 10:

Full renewal ☐ 2 Defra nominees; 1 LA vet; Option of up to 2 more from LA ☐

Full periodical ☐ 2 Defra nominees; 1 LA vet; Option of up to 2 more from LA ☐

Section 11: ☐ Any number of competent LA authorised appointees ☐

Special ☐

Section 12: ☐

Informal ☐ One competent LA authorised appointee ☐

Section 14(1)(b) dispensation: ☐

Informal ☐ One competent LA authorised appointee ☐

Section 14(2) dispensation: ☐

Renewal application ☐ Defra nominee(s) ☐

Periodical ☐ Defra nominee(s) ☐

Please use Appendix 11A (form ZOO 3) for Licence Inspectors under Section 4(1A) and 5 (significant change inspections under Sections 16(2B) or 16(3A) of the Zoo Licensing Act 1981 (as amended).

Portcode:

Names and designations of inspectors:

Name(s) of zoo representative(s):

Copies: Original to local authority; 1st copy to applicant/operator; 2nd copy to Defra; 3rd copy to inspectors

1 of 10

Useful information available to applicants:

Information about the Zoo Licensing Act 1981 (Amendment) (England and Wales) Regulations 2002)

Where to find it – available from your local authority who are responsible for administering the Act or from Defra at <http://www.defra.gov.uk/wildlife-countryside/qawd/index.htm> or 0117 372 8209.

Secretary of State's Standards of Modern Zoo Practice. Where to find it - available at <http://www.defra.gov.uk/wildlife-conservation/loved/index.htm> or from your local authority who are responsible for administering the Zoo Licensing Act 1981 (as amended). A limited number of hard copies are still available from Defra.

Government Circular Guidance 02/2003 on the Zoo Licensing Act 1981 (Amendment) (England and Wales) Regulations 2002). Where to find it - available at <http://www.defra.gov.uk/wildlife/countryside/owd2003.htm#licrule>.

Preamble to inspectors' report

Alternatively hard copies can be obtained by contacting
Tom Adams,

Defra,
1/16 Temple Quay House,
2 The Square

2. The square,
Temple Quay,

Bristol BS1 6EB
Tel: 0117 372 8209

E-mail: zoos.branch@defra.gov.uk

Where to find it – hard copies of available chapters can be obtained from Tom Adams at the above address (while stocks last). Electronic versions can be downloaded from <http://www.dietra.co.uk/wildlife-count/tomadams/wild2007/county/index.htm>.

Assessment of the Pre-Inspection Audit

Hart	Assessment (tick one box)	Comments
A. Details of institution	<input type="checkbox"/> Complete <input type="checkbox"/> Incomplete <input type="checkbox"/> Absent	
B. Animal records	<input type="checkbox"/> Complete <input type="checkbox"/> Incomplete <input type="checkbox"/> Absent	Animal records
C. Animal husbandry and veterinary care	<input type="checkbox"/> Complete <input type="checkbox"/> Incomplete <input type="checkbox"/> Absent	
D. Health and safety	<input type="checkbox"/> Complete <input type="checkbox"/> Incomplete <input type="checkbox"/> Absent	
E. Security	<input type="checkbox"/> Complete <input type="checkbox"/> Incomplete <input type="checkbox"/> Absent	
F. Conservation	<input type="checkbox"/> Complete <input type="checkbox"/> Incomplete <input type="checkbox"/> Absent	
G. Education	<input type="checkbox"/> Complete <input type="checkbox"/> Incomplete <input type="checkbox"/> Absent	
H. Staff training	<input type="checkbox"/> Complete <input type="checkbox"/> Incomplete <input type="checkbox"/> Absent	
I. Research	<input type="checkbox"/> Complete <input type="checkbox"/> Incomplete <input type="checkbox"/> Absent	
J. Ethical considerations	<input type="checkbox"/> Complete <input type="checkbox"/> Incomplete <input type="checkbox"/> Absent	

ZOO 210.05

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ONE-MIN

Findings at inspection

Marking Key
 Score YES or NO or N/A (i.e. not applicable) as appropriate. YES scores may also be graded (if considered appropriate) in the 'YES' column as follows:
 1 = Excellent, 2 = Good, 3 = Adequate, 4 = Barely acceptable.

	YES & grade if used	NO	N/A	Notes
1. Provision of food and water				
1. Directive Condition 1A(Q1):				
1. Is each animal provided with a high standard of nutrition?	select ▼			
2. Is food and drink appropriate for the species/individual supplied?	select ▼			
3. Are supplies of food and water kept hygienically?	select ▼			
(a) prepared hygienically?	select ▼			
(b) supplied to the animal hygienically?	select ▼			
4. Has natural feeding behaviour been adequately considered to ensure that all animals have access to food and drink?	select ▼			
5. Are feeding methods safe for staff and animals?	select ▼			
6. Is feeding by visitors permitted?	select ▼			
(a) if YES, is it properly controlled?	select ▼			
2. Provision of suitable environment				
1. Directive Condition 1A(Q2):				
1. Is each animal provided with an environment well adapted to meet the physical, psychological and social needs of the species to which it belongs?	select ▼			
2. Are the following environmental parameters appropriate:				
(a) temperature?	select ▼			
(b) ventilation?	select ▼			
(c) lighting?	select ▼			
(d) noise levels?	select ▼			
(e) any other environmental parameters?	select ▼			
3. Do animal enclosures have sufficient shelter?	select ▼			
4. Do animal enclosures provide sufficient space?	select ▼			
5. Are backup facilities for life support systems adequate?	select ▼			
6. Is the cleaning of the accommodation satisfactory?	select ▼			
7. Is the standard of maintenance adequate for:				
(a) the buildings?	select ▼			
(b) the fences?	select ▼			
8. Is all drainage effective and safer?	select ▼			

ZOO 210.05

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ONE-MIN

YES & grade if used	NO	N/A	Notes
3. Provision of animal health care			
Directive Condition 1A(c)(i):			
1. Is each animal provided with a high standard of animal husbandry?	<input type="select"/>		
2. Do all animals on display to the public appear to be in good health?	<input type="select"/>		
3. Are observations of condition and health made and recorded?	<input type="select"/>		
4. Do all animals receive prompt and appropriate attention when problems are noted?	<input type="select"/>		
5. Are enclosures designed and operated in such a way that social interaction problems are avoided?	<input type="select"/>		
On-site facilities:			
3. Are catch-up and restraint facilities adequate?	<input type="select"/>		
7. Is darting equipment satisfactory?	<input type="select"/>		
8. Are on-site veterinary facilities adequate?	<input type="select"/>		
Veterinary care			
Directive Condition 1A(c)(i):			
9. Is each animal provided with a developed programme of preventative and curative veterinary care and nutrition?	<input type="select"/>		
10. Is a satisfactory programme of preventative and curative veterinary care established and maintained?	<input type="select"/>		
11. Is there a system for the regular review of clinical and pathological records?	<input type="select"/>		
12. Are appropriate veterinary records kept?	<input type="select"/>		
13. Are medicines correctly kept?	<input type="select"/>		
14. Are controlled drugs used and recorded satisfactorily?	<input type="select"/>		
15. Are appropriate antibiotics available?	<input type="select"/>		
16. Are post mortem examination arrangements satisfactory?	<input type="select"/>		
Isolation and containment			
17. Is adequate reserve accommodation available for isolation of animals for:	<input type="select"/>		
(a) assessment?	<input type="select"/>		
(b) treatment?	<input type="select"/>		
(c) recovery?	<input type="select"/>		
(d) quarantine (where required)?	<input type="select"/>		
Sanitation and control of disease			
Directive Condition 1A(e):			
18. Are satisfactory measures in place to prevent the intrusion of pests and vermin into the zoo premises?	<input type="select"/>		
19. Does it appear that general sanitation and pest control are effective?	<input type="select"/>		

YES & grade if used	NO	N/A	Notes
4. Provision of an opportunity to express most normal behaviour			
1. Does accommodation appear adequately to meet the biological and behavioural needs of the animals?			
<input type="select"/>			
5. Provision of protection from fear and distress			
1. Are the animals handled only by or under the supervision of appropriately experienced staff?			
<input type="select"/>			
2. Is physical contact between animals and the public consistent with the animals' welfare?			
<input type="select"/>			
3. Are interactions between the animals such that they are not excessively stressful?			
<input type="select"/>			
6. Transportation and movement of live animals			
1. Can the zoo demonstrate an awareness of the regulations covering transportation of animals and provide copies of certificates to show compliance when transportation has occurred?			
<input type="select"/>			
2. Is transport and movement equipment in good order?			
<input type="select"/>			
3. Are facilities suitable for lifting, crating and transportation of all the types of animals kept within the zoo to destinations both inside and outside the zoo readily available?			
<input type="select"/>			
4. Do the catching and transportation techniques take account of the animals' temperament and escape behaviour in order to minimise injury, damage and distress?			
<input type="select"/>			
5. Is adequate provision made for the animals and the public's safety and well being while the animal is being transported or kept away from the zoo?			
<input type="select"/>			
7. Conservation, Education and Research			
Directive Condition 1A(a):			
1. Is the zoo participating in at least one of the following:			
(i) research from which conservation benefits accrue to species of wild animals?	<input type="select"/>		
(ii) training in relevant conservation skills?	<input type="select"/>		
(iii) the exchange of information relating to the conservation of species of wild animals?	<input type="select"/>		
(iv) where appropriate, breeding of wild animals in captivity?	<input type="select"/>		
(v) where appropriate, the repopulation of an area with, or the reintroduction into the wild of, wild animals?	<input type="select"/>		

	YES & grade if used	NO	N/A	Notes
7. Conservation, Education and Research (cont.)				
Directive Condition 1A(b):				
2. Is the zoo promoting public education and awareness in relation to the conservation of biodiversity, in particular by providing information about the species of wild animals kept in the zoo and their natural habitats?	select ▼			
3. Where appropriate are animals managed (including accommodation) in a way consistent with the conservation needs of the species?	select ▼			
4. Are on-site education facilities commensurate with the collection?	select ▼			
(a) are they adequate for the purposes?	select ▼			
5. Are the conservation efforts adequate for the resources of the collection?	select ▼			
6. Are the research efforts adequate for the resources of the collection?	select ▼			
7. Is captive breeding properly managed?	select ▼			
8. Public safety				
Directive Condition 1A(d):				
1. Are there satisfactory measures in place to prevent the escape of animals?	select ▼			
2. Are there satisfactory measures in place to be taken in the event of any escape or unauthorised release of animals?	select ▼			
3. Will the perimeter deter unauthorised entry and aid the confinement of zoo stock?	select ▼			
4. Do stand-off barriers appear adequate?	select ▼			
5. Are adequate warning signs provided?	select ▼			
6. Are prohibited areas appropriately signed?	select ▼			
7. Are exits clearly marked and accessible?	select ▼			
8. Does maintenance of buildings appear adequate?	select ▼			
9. Do public areas and walkways appear safe?	select ▼			
10. Are trees regularly inspected and appropriate remedial action taken?	select ▼			
11. Are the special safety requirements for walk-through or drive-through exhibits adequately met?	select ▼			
9. Records				
Directive Condition 1A(f):				
1. Are there up-to-date records of the zoo's collection, including records of:	select ▼			
(i) the numbers of different animals?				
(ii) acquisitions, births, deaths, disposals and escapes of animals?	select ▼			
(iii) the causes of any such deaths?	select ▼			
(iv) the health of the animals?	select ▼			

	YES & grade if used	NO	N/A	Notes
9. Records (cont.)				
2. Are daily diaries maintained?	select ▼			
(a) do they contain appropriate information?				
3. Are animal stock records clear and up-to-date?	select ▼			
4. Are annual inventories maintained and submitted to the Local Authority?	select ▼			
5. Are animal source and destination records kept?	select ▼			
6. Are archived records secure?	select ▼			
10. Miscellaneous				
1. Do staff numbers and training of staff appear adequate?	select ▼			
2. Is the management structure adequate for the proper care and well-being of the animals and the safety of the visiting public and zoo staff?	select ▼			
3. Are effective risk assessments carried out where appropriate?	select ▼			
4. Has an ethical review process been established?	select ▼			
5. Are public toilet facilities adequate and serviced?	select ▼			
6. Are parking facilities adequate?	select ▼			
7. Is a First Aid Policy in effect and is it adequate?	select ▼			
11. Associated legislation				
1. Is electrical equipment routinely serviced?	select ▼			
2. Have fire precautions been agreed and implemented?	select ▼			
3. Is refuse disposed of correctly?	select ▼			
4. Are the required needs of disabled visitors met?	select ▼			
5. Is an accident reporting and recording system in use?	select ▼			
12. Compliance check				
1. Is the current licence or a copy on public display at each public entrance?	select ▼			
2. Is adequate Public Liability Insurance current?	select ▼			
3. Have existing licence conditions been met?	select ▼			
4. On summary inspection, does the zoo appear to be in compliance with CITES legislation?	select ▼			

Additional space

The following space is provided for:

- additional notes and comments on the answers to the earlier questions;
- recommendations (other than in respect of grant or refusal of a licence and any specific conditions recommended for a licence – see overleaf); and
- any general remarks which the inspecting team may wish to record.

Inspecting team's recommendation to the local authority

Having inspected
(name of zoo)

on

the inspecting team make the following recommendation:

- Please tick appropriate box
- it is recommended that a licence be refused. ☐
 - it is recommended that the above collection be licensed in accordance with the Act subject to the Directive Conditions. ☐
 - it is recommended that the above collection be licensed in accordance with the Act subject to the Directive Conditions and the following Additional Conditions. ☐
 - it is recommended that the following alterations be made to the above collection's licence conditions ☐

Additional conditions (if appropriate)

Inspector(s) signature(s)	Date signed

The Data Protection Act 1998

This form is intended for use by local authorities in England for administering the Zoo Licensing Act 1981 (Amendment) (England and Wales) Regulations 2002. Completed forms held by public authorities are subject to the provisions of the Freedom of Information Act 2000, the Environmental Information Regulations 2004 and the Data Protection Act 1998. Copies of forms may be supplied to the Department for Environment, Food and Rural Affairs for the purpose of providing information on the administration of the Zoo Licensing Act 1981 (Amendment) (England and Wales) Regulations 2002.

**Zoo Licensing Act 1981 (Amendment)
(England and Wales) Regulations 2002**

Licence Inspection Report

Formal form

Appendix 11A

Name of applicant

Name of institution

Address of institution

Telephone number (incl. national dialling code)

Fax number (incl. national dialling code)

Date Report completed

FE/CL CODE

Type of inspection

Licence inspection
under Section 4(1a)

Significant change inspection
under Section 18(2)(b) or 18(3A)

This form is only for use for inspections before the grant or renewal of a new licence and before any significant alteration to a licence. Please use [Appendix 11 \(Form ZOO 2\)](#) for all other inspections.

Statutory composition of inspection team

One or more Defra members

Any number of consultant LA authorised appointees

Names and designations of inspectors	Name(s) of zoo representative(s)

Copies: Original to local authority, 1st copy to applicant/visitor, 2nd copy to Defra, 3rd copy to inspectors

1000 211005

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information about the Zoo Licensing Act 1981 (Amendment) (England and Wales) Regulations 2002).

Where to find it – available from your local authority who are responsible for administering the Act or from Defra at <http://www.defra.gov.uk/wildlife-conservation/guidance.htm> or 0117 372 8209.

Secretary of State's Standards of Modern Zoo Practice.

Where to find it – available at <http://www.defra.gov.uk/wildlife-conservation/guidance.htm> or from your local authority who are responsible for administering the Zoo Licensing Act 1981 (as amended). A limited number of hard copies are still available from Defra.

Government Circular Guidance 02/2003 on the Zoo Licensing Act 1981 (Amendment) (England and Wales) Regulations 2002.

Where to find it – available at <http://www.defra.gov.uk/wildlife-conservation/guidance.htm>.

Lerra,
1/16 Temple Quay House,
2 The Square,
Temple Quay,
Bristol BS1 6EB
Tel: 0117 372 8209
E-mail: zoox.branch@defrasi.gov.uk

Zoos Forum Handbook
Where to find it – hard copies of available chapters can be obtained from Tom Adams at the above address (while stocks last). Electronic versions can be downloaded from <http://www.defra.gov.uk/wildlife-count/tomadams/zooconservation/index.htm>.

A large, empty rectangular box with a thin black border, occupying the central portion of the page. It appears to be a placeholder for a figure or image that is not present in this version of the document.

1. Directive Conditions (in accordance with Section 1A of the amended Act)

Condition	Likely to be met	Not likely to be met	N/A	Notes
1A(a) Participate in at least one of the five activities listed from (i) to (v) below:				
(i) research from which conservation benefits accrue to species of wild animals				
(ii) training in relevant conservation skills				
(iii) the exchange of information relating to the conservation of species of wild animals				
(iv) where appropriate, breeding of wild animals in captivity				
(v) where appropriate, the repopulation of an area with, or the reintroduction into the wild of, wild animals				
(b) Promoting public education and awareness in relation to the conservation of biodiversity, in particular by providing information about the species of wild animals kept in the zoo and their natural habitats				
(c) Accommodating their animals under conditions which aim to satisfy the biological and conservation requirements of the species to which they belong, including:				
(i) providing each animal with an environment well adapted to meet the physical, psychological and social needs of the species to which it belongs; and				

Condition	Likely to be met	Not likely to be met	N/A	Notes
(i) providing a high standard of animal husbandry with a developed programme of preventative and curative veterinary care and nutrition.				Notes
(d) Preventing the escape of animals and putting in place measures to be taken in the event of any escape or unauthorised release of animals				
(e) Preventing the intrusion of pests and vermin into the zoo premises				
(f) Keeping up-to-date records of the zoo's collection, including records of:				
(i) the numbers of different animals				
(ii) acquisitions, births, deaths, disposal and escapes of animals				
(iii) the causes of any deaths				
(iv) the health of the animals				

2. Other/New or Varied Conditions* (Proposed by the local authority)**

[illegible]

- 'Other' refers to conditions for a new licence (Section 4(1)(a)). 'New or Varied' refers to conditions proposed as a result of a significant change to a licence (Section 16).

** The local authority are required to have regard to the Secretary of State's Standards of Modern Zoo Practice when considering what other conditions should be added to a licence. These might include insurance against liability for damage caused by animals (Section 5(3) and Section 5(4) of the Act).

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3. Other Conditions*** (Proposed by the nominated Secretary of State Inspector(s))

[illegible]

*** This section does not apply to significant change inspections.

2003 (1.05)

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The Secretary of State's nominated inspector(s)
recommendation to the local authority _____

Having inspected _____
(name of zoo)

on _____

the inspecting team make the following recommendation: Please tick appropriate box

- it is recommended that a licence be refused: ☐
- it is recommended that the above collection be licensed in accordance with the Act subject to the Directive Conditions listed in section 1 of this report ☐
- it is recommended that the above collection be licensed in accordance with the Act subject to the Directive Conditions listed in section 1 and the Additional Conditions listed in section 2 and/or 3 of this report ☐

Dispensation Status

If it is recommended that the above collection be licensed does the nominated Secretary of State inspector(s) consider that the collection may be suitable for a dispensation under Section 14 of the Act? YES ☐ NO ☐

If YES, please specify type of dispensation recommended:

Signature of Secretary of State inspector(s)	Date signed:

The Data Protection Act 1998

This form is intended for use by local authorities in England for administering the Zoo Licensing Act 1981 (Amendment) (England and Wales) Regulations 2002. Completed forms held by public authorities are subject to the provisions of the Freedom of Information Act 2000, the Environmental Information Regulations 2004 and the Data Protection Act 1998. Copies of forms may be supplied to the Department for Environment, Food and Rural Affairs for the purpose of providing information on the administration of the Zoo Licensing Act 1981 (Amendment) (England and Wales) Regulations 2002.

Appendix G: Zoological collections randomly selected for this study

num.	code⁸⁷	<u>Dispensation Status</u>	<u>Type of collection</u>	<u>Licensing Authority</u>
1	SOU274	None	General mixed	Barrow Borough Council
2	BAN239	None	General mixed	Breckland District Council
3	BRI244	None	General mixed	Bristol City Council
4	HOW256	None	General mixed	Canterbury City Council
5	WHI279	None	General mixed	Central Bedfordshire Council
6	WOB280	None	General mixed	Central Bedfordshire Council
7	CHE246	None	General mixed	Cheshire West and Chester Council
8	COL247	None	General mixed	Colchester Borough Council
9	NEW267	None	General mixed	Cornwall Council
10	DUD252	None	General mixed	Dudley Metropolitan Borough Council
11	BIR240	None	General mixed	East Hampshire District Council
12	PAR270	None	General mixed	East Hertfordshire District Council
13	THR276	None	General mixed	Great Yarmouth Borough Council
14	TWY277	None	General mixed	Hinckley and Bosworth Borough Council
15	ISL257	None	General mixed	Isle of Wight Council
16	CHE245	None	General mixed	Kingston upon Thames Royal Borough of London Council
17	KNO258	None	General mixed	Knowsley Metropolitan Borough Council
18	HAR255	None	Other Bird	Leeds City Council
19	LOT263	None	Other Bird	Leeds City Council
20	DRA250	None	General mixed	Lichfield District Council
21	LON260	None	Aquarium	London Borough of Lambeth
22	FLA253	None	General mixed	Ryedale District Council
23	LIN259	None	General mixed	South Cambridgeshire District Council
24	SHE272	None	General mixed	South Cambridgeshire District Council
25	DAR249	None	General mixed	South Hams District Council
26	BLA241	None	Other Bird	Staffordshire Moorlands District Council
27	SLI273	None	Other Bird	Stroud District Council
28	PAI269	None	General mixed	Torbay Council
29	AFR237	None	General mixed	Waveney District Council
30	DRU251	None	General mixed	Wealden District Council
31	LON261	None	General mixed	Westminster City Council
32	MAR265	None	General mixed	Winchester City Council

⁸⁷ The names of the collections have been substituted by codes, but they can be passed to the appropriate authorities on request. The letters in the codes do not necessarily relate to the names of the collections.

33	WES278	None	General mixed	Wyre Forest District Council
34	CRY234	14.1.b	Farm Park	London Borough of Bromley
35	THE236	14.1.b	Invertebrate	North Somerset Council
36	THE235	14.1.b	Invertebrate	Shepway District Council
37	BAN174	14.1.a	Invertebrate	Allerdale Borough Council
38	TRI223	14.1.a	Farm Park	Bracknell Forest Borough Council
39	CLI181	14.1.a	Other Bird	Bradford Metropolitan District Council
40	THE220	14.1.a	General mixed	Broadland District Council
41	MAN206	14.1.a	Invertebrate	Calderdale Metropolitan Borough Council
42	THE221	14.1.a	Invertebrate	Calderdale Metropolitan Borough Council
43	DRU187	14.1.a	Farm Park	Canterbury City Council
44	VIC225	14.1.a	Other Bird	Cheshire East Borough Council
45	WES229	14.1.a	Other Bird	Cheshire East Borough Council
46	MOU210	14.1.a	Other Bird	Cornwall Council
47	HOR199	14.1.a	Farm Park	Epsom and Ewell Borough Council
48	CEN179	14.1.a	Other	Forest Heath District Council
49	MON209	14.1.a	Farm Park	Hambleton District Council
50	WEL228	14.1.a	Farm Park	Hart District Council
51	HOL198	14.1.a	Farm Park	Horsham District Council
52	WIC231	14.1.a	Other Bird	Kettering Borough Council
53	EMS189	14.1.a	Farm Park	Leeds City Council
54	SPR216	14.1.a	Other Bird	Leeds City Council
55	MAR207	14.1.a	Farm Park	London Borough of Greenwich
56	TUL224	14.1.a	Farm Park	Mid Sussex District Council
57	WAS227	14.1.a	Farm Park	Mid Sussex District Council
58	STE218	14.1.a	Other	Middlesbrough Council
59	CEN178	14.1.a	Other	Newark and Sherwood District Council
60	WHI230	14.1.a	Farm Park	Newark and Sherwood District Council
61	NOR212	14.1.a	Other	North Lincolnshire Council
62	COU183	14.1.a	Farm Park	North Somerset Council
63	DEE186	14.1.a	Other	North Somerset Council
64	CUT184	14.1.a	Other Bird	Oxford City Council
65	NAT211	14.1.a	Other	Royal Borough of Kensington and Chelsea
66	MEM208	14.1.a	Other Bird	Scarborough Borough Council
67	BOT176	14.1.a	Other Bird	Sefton Metropolitan Borough Council
68	COO182	14.1.a	Other	Sevenoaks District Council
69	PAR214	14.1.a	Farm Park	Shropshire Council
70	FER191	14.1.a	Other	South Somerset District Council
71	HAW195	14.1.a	Reptile/Amphibian	Southampton City Council

72	ABB171	14.1.a	Other Bird	St Edmundsbury Borough Council
73	SUN219	14.1.a	Reptile/Amphibian	Sunderland City Council
74	GOD193	14.1.a	Farm Park	Tandridge District Council
75	DAR185	14.1.a	Farm Park	Teignbridge District Council
76	LAK202	14.1.a	Farm Park	Telford & Wrekin Borough Council
77	FIN192	14.1.a	Farm Park	Test Valley Borough Council
78	WAL226	14.1.a	General mixed	Warrington Borough Council
79	LYM205	14.1.a	Aquarium	West Dorset District Council
80	FAR190	14.1.a	Farm Park	West Lancashire District Council
81	TRO148	14.2	General mixed	Allerdale Borough Council
82	WIL159	14.2	Other	Ashford Borough Council
83	TIG140	14.2	Other	Aylesbury Vale District Council
84	WET155	14.2	Other	Bassetlaw District Council
85	WIL158	14.2	Invertebrate	Bedford Borough Council
86	BIR20	14.2	General mixed	Birmingham City Council
87	NAT93	14.2	Aquarium	Birmingham City Council
88	SEA119	14.2	Aquarium	Blackpool Borough Council
89	ANI7	14.2	Farm Park	Bolton Metropolitan Borough Council
90	BOL28	14.2	Aquarium	Bolton Metropolitan Borough Council
91	SMI126	14.2	Other Bird	Bolton Metropolitan Borough Council
92	OCE100	14.2	Aquarium	Bournemouth Borough Council
93	MEL88	14.2	Farm Park	Breckland District Council
94	OLD101	14.2	Farm Park	Brentwood Borough Council
95	SEA118	14.2	Aquarium	Brighton & Hove City Council
96	BLU26	14.2	Aquarium	Bristol City Council
97	NOR97	14.2	General mixed	Broadland District Council
98	PET108	14.2	Farm Park	Broadland District Council
99	FAL56	14.2	Bird of Prey	Bromsgrove District Council
100	WIL160	14.2	General mixed	Canterbury City Council
101	ENG52	14.2	Bird of Prey	Central Bedfordshire Council
102	TRO145	14.2	Invertebrate	Chelmsford Borough Council
103	GAU62	14.2	Bird of Prey	Cheshire East Borough Council
104	PEC105	14.2	Bird of Prey	Cheshire East Borough Council
105	REA114	14.2	General mixed	Cheshire East Borough Council
106	STA130	14.2	General mixed	Cheshire East Borough Council
107	STO131	14.2	Farm Park	Cheshire East Borough Council
108	OWL102	14.2	Bird of Prey	Copeland Borough Council
109	BLU25	14.2	Aquarium	Cornwall Council
110	COR46	14.2	Bird of Prey	Cornwall Council
111	MON90	14.2	Other	Cornwall Council
112	NAT94	14.2	Other	Cornwall Council
113	PAR103	14.2	Other Bird	Cornwall Council
114	BIR19	14.2	Other Bird	Cotswold District Council
115	COT47	14.2	Bird of Prey	Cotswold District Council

116	YOR169	14.2	Bird of Prey	Craven District Council
117	TIL141	14.2	General mixed	Crawley Borough Council
118	HOL68	14.2	Bird of Prey	Daventry District Council
119	YOR170	14.2	Farm Park	Doncaster Metropolitan Borough Council
120	RAR113	14.2	General mixed	Dover District Council
121	WIN162	14.2	General mixed	Dover District Council
122	BRO34	14.2	General mixed	Dudley Metropolitan Borough Council
123	BEA15	14.2	Bird of Prey	Durham County Council
124	ESC53	14.2	Farm Park	East Devon District Council
125	WOR167	14.2	Farm Park	East Devon District Council
126	ANI6	14.2	General mixed	East Hertfordshire District Council
127	NAT95	14.2	General mixed	East Lindsey District Council
128	SEW124	14.2	General mixed	East Riding of Yorkshire District Council
129	EDE51	14.2	Farm Park	Eden District Council
130	LAK81	14.2	Bird of Prey	Eden District Council
131	INT74	14.2	Bird of Prey	Forest of Dean District Council
132	BAR10	14.2	Bird of Prey	Gloucester City Council
133	GRE65	14.2	Aquarium	Great Yarmouth Borough Council
134	FAL57	14.2	Bird of Prey	Hambleton District Council
135	FAL58	14.2	Bird of Prey	Hambleton District Council
136	BIR18	14.2	Bird of Prey	Harrogate Borough Council
137	BLU24	14.2	Aquarium	Hastings Borough Council
138	WYE168	14.2	Invertebrate	Herefordshire County Council
139	WIL161	14.2	Bird of Prey	Hertsmere Borough Council
140	TRO143	14.2	Other Bird	Hinckley and Bosworth Borough Council
141	HUX72	14.2	Bird of Prey	Horsham District Council
142	RAP112	14.2	Bird of Prey	Huntingdonshire District Council
143	BUT36	14.2	Invertebrate	Isle of Wight Council
144	ISL75	14.2	Bird of Prey	Isle of Wight Council
145	SEA122	14.2	Other Bird	Isle of Wight Council
146	THE138	14.2	Other	Isle of Wight Council
147	HUN71	14.2	Other	King's Lynn and West Norfolk Borough Council
148	BUT39	14.2	Invertebrate	Lancaster City Council
149	TRO146	14.2	General mixed	Leeds City Council
150	WES153	14.2	Other	Leeds City Council
151	WOR166	14.2	Aquarium	Liverpool City Council
152	GOL64	14.2	Other	London Borough of Barnet Council
153	BRE31	14.2	General mixed	London Borough of Ealing
154	THE139	14.2	General mixed	London Borough of Hounslow
155	HOR70	14.2	Aquarium	London Borough of Lewisham
156	FOX61	14.2	Farm Park	London Borough of Redbridge
157	BAR11	14.2	Other Bird	London Borough of Richmond Upon

				Thames
158	AVI9	14.2	Other Bird	Maidstone Borough Council
159	CAN41	14.2	Other	Manchester City Council
160	SUF134	14.2	Bird of Prey	Mid Suffolk District Council
161	HEN67	14.2	Bird of Prey	Mole Valley District Council
162	LIB84	14.2	Bird of Prey	New Forest District Council
163	NEW96	14.2	General mixed	New Forest District Council
164	PAU104	14.2	Other Bird	New Forest District Council
165	THE136	14.2	Reptile/Amphibian	Newcastle Upon Tyne City Council
166	EXM55	14.2	General mixed	North Devon District Council
167	ILF73	14.2	Aquarium	North Devon District Council
168	SEA121	14.2	Aquarium	North Somerset Council
169	BLU27	14.2	Aquarium	North Tyneside Metropolitan Borough Council
170	KIE76	14.2	Bird of Prey	Northumberland County Council
171	NAT91	14.2	Aquarium	Plymouth City Council
172	BLU23	14.2	Aquarium	Portsmouth City Council
173	KIR78	14.2	Bird of Prey	Redcar & Cleveland Borough Council
174	TRO144	14.2	General mixed	Rotherham Metropolitan Borough Council
175	ALS1	14.2	General mixed	Sedgemoor District Council
176	SEC123	14.2	General mixed	Sedgemoor District Council
177	EAG49	14.2	General mixed	Sevenoaks District Council
178	BUT37	14.2	General mixed	South Holland District Council
179	LAK82	14.2	General mixed	South Lakeland District Council
180	TUR149	14.2	Bird of Prey	South Ribble Borough Council
181	SOU128	14.2	General mixed	South Staffordshire District Council
182	SEA117	14.2	Aquarium	Southend on Sea Borough Council
183	BRI33	14.2	General mixed	Stafford Borough Council
184	GEN63	14.2	General mixed	Stafford Borough Council
185	TRE142	14.2	Other	Stafford Borough Council
186	KIN77	14.2	Bird of Prey	Staffordshire Moorlands District Council
187	STR132	14.2	Invertebrate	Stratford-upon-Avon District Council
188	BUT38	14.2	Invertebrate	Stroud District Council
189	CAT42	14.2	Farm Park	Stroud District Council
190	PRI111	14.2	Other Bird	Stroud District Council
191	WAS152	14.2	Other Bird	Sunderland City Council
192	FAR59	14.2	Bird of Prey	Swale Borough Council
193	BEA16	14.2	Reptile/Amphibian	Tandridge District Council
194	BRI32	14.2	General mixed	Tandridge District Council
195	BUC35	14.2	Farm Park	Teignbridge District Council
196	SHA125	14.2	General mixed	Teignbridge District Council
197	HOO69	14.2	Farm Park	Telford & Wrekin Borough Council
198	LIV86	14.2	General mixed	Torbay Council
199	BAT12	14.2	General mixed	Wandsworth Borough Council

200	BEN17	14.2	Other Bird	Wealden District Council
201	KNO79	14.2	General mixed	Wealden District Council
202	BEA14	14.2	General mixed	West Berkshire District Council
203	LIV87	14.2	General mixed	West Berkshire District Council
204	WOO165	14.2	Bird of Prey	West Lindsey District Council
205	BLE22	14.2	Invertebrate	West Oxfordshire District Council
206	TRO147	14.2	General mixed	West Somerset District Council
207	WEY156	14.2	Aquarium	Weymouth and Portland Borough Council

Appendix H: Zoological collections in this study believed to be holding a wrong dispensation

<u>Zoo Code</u>	<u>Disp.</u>	<u>Type</u>	<u>Local Authority</u>
BAN174	14.1.a	Invertebrate	Allerdale Borough Council
TRO148	14.2	General mixed	Allerdale Borough Council
TIG140	14.2	Other	Aylesbury Vale District Council
BIR20	14.2	General mixed	Birmingham City Council
NAT93	14.2	Aquarium	Birmingham City Council
SEA119	14.2	Aquarium	Blackpool Borough Council
BOL28	14.2	Aquarium	Bolton Metropolitan Borough Council
OCE100	14.2	Aquarium	Bournemouth Borough Council
CLI181	14.1.a	Other Bird	Bradford Metropolitan District Council
SEA118	14.2	Aquarium	Brighton & Hove City Council
BLU26	14.2	Aquarium	Bristol City Council
THE220	14.1.a	General mixed	Broadland District Council
FAL56	14.2	Bird of Prey	Bromsgrove District Council
MAN206	14.1.a	Invertebrate	Calderdale Metropolitan Borough Council
THE221	14.1.a	Invertebrate	Calderdale Metropolitan Borough Council
WIL160	14.2	General mixed	Canterbury City Council
ENG52	14.2	Bird of Prey	Central Bedfordshire Council
TRO145	14.2	Invertebrate	Chelmsford Borough Council
GAU62	14.2	Bird of Prey	Cheshire East Borough Council
REA114	14.2	General mixed	Cheshire East Borough Council
OWL102	14.2	Bird of Prey	Copeland Borough Council
BLU25	14.2	Aquarium	Cornwall Council
COR46	14.2	Bird of Prey	Cornwall Council
PAR103	14.2	Other Bird	Cornwall Council
BIR19	14.2	Other Bird	Cotswold District Council
COT47	14.2	Bird of Prey	Cotswold District Council
RAR113	14.2	General mixed	Dover District Council
WIN162	14.2	General mixed	Dover District Council
BEA15	14.2	Bird of Prey	Durham County Council
ESC53	14.2	Farm Park	East Devon District Council
WOR167	14.2	Farm Park	East Devon District Council
CEN179	14.1.a	Other	Forest Heath District Council
INT74	14.2	Bird of Prey	Forest of Dean District Council
GRE65	14.2	Aquarium	Great Yarmouth Borough Council
FAL57	14.2	Bird of Prey	Hambleton District Council
FAL58	14.2	Bird of Prey	Hambleton District Council
MON209	14.1.a	Farm Park	Hambleton District Council
WEL228	14.1.a	Farm Park	Hart District Council

WIL161	14.2	Bird of Prey	Hertsmere Borough Council
HOL198	14.1.a	Farm Park	Horsham District Council
HUX72	14.2	Bird of Prey	Horsham District Council
RAP112	14.2	Bird of Prey	Huntingdonshire District Council
SEA122	14.2	Other Bird	Isle of Wight Council
THE138	14.2	Other	Isle of Wight Council
WIC231	14.1.a	Other Bird	Kettering Borough Council
HUN71	14.2	Other	King's Lynn and West Norfolk Borough Council
BUT39	14.2	Invertebrate	Lancaster City Council
EMS189	14.1.a	Farm Park	Leeds City Council
TRO146	14.2	General mixed	Leeds City Council
CRY234	14.1.b	Farm Park	London Borough of Bromley
MAR207	14.1.a	Farm Park	London Borough of Greenwich
AVI9	14.2	Other Bird	Maidstone Borough Council
SUF134	14.2	Bird of Prey	Mid Suffolk District Council
TUL224	14.1.a	Farm Park	Mid Sussex District Council
WAS227	14.1.a	Farm Park	Mid Sussex District Council
STE218	14.1.a	Other	Middlesbrough Council
LIB84	14.2	Bird of Prey	New Forest District Council
NEW96	14.2	General mixed	New Forest District Council
PAU104	14.2	Other Bird	New Forest District Council
CEN178	14.1.a	Other	Newark and Sherwood District Council
WHI230	14.1.a	Farm Park	Newark and Sherwood District Council
EXM55	14.2	General mixed	North Devon District Council
COU183	14.1.a	Farm Park	North Somerset Council
THE236	14.1.b	Invertebrate	North Somerset Council
BLU27	14.2	Aquarium	North Tyneside Metropolitan Borough Council
KIE76	14.2	Bird of Prey	Northumberland County Council
NAT91	14.2	Aquarium	Plymouth City Council
BLU23	14.2	Aquarium	Portsmouth City Council
KIR78	14.2	Bird of Prey	Redcar & Cleveland Borough Council
ALS1	14.2	General mixed	Sedgemoor District Council
BOT176	14.1.a	Other Bird	Sefton Metropolitan Borough Council
COO182	14.1.a	Other	Sevenoaks District Council
EAG49	14.2	General mixed	Sevenoaks District Council
PAR214	14.1.a	Farm Park	Shropshire Council
LAK82	14.2	General mixed	South Lakeland District Council
TUR149	14.2	Bird of Prey	South Ribble Borough Council
FER191	14.1.a	Other	South Somerset District Council
HAW195	14.1.a	Reptile/Amphibian	Southampton City Council
SEA117	14.2	Aquarium	Southend on Sea Borough Council
ABB171	14.1.a	Other Bird	St Edmundsbury Borough Council
GEN63	14.2	General mixed	Stafford Borough Council

TRE142	14.2	Other	Stafford Borough Council
KIN77	14.2	Bird of Prey	Staffordshire Moorlands District Council
WAS152	14.2	Other Bird	Sunderland City Council
BRI32	14.2	General mixed	Tandridge District Council
DAR185	14.1.a	Farm Park	Teignbridge District Council
SHA125	14.2	General mixed	Teignbridge District Council
LAK202	14.1.a	Farm Park	Telford & Wrekin Borough Council
FIN192	14.1.a	Farm Park	Test Valley Borough Council
LIV86	14.2	General mixed	Torbay Council
WAL226	14.1.a	General mixed	Warrington Borough Council
BEN17	14.2	Other Bird	Wealden District Council
BEA14	14.2	General mixed	West Berkshire District Council
LIV87	14.2	General mixed	West Berkshire District Council
FAR190	14.1.a	Farm Park	West Lancashire District Council
WOO165	14.2	Bird of Prey	West Lindsey District Council
WEY156	14.2	Aquarium	Weymouth and Portland Borough Council

Appendix I: Scoring of zoological collections on standards of modern zoo practice

All the values in the following table are averages of values obtained from analysis of zoo inspection reports (N=number of reports received from the local authority). The zoological collections are represented by codes not necessarily related to the names of the collections, and they have been ordered alphabetically by code. The “issues” referred in the third, fourth and fifth column are “unsatisfactory issues” found from the inspectors comments, as is the case of the second column. Seventh column does not include environmental or enforcement licence conditions derived from EC Zoos Directive (see text). For the method to calculate the standards’ scores of the eighth, ninth and tenth columns see text⁸⁸. The selected collections that are part of this study from which the local authority did not send us any inspection report of any kind have not been included in this list since they cannot be evaluated with the method chosen. In red are collections that score “negatively” in the tenth column, and therefore which the author considered sub-standard in terms of modern zoo practice during the period studied.

Zoo code	Unsa- tisfactory issues	Recurrent issues from last inspection	Recurrent issues from second to last inspection	Recurrent issues from third to last or earlier inspections	Recognised licence conditions breaches	Breaches of Conservation/ Animal welfare conditions defined in the EC Zoos Directive	Standards score from all inspections	Standards score from last inspection	Standards score from all formal inspections	N
AFR237	5.00	3.00	2.00	2.00	1.50	3.25	-1.50	-1.00	-2.00	4
ALS1	1.00	0.00	0.50	0.00	0.00	0.50	1.75	3.00		4
ANI6	5.75	0.00	0.67	0.00	0.50	3.50	0.75	3.00	-1.50	4
ANI7	8.00	1.80	1.25	0.67	0.20	4.40	-0.20	-2.00	-2.00	5
AVI9	16.00	?	?	?	1.00	6.00	-2.00	-2.00	-2.00	1
BAN239	10.67	1.00	0.00	1.00	0.00	7.67	-0.67	2.00	-0.67	3
BAR10	12.00	?	?	?	?	4.00	0.00	0.00	0.00	1
BAR11	8.00	1.33	0.00	0.00	1.00	3.67	1.00	3.00	0.50	3
BAT12	1.71	0.14	0.00	0.17	0.00	0.71	2.00	3.00	0.50	7
BEA14	0.33	0.00	0.00	0.00	0.00	0.33	2.67	3.00	2.00	3
BEA15	9.00	0.00	?	?	0.00	3.50	0.00	-2.00	0.00	2
BEA16	7.00	0.67	0.00	0.00	0.75	3.00	-0.50	-1.00	-1.50	4
BEN17	12.40	1.50	1.00	1.00	0.80	5.80	-0.80	-2.00	-2.00	5
BIR18	6.50	0.00	?	?	0.00	1.50	0.50	-1.00	0.50	2
BIR19	12.00	1.00	?	?	0.50	5.00	-1.50	-1.00	-2.00	2
BIR20	3.83	0.40	0.00	0.00	0.17	1.33	1.33	2.00	2.00	6
BIR240	6.17	1.33	1.40	1.40	1.67	4.00	-1.00	-2.00	-2.00	6
BLA241	8.50	1.00	?	?	1.00	6.50	-1.50	-1.00	-2.00	1
BLE22	11.50	1.00	?	?	0.00	7.50	0.00	2.00	0.00	2
BLU23	3.00	1.00	0.00	?	0.00	1.33	2.00	2.00	2.00	3
BLU24	4.83	1.60	0.75	1.50	0.67	4.00	-0.33	3.00	-1.00	6
BLU25	4.75	0.67	0.00	0.00	0.00	3.25	0.50	-1.00	0.00	4

⁸⁸ Note that each zoo would have scored differently if other methods to evaluate the standards of modern zoo practice had been used. A negative score that qualifies a collection as sub-standard in this study does not mean that in another study using a different method the collection would not have received a positive score, qualifying it as over-standard.

BLU26	0.50	0.00	?	?	0.00	2.00	2.00	2.00	2.00	2
BLU27	0.67	0.00	0.00	0.00	0.00	0.67	2.67	3.00	2.67	3
BOL28	5.00	2.50	2.00	1.00	0.60	4.40	0.00	-1.00	-1.00	5
BOT176	4.50	5.00	?	?	?	3.50	0.00	0.00		2
BRE31	3.75	0.38	0.17	0.50	0.25	2.38	0.88	-2.00	-0.33	8
BRI244	2.83	1.00	0.25	0.00	0.00	1.33	1.17	3.00	0.00	6
BRI32	7.20	1.00	0.33	0.00	1.20	3.20	0.40	2.00	0.00	5
BRI33	9.67	1.00	3.00	?	0.33	3.67	-0.33	-1.00	-1.50	3
BRO34	4.88	0.71	0.17	0.00	0.50	3.50	0.75	2.00	0.00	8
BUC35	11.00	2.00	?	?	0.00	3.50	0.00	2.00	-2.00	2
BUT36	5.67	1.00	0.00	0.00	1.33	1.67	-0.33	-2.00	-2.00	3
BUT37	3.11	0.89	1.00	0.89	1.89	2.11	-0.44	-2.00	-2.00	9
BUT38	4.33	0.33	0.00	0.33	0.83	2.17	0.00	2.00	-1.50	6
BUT39	15.25	7.00	3.50	3.00	1.25	9.00	-2.00	-2.00	-2.00	4
CAN41	2.00	0.00	0.00	0.00	0.00	0.33	1.67	2.00	1.00	3
CAT42	7.67	1.67	1.50	0.33	0.50	2.17	-0.50	-1.00	-1.00	6
CHE245	5.50	1.20	0.50	0.33	1.17	2.67	-0.17	3.00	-2.00	6
CHE246	3.80	0.50	0.00	0.50	0.00	2.00	1.00	3.00	-1.00	5
COL247	1.00	0.10	0.00	0.10	0.00	0.64	2.36	3.00	2.00	1 1
COO182	0.00	?	?	?	?	0.00	0.00	0.00		1
COR46	11.00	0.80	0.00	4.60	2.50	5.83	-0.33	-2.00	-2.50	6
COT47	5.50	0.00	?	?	0.50	0.50	0.50	-1.00	-1.00	2
COU183	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		1
CRY234	1.00	0.00	0.00	0.00	0.00	0.50	2.50	3.00	2.00	2
DAR249	11.20	5.00	0.00	0.00	0.80	6.60	-1.00	-2.00	-0.67	5
DRA250	3.43	0.50	0.40	0.20	0.00	2.57	1.29	2.00	0.50	7
DRU251	6.00	1.71	1.00	1.50	1.14	3.00	-0.86	-1.00	-1.00	7
DUD252	10.67	1.20	1.25	1.67	0.00	6.17	-1.33	-1.00	-1.00	6
EAG49	13.67	5.50	2.00	?	1.33	7.33	-1.67	-1.00	-2.00	3
EDE51	8.63	1.40	0.50	1.00	1.71	6.38	-1.00	0.00	-3.00	8
ENG52	4.75	0.29	0.17	0.80	0.38	3.50	1.00	3.00	-1.50	8
ESC53	10.33	1.00	2.00	2.00	2.50	6.67	-1.33	-2.00	-2.00	3
EXM55	10.00	1.00	?	?	1.00	7.00	-1.50	-1.00	-1.50	2
FAL56	8.80	0.00	0.00	0.67	0.00	5.00	0.80	2.00	-1.50	5
FAL57	8.25	2.75	1.50	1.29	1.00	4.75	-0.38	-1.00	-1.50	8
FAL58	4.67	0.40	0.75	0.50	0.83	1.50	0.50	3.00	-1.50	6
FAR190	0.00	0.00	0.00	0.00	?	0.00	0.00	0.00		1
FAR59	14.60	2.00	3.00	1.50	3.00	8.40	-2.20	-2.00	-2.33	5
FER191	0.00	?	?	?	?	0.00	0.00	0.00		1
FIN192	0.00	0.00	0.00	0.00	?	0.00	0.00	0.00		1
FLA253	2.25	0.00	0.00	0.00	0.25	0.88	1.88	3.00	0.50	8
FOX61	1.43	0.14	0.00	0.20	0.14	0.71	2.14	3.00	0.50	7
GAU62	5.60	1.50	0.33	0.33	0.60	2.80	0.00	3.00	-0.33	5
GEN63	8.00	1.00	?	?	0.00	4.50	0.50	2.00	0.50	2

GOL64	5.86	2.86	1.33	0.60	0.60	3.86	0.57	3.00	0.00	7
GRE65	5.40	0.33	0.00	0.00	0.25	3.00	0.20	-1.00	-0.50	5
HAR255	4.75	0.00	0.50	0.00	0.25	3.50	0.50	-1.00	-1.00	4
HEN67	3.00	?	?	?	?	0.00	2.00	2.00	2.00	1
HOL68	5.83	0.50	0.17	0.60	0.50	1.83	1.17	-2.00	-1.50	6
HOO69	5.60	0.75	0.25	0.00	0.00	2.00	1.00	3.00	-1.50	5
HOR199	0.00	?	?	?	?	0.00	0.00	0.00	0.00	1
HOR70	11.00	?	?	?	?	9.00	0.00	0.00	-1.00	1
HOW256	5.75	1.00	2.00	1.00	1.00	3.25	0.00	-2.00	-2.00	4
HUN71	1.17	0.00	0.00	0.00	0.00	0.83	2.67	3.00	2.00	6
HUX72	31.50	14.00	?	?	1.50	14.00	-2.50	-3.00	-2.50	2
ILF73	5.50	0.00	?	?	0.50	3.00	-1.00	-1.00	-1.00	2
INT74	6.25	1.00	3.00	0.00	0.50	4.00	-0.25	3.00	-1.50	4
ISL257	6.20	1.40	1.00	1.00	0.75	3.40	-1.00	-2.00	-1.50	5
ISL75	2.00	0.33	0.00	0.00	0.00	1.25	1.50	2.00	1.00	4
KIE76	10.00	0.00	?	?	0.00	2.50	0.00	-2.00	-2.00	2
KIN77	29.75	12.33	15.00	6.00	9.75	16.00	-2.75	-2.00	-2.67	3
KIR78	5.25	0.67	0.00	0.00	0.00	1.75	0.50	-1.00	-1.00	4
KNO258	9.50	1.00	1.00	0.50	1.33	5.25	-0.75	-2.00	-2.00	4
KNO79	9.83	1.83	1.50	1.67	1.00	4.83	-0.83	-1.00	-1.50	6
LAK81	7.00	0.00	?	?	0.50	3.50	0.50	2.00	0.50	2
LAK82	7.75	1.00	2.00	?	2.00	4.25	-1.50	-2.00	-2.00	4
LIB84	4.38	1.00	0.80	0.40	0.38	1.50	0.25	-1.00	0.50	8
LIN259	5.33	2.00	0.60	0.25	0.50	1.83	0.00	-1.00	-0.67	6
LIV86	2.00	1.00	1.00	?	0.00	0.67	1.33	2.00	1.00	3
LIV87	4.33	0.00	0.00	0.00	0.00	2.33	1.67	2.00	1.00	3
LON260	2.40	0.80	0.00	0.25	0.60	1.60	1.20	3.00	-2.00	5
LON261	12.25	2.75	3.00	1.50	1.75	6.25	-1.75	-2.00	-0.67	4
LOT263	6.80	0.60	0.00	0.67	0.20	4.20	0.40	-1.00	-1.50	5
MAR265	3.75	1.00	0.33	0.00	0.00	1.25	1.25	2.00	0.50	4
MEL88	25.50	12.00	?	?	?	15.00	-2.00	-3.00	-2.00	2
MON209	0.00	1.00	1.00	1.00	?	0.00	0.00	0.00	2.00	5
MON90	1.20	0.00	0.00	0.00	0.00	0.00	2.60	3.00	2.00	5
NAT211	0.50	0.00	0.00	0.00	?	0.50	0.00	0.00		2
NAT91	1.75	0.00	0.00	?	0.00	1.00	2.00	2.00	2.00	4
NAT93	2.33	0.00	0.00	0.00	0.00	1.83	2.00	3.00	0.50	6
NAT94	1.00	0.00	0.00	0.00	0.00	0.50	2.50	3.00	2.00	3
NAT95	4.50	0.50	1.00	1.00	0.25	2.00	0.50	2.00	-1.00	4
NEW267	2.00	0.17	0.17	0.20	0.00	1.33	2.00	-1.00	0.50	6
NEW96	4.80	0.80	0.40	0.40	0.60	3.00	1.00	3.00	-2.00	5
NOR97	7.50	1.80	1.00	2.00	3.25	5.83	-0.17	3.00	0.00	6
OCE100	7.50	4.00	?	?	0.00	2.50	0.00	0.00	0.00	2
OLD101	8.43	0.33	0.20	1.25	0.67	3.29	0.43	-1.00	-2.00	7
OWL102	5.75	1.75	1.00	0.00	0.25	2.00	0.75	3.00	-1.00	4

PAI269	4.20	1.25	0.33	0.00	0.60	2.60	0.20	3.00	-2.00	5
PAR103	0.17	0.00	0.00	0.40	0.00	0.00	2.17	3.00	0.50	6
PAR270	2.45	0.00	0.00	0.30	0.20	1.18	1.64	2.00	-1.50	1
PAU104	3.71	0.00	0.60	0.00	0.17	1.86	1.43	3.00	-0.33	7
PEC105	8.50	1.00	?	?	0.50	2.00	0.00	-2.00	0.00	2
PET108	13.20	3.25	1.67	3.00	3.80	7.20	-2.20	-1.00	-2.00	5
PRI111	13.80	4.00	4.33	1.75	3.00	9.00	-1.80	-2.00	-2.00	5
RAP112	3.00	0.25	0.00	0.00	0.00	2.20	1.40	-1.00	0.50	5
RAR113	8.20	0.25	0.00	1.75	1.20	3.60	0.80	2.00	0.00	5
REA114	16.75	2.67	3.00	3.00	3.00	12.25	-2.00	-1.00	-2.00	4
SEA117	3.25	0.00	0.00	0.00	0.00	1.25	1.50	3.00	0.50	4
SEA118	2.00	1.33	0.00	0.00	0.75	2.00	0.25	2.00	0.00	4
SEA119	10.25	2.57	1.00	1.20	0.50	7.25	-0.75	2.00	-1.50	8
SEA121	3.75	0.67	1.00	0.00	0.00	1.00	1.25	2.00	0.50	4
SEA122	3.00	0.00	0.00	0.00	0.00	2.67	1.33	-1.00	0.50	3
SEC123	4.40	0.50	0.50	1.33	1.40	0.80	0.00	3.00	-2.00	5
SEW124	15.00	?	?	3.00	5.00	11.50	-2.00	-3.00	-2.00	2
SHA125	6.25	0.67	0.50	0.00	1.00	2.50	-0.25	-1.00	0.00	4
SHE272	7.80	0.25	0.00	0.33	0.40	4.80	1.40	2.00	0.33	5
SLI273	4.33	0.40	0.50	0.00	0.33	1.50	0.33	2.00	-0.33	6
SMI126	10.83	2.00	1.50	1.00	1.20	5.17	-1.00	-2.00	-0.67	8
SOU128	6.20	0.00	0.00	0.00	0.25	2.60	0.80	-1.00	-0.33	5
SOU274	9.50	1.60	3.25	1.50	1.17	4.83	-1.67	-2.00	-2.00	5
STA130	8.00	0.50	0.00	?	0.00	6.00	-0.33	-2.00	-1.50	3
STO131	16.00	3.00	3.00	3.00	2.50	9.67	-2.00	-2.00	-2.00	3
STR132	4.00	0.33	0.00	0.00	0.33	1.33	1.33	-1.00	0.50	3
SUF134	8.00	2.00	0.00	0.00	0.33	3.67	0.33	3.00	-1.00	3
SUN219	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.50	1
THE136	5.00	1.00	?	?	1.00	2.00	0.50	-1.00	0.50	2
THE138	9.00	4.00	?	?	2.00	3.50	0.00	-2.00	0.00	2
THE139	22.33	8.50	3.00	2.00	5.00	12.33	-2.33	-1.00	-3.00	3
THE220	0.67	0.50	0.00	?	?	0.67	0.00	0.00		3
THE235	2.00	?	?	?	0.00	0.00	-1.00	-1.00		1
THE236	3.00	?	?	?	?	0.00	2.00	2.00	2.00	1
THR276	8.00	0.17	0.00	0.00	0.67	6.14	-0.29	-1.00	-2.00	7
TIG140	7.50	?	?	?	0.00	1.00	1.00	2.00	2.00	2
TIL141	10.67	2.00	2.00	?	0.67	4.33	-1.33	-1.00	-1.50	3
TRE142	1.67	0.00	0.00	?	0.00	0.00	2.33	2.00	2.50	3
TRI223	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		1
TRO143	17.75	0.67	4.67	1.00	2.33	8.25	-1.75	-1.00	-3.00	4
TRO144	9.60	1.00	0.67	1.00	0.20	5.40	-0.60	-2.00	-2.00	5
TRO145	12.50	2.00	?	?	0.50	6.50	-1.50	-2.00	-1.50	2
TRO146	16.20	3.25	0.67	2.50	2.00	9.00	-1.40	-2.00	-2.50	5
TRO147	12.00	1.17	2.40	1.00	2.80	6.33	-0.33	-1.00	-3.00	6

TRO148	5.60	2.20	1.00	0.50	1.60	1.80	-1.00	-1.00	0.00	5
TUR149	6.75	1.33	0.33	1.00	1.50	2.00	0.25	-2.00	0.00	4
TWY277	7.33	2.50	0.00	?	1.00	3.67	-1.00	0.00	-1.50	3
WAL226	0.00	?	?	?	?	0.00	0.00	0.00		1
WAS152	6.00	0.00	0.00	?	0.00	4.33	0.00	2.00	0.00	3
WAS227	0.00	?	?	?	?	0.00	0.00	0.00		1
WEL228	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		1
WES153	14.75	6.00	3.25	0.00	3.75	8.50	-2.00	-2.00	-2.00	4
WES278	8.50	2.00	0.00	0.33	0.83	5.50	1.00	3.00	-2.00	6
WET155	14.80	0.50	0.00	4.33	1.80	8.40	-0.40	-1.00	-3.00	5
WEY156	2.00	0.00	0.33	0.00	0.33	0.00	1.33	2.00	0.50	3
WHI230	0.00	?	?	?	?	0.00	0.00	0.00		1
WHI279	4.80	2.50	0.33	0.00	1.00	3.00	1.00	3.00	-1.50	5
WIL158	10.67	2.00	?	?	0.00	4.33	-1.33	-1.00	-1.50	3
WIL159	8.00	2.67	4.00	0.00	1.25	1.75	-0.75	-1.00	-0.33	4
WIL160	12.50	9.50	5.33	3.00	2.50	6.50	-1.50	-2.00	-1.33	4
WIL161	5.00	0.00	?	?	0.00	3.00	0.50	-1.00	0.50	2
WIN162	3.50	0.00	0.00	0.00	0.25	1.75	2.25	-2.00	-2.00	8
WOB280	6.00	0.25	0.00	0.60	0.80	3.80	0.00	-2.00	-2.00	6
WOO165	6.75	2.00	0.50	0.00	1.25	5.00	-0.75	2.00	-2.00	4
WOR166	6.80	4.50	2.00	1.00	3.50	4.00	0.20	2.00	0.00	5
WOR167	12.00	2.67	0.00	0.00	2.33	5.33	-0.33	-2.00	-2.00	3
WYE168	7.00	?	?	?	0.00	2.00	-1.00	-1.00	-1.00	1
YOR169	14.83	2.20	2.75	1.67	3.33	6.50	-1.33	-2.00	-2.33	6
YOR170	5.00	0.00	0.67	0.00	0.20	4.80	0.20	-1.00	0.00	5

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