

Arboricultural Association

Report Writing Guidance

INTRODUCTION

1. Anyone advising clients should expect to be called on for a written account of that advice – a report. That may be produced in a variety of forms e.g. a letter, a structured bound report, or a proof of evidence. Whatever the form and whoever the author (tree officer, contractor or consultant), there are skills that must be applied to ensure that the output is fit for purpose, intelligible to the reader and defensible by the author.
2. Often, the wording of a letter (or even an email) will require the most care and thought to make sure that the message is clear, complete and concise. However, a formal report or proof of evidence will be governed by a logical structure and will provide more opportunity to discuss and explain data and reasoning. But, recognising what to say, how to say it and when to stop is a crucial skill!
3. Report writing does not come naturally to all of us; guidance and practise will help you to develop and hone that skill. Getting help from a colleague or independent mentor will be invaluable, particularly to read and give feed back on draft reports. These notes identify some of the issues that you should consider when drafting reports to help create a robust product.

THE ARBORICULTURAL ASSOCIATION REGISTERED CONSULTANT SCHEME

4. Ultimately, as someone who has an appropriate level of knowledge and experience and advises clients on arboricultural matters in the most complex and demanding situations, you can apply to become an Arboricultural Association Registered Consultant (AARC). Applicants to this scheme are expected “to demonstrate clear and logical thought processes, with the ability to impart their knowledge and opinions in a dispassionate and objective manner”.¹
5. These notes will help aspiring applicants to the scheme review their skills in presenting information and opinion in a written form. The assessment of the portfolio of reports that must be submitted by applicants will be carried out to confirm that the expected standards have been met.
6. The aims and objectives of the assessment are:
 - a) To assess the applicant to the required standards of the AARC scheme as set out in the Assessment Criteria (see Appendix C of the AARC Application Pack).
 - b) For the assessment, whatever the outcome, to provide guidance to the applicant for further development and improvement of their skills.
 - c) To ensure that a successful applicant is aware of his or her responsibilities in terms of:
 - i) an understanding of and adherence to the AA's Code of Professional Conduct and Code of Ethics,
 - ii) a more general understanding of professional behaviour in other fields,
 - iii) an understanding of the duties and responsibilities of an expert witness,
 - iv) a more general understanding of client expectations, compliance with insurers' terms and conditions, and that a consultant is never “off duty”, and
 - v) cognisance of the role of an AARC as an ambassador for the profession.

REPORT WRITING

7. **Principles of Drafting Individual Reports.**
 - a) Reports are not just about the layout, construction, reasoning and justification of information, but also your mind-set. The mind-set relates to your general approach. A good mind-set is one where the individual:
 - i) conveys authority without arrogance,

1 AARC Application Pack. www.trees.org.uk

Arboricultural Association

Report Writing Guidance

- ii) shows a command of the technical and behavioural aspects,
- iii) has the ability to accept criticism constructively,
- iv) is courteous,
- v) has the ability to listen and impart knowledge and experience objectively, and above all
- vi) is a credible ambassador for the profession.

b) Two fundamental maxims that apply to any written or spoken work are:

- i) **Do not say or write anything that you would not be prepared to justify in the witness box.**

The chances are very remote that any court action would ensue for the vast majority of work, but this is a fundamental principle that is often ignored simply because there is no realistic prospect of being in the witness box. The principles of the *Civil Procedure Rules* (CPR35) and where appropriate the *Criminal Procedure Rules* (CrimPR 33) should be maintained at all times even though you may not need to abide by every factor in every case or provide evidential details to the same focus. Adherence to these principles is not difficult if you have the right mind-set, and they are a natural complement to the AA's Code of Professional Conduct and Ethics. You must also recognise your responsibilities to your Professional Indemnity insurers.

- ii) **If, set against the terms of reference, the reader of a report has any substantive questions about its contents or consequences, the report has failed in its purpose.**

This does not necessarily mean that the report is worthless, but it must provide:

- a comprehensive portrayal of the problem (a consultant is usually only instructed to answer a problem),
- the means by which you have examined and reasoned the problem,
- the justifications for the outcome(s), such additional ancillary information as may be sensible, and
- crucially - what to do next.

c) An otherwise good report should not leave the reader confused. On reading a report the reader should have a full understanding of the report and know where he or she stands, and what to do next.

d) Staying within the bounds of one's professional field is essential and these notes assume that you have no professional expertise in other fields. Failure to abide by this maxim could well undermine your more general credibility. However, where you do have additional professional expertise this may allow a degree of "cross-over", but there is a considerable difference between having a qualification and being experienced with its use.

8. **Comprehensive knowledge and understanding of the subject areas encountered by the author of a report**

a) *Knowledge*

- i) This is self-explanatory insofar as any information contained within a report should be up to date, bearing in mind the date of issue of the report.
- ii) Clearly, information that is demonstrably out of date at the time of issue, or inaccurate or misleading, is deficient.
- iii) Where information is subject to conjecture or in any other way is not definitive, you should qualify the use of it.
- iv) Where knowledge is derived from your own experience this should be made clear.

Arboricultural Association

Report Writing Guidance

- v) Sources of knowledge should be acknowledged and not infringe copyright.
- vi) Blatant plagiarism (unaccredited) is unwelcome but there are many subjects where certain phraseology is in common use and the familiarity is generally understood and accepted.

b) *Interpretation of reference material and other data*

- i) Interpretation is different to application; the latter being how one uses information.
- ii) Interpretation relates to understanding and in this context it relates to information from other professional fields as well as arboriculture. You must demonstrate the ability to extract the pertinent facets of technical information in a manner that clearly demonstrates comprehension.
- iii) In respect of laboratory results you should understand the limitations of the instructions issued to the laboratory and be aware of the consequent qualifications of the results.
- iv) In respect of statistical analysis you should understand the concept and context of data and be alert to sample construction, standard deviation and other statistical tools. Statistics is a defined professional field and you should not attempt detailed analysis or draw proportional representations without setting out the limitations.
- v) Where calculations are undertaken, you must demonstrate an understanding of accuracy context. If the input material is approximate, estimated by rule of thumb or applying a generality to specific site circumstances, a resultant number to pinpoint accuracy is portraying false accuracy. A very simple example is the radius of an RPA – would anyone with experience of construction sites expect a radial measurement of say, 7.42 metres, to be workable at all?

c) *Limits of experience and expertise*

You must recognise and elucidate the boundaries of your knowledge and experience, and how far you are able to interpret matters in hand.

9. Analysis of Information

a) *Collect and verify data.*

- i) Some assumptions are inevitable, but a report should identify them as such. The accuracy of facts may need to be qualified, because some details may be anecdotal, others not current, and others intrinsically inexact.
- ii) Superfluous data are a distraction and can confuse the issue, whereas insufficient data compromise the basis for subsequent discussion and opinion.
- iii) If more than one method of data collection was available, you should explain why the particular method was chosen.
- iv) Data must be clearly presented and cross-referenced.
- v) Data supplied by others must be identified and attributed, and if appropriate you should indicate the degree of reliance put upon them.
- vi) Descriptions must be consistent throughout a report.
- vii) There are very few “absolutes” about trees, and matters that are subjective judgements should not strictly speaking be described as data.
- viii) Data can need qualification.
- ix) If, having gone to the trouble of collecting data of the appropriate accuracy and distinguishing between assumptions, opinions and facts, the data are presented inaccurately or in a misleading way the functionality of a report is compromised, as is your professionalism.

Arboricultural Association

Report Writing Guidance

x) In all work, but with litigation particularly, a professional arboriculturist must separate facts (verifiable data) from assumptions, justifications and opinions.

b) *Employment of critical analysis in a logical manner*

i) Such analysis must be ruthlessly objective.

ii) The author and reader must be in no doubt that the method of analysis is appropriate, otherwise the opinion derived could be flawed.

iii) The explanation of analysis must follow a logical progression, which in practice means that the reasoning must flow with no gaps or sudden leaps. A complicated situation may benefit from being illustrated graphically.

10. Development of reasoned opinions

a) *Logical progression from analysis*

i) The formation of an opinion is the fundamental function of the author of a report.

ii) You should set out the reasoning in a manner that leads the reader to anticipate the opinion. Thus the opinion should not be a surprise to the reader but more of a confirmation of the analysis and logic.

b) *Opinions to be clear and unambiguous*

i) An opinion can be in three fundamental forms:

- a firm opinion – the only outcome
- a conditional opinion – the outcome is qualified
- an optional opinion – there is more than one outcome

ii) In each instance the outcome must be justified and be a logical progression from the analysis of data.

11. Conclusions and recommendations

a) *Logical progression from analysis*

i) A conclusion is what to do with the opinion, and the recommendations are how to carry it out.

ii) As with the opinion flowing from the analysis, the conclusions should be the logical outcome of the opinion(s).

iii) The whole purpose of a report is to solve a problem and the conclusions will do just that.

iv) The conclusions will relate directly to the instructions. If there are say, six specific items in the instructions you must provide six corresponding conclusions, along with any other matters that are relevant.

v) Ideally each conclusion should be short as the function is to answer each item of the instructions. The details are in the report.

b) *Clarity and non-ambiguity*

i) Your recommendations should be absolutely clear and with unambiguous specifications and must include all actions necessary to fulfil the conclusions.

ii) If there are technical terms these should be defined or referred to in a glossary.

Arboricultural Association

Report Writing Guidance

12. Written output

- a) Does the report, letter, statement or even e-mail achieve its objective? Is it a product worthy of the title “professional” and would the client be content to pay for it? Have you offered what you know or what the client needs? There is a marked difference. The following elements will usually be expected in a report.
- b) *Terms of Reference/Instructions and Summary*
 - i) Some authors separate these, some do not, but it doesn’t matter provided that the meaning is clear.
 - ii) Terms of Reference (ToR) are the fundamental framework of a task.
 - iii) Some form of summary at the start of a report or statement is essential, although not necessarily if a brief letter is submitted.
- c) *Methods of data collection*
 - i) You should list all means of data collection and the standards, conventions and guidance observed. All pertinent methods should be appropriate to the task and clearly described.
 - ii) What did you actually do in collecting data? How did any limitations of access affect data collection? For example, is it acceptable when assessing the structural condition of a tree where the matter is crucial, to say that access to the base of the tree was impeded?
 - iii) The weather conditions at the time of the site visit are commonly mentioned, but with no explanation as to implications.
 - iv) The description of the site should be clear and use orientation indicators.
 - v) Neighbouring land and the wider vicinity are usually important to provide the landscape context. There are very few instances when the soil type is of no relevance.
- d) *Constraints*
 - i) Your report should set out all the factors that affect the gathering of data and writing of the report.
 - ii) Set out the protection status of trees on and off the site, or state if no investigation took place.
- e) *Distinct separation of facts from assumptions*
 - i) A fact is something that can be verified independently without conjecture. There will be discrepancies of, for instance, linear separation distances between a tree and a structure. You should state the conventions observed and any modifications of method necessitated by the site circumstances.
 - ii) Anything that is not a fact is an assumption and must not be cited as a fact. Confusion between the two in a litigation statement is usually a major deficiency.
 - iii) Where facts are derived from references they must be cited and attributed.
 - iv) Where facts in relation to the specific matters of the site are derived from the previous work of others, particularly when not connected with you, you must state the degree of reliance upon them.
 - v) Quantities and measurements are usually facts, but you must state the degree of accuracy adopted. The simplest way of doing this is to use terms such as “about”, “approximately”, “estimated”, “or so” etc.
- f) *Distinct separation of opinions from conclusions and recommendations*
 - i) Opinions are often either included in the discussion part of a report or within the conclusions. There is no need for a distinct section provided that the separation is clear. (You should be firm and offer opinions in the first person with direct phrases. “It is my opinion that ...” is better written (or spoken) as, “in my opinion ...” or “my opinion is ...”.

Arboricultural Association

Report Writing Guidance

- ii) Conclusions and recommendations should be under separate headings for the simple reasons that:
 - conclusions answer the Terms of Reference, and
 - recommendations set out the action needed to effect the conclusions.

g) *Clear and relevant graphics*

- i) The fundamental importance of graphics cannot be over-emphasised. They include plans, photographs, diagrams, tables and any other visual presentations that are vital elements of a report.
- ii) The single most important criterion is clarity. A picture is supposed to “save a thousand words” – it must not generate a thousand questions!
- iii) Check that the graphic is comprehensible and assists with the portrayal of the subject matter.

h) *Navigation*

- i) Navigation of a report is something that requires very careful consideration given that whoever reads it must be able to find their way around it.
- ii) The contents page should be clear and accurate.
- iii) Each page should be numbered with the total of the pages.
- iv) Cross-referencing must be accurate.
- v) Section headings must be clear and relate to the subject matter they refer to.

i) *Appendices and References*

- i) Appendices should be used whenever there is a requirement for detail that would spoil the flow of a report text, or would otherwise be a distraction.
- ii) Where a report is presented to the standard of a proof, it is usually helpful to have appendices identified either with a separation page of a different colour, or tabbed dividers.
- iii) Extracts, whether scanned or typed, must be clearly identified as such and properly attributed and referenced.
- iv) Footnotes must relate to the mentions in the text and are usually identified with superscript numbers. If more than one superscript reference is made to a footnote or if for spatial reasons a footnote appears on a different page, this should be made clear.
- v) There should be a listing of the technical books/papers and other documents referred to, together with details of other people approached to provide pertinent information.

j) *English*

- i) In terms of writing structure there should be no long convoluted sentences, or long paragraphs.
- ii) The layout of a page is also of critical importance – white space being particularly valuable as relief to the eye. The appearance of a report must be inviting and not a distraction.
- iii) Individual styles of writing are absolutely essential and no one would want any form of “homogenised” or “standard” writing style.
- iv) You must confine your technical comments to your field and not stray into other professional disciplines, e.g. describing the ecological value of a site in the absence of any technical evidence from an ecologist, or pronouncing upon the interpretation of law.

Arboricultural Association

Report Writing Guidance

- v) The report should be written in the first person. The use of the third person in the passive voice is usually the preferred style of authors who are writing on behalf of a company or other body. (NB AARC status is personal and does not apply to others in a company)
 - vi) The passive voice is to be avoided.
 - vii) If more than one person is involved with a piece of work then they should all be recognised.
- k) *Fit for Purpose (Reliability, clarity, accuracy and defensibility)*
- i) A base function of a report is to put over the message.
 - ii) A report is a product. It should do the job and be easy to read, use, refer to, and integrate with other work. By writing a report you will demonstrate your understanding of the:
 - command of your subject,
 - needs and situation of the client,
 - instructions and terms of reference,
 - status of the work in terms of legal, technical, insurance responsibilities,
 - problem,
 - required data,
 - correct means of gathering data,
 - appropriate verification of data,
 - clear separation of verifiable facts,
 - logical assimilation and interpretation of data,
 - unambiguous discussion and justification for the formation of opinions,
 - clear portrayal of opinions and the consequent conclusions,
 - lucid explanation and specification of recommendations, and
 - clear indication to the client of what happens next.

l) *The Bottom Line*

The bottom line is quite simple:

- i) Is the client justified in paying your fee?
- ii) Have you carried out the instructions in an unimpeachable manner?
- iii) Have you upheld the AA's Code of Professional Conduct and Code of Ethics?
- iv) Have you enhanced the profession of arboriculture?
- v) Notwithstanding matters of confidentiality, would you be content to see the report have unrestricted availability?
- vi) Would the client use you again?

Arboricultural Association

Report Writing Guidance

m) *Proof Reading*

Proof reading is one of the most difficult things for an author working on their own to master. Ideally someone else should do it who has no technical appreciation of arboriculture because then the fundamental requirement of clarity can be tested. However the technical details do need to be correct as well. When reading one's own work, the mind is familiar with the style and word-blindness occurs.

AND FINALLY

13. A professional should never stray from their professional discipline(s).
14. Sometimes there may be more than one potential course of action. Each different course must be justified and the consequences explained to enable the client to make a decision. You may favour one course over another, but that choice must be justified.
15. There may be two diametrically opposed opinions about what to do, and this is a situation that can confront any decision-maker. You must set out the "pros and cons" of each.
16. A good mind-set is where you actually set out the arguments that challenge your opinions and is able, by reasoned justification, to convince the decision-maker that your view should prevail.
17. It follows therefore that all justifications that you employ and advance must stand rigorous interrogation. Furthermore, you must demonstrate that the consequences of the actions flowing from your justifications are sensible, practicable and sustainable.
18. You must also be up to date and demonstrate that you are aware of new thinking and research.