

# THE GREEN TREE WRITING COMPANY

## Authoring & Documentation Services

This leaflet has been prepared to give some insight into the expectation and preparation of Operation & Maintenance Manuals (O&Ms). If you would like to discuss your requirements then please do contact *The Green Tree Writing Company* and I will be pleased to help you. We pride ourselves in giving a personal service.

### INTRODUCTION

The acronym O&M can stand for a number of things. Within my specialised area of work in the Buildings Services and Construction Industry an O&M stands for Operation & Maintenance Manual.

Over the many years I have been in the business I have seen O&Ms develop from just a few sheets of paper stapled together with a few record drawings to what is now a very comprehensive paper or electronic document often to meet very detailed requirements. It can come in many shapes and sizes with every company, consultant, and even person having their own expectation. There are guidelines out there provided by the trade bodies BSRIA and the HVCA.

However, from my experience the manuals do not always carry the respect that such an important document deserves. Thrown together and then discarded to the archives to collect dust and only summoned in the event of a major difficulty as these two examples below show.

### YOU CALL THIS AN O&M?

I remember a few years ago I met a potential client who needed an O&M to meet the project requirements as laid out in the consultant's specification. I met him at his premises. His company was small; you know the type, he being the busy working boss with someone in the office to sort out and keep the paperwork tidy, and a couple of jobbers on the road. His only experience of O&Ms had been a few years earlier when he had one put together by someone who he said did it at an "extortionate price to just put a few product leaflets thrown into a ring binder." "Oh", he added, "it did have some dividers, though". He actually pulled the offering out of his filing cabinet and showed me. I have to admit the manual that was put in front of me did seem lacking quite a lot for the price he had paid.

### AND THEN - THE SEARCH .....

Some time earlier during the 1980's I was project managing. I had a design modification to do on an existing factory ventilation system in a large electronics company. The chief engineer sent me down to the Maintenance Department to collect the O&M in which he assured me all the drawings and data I needed would be found. I arrived at the said department and after we had a mug of obligatory tea the senior engineer rummaged through a drawing chest, then a filing cabinet, and after few "ums" and "ahs" disappeared up the stairs to the mezzanine archive storage above. He returned after five or so minutes with a discoloured and dusty white binder and inside

there were some equally dusty pages with a number of empty clear plastic wallets where the record drawings had presumably once been. "Ah", he said, "I think I know where the drawings will be." He then went back to the drawing chest started sifting through drawers of seemingly endless piles of drawings. After looking carefully at each one he eventually lifted out a bundle of fading, well-used drawings repaired with sticky tape where torn. Yes, it seemed they had been found at last but the search for the O&M high-lighted the lack of regard to the importance of the entire manual, as well as a rather questionable "hit and miss" filing system.

### SO, WHAT IS AN O&M

What is an O&M then, or more to the point, what should be expected from an O&M?

Essentially it should be a well arranged document that gives ease of access to a record of:

- what was installed
- what it does, and
- how to keep it doing what it does

So, a good manual should ideally include at least the following:

1. Design Parameters to help with future upgrades
2. Health & Safety Information including Residual Hazards, Hazardous Substances (COSHH), etc.
3. Descriptions of Plant & Systems Installed
4. Equipment & Plant Schedules
5. Manufacturers & Suppliers Addresses
6. Operating Procedures
7. Testing & Commissioning Certificates
8. Planned Maintenance Procedures
9. Recommended Spares
10. Emergency Procedures & Fault Finding
11. Manufacturers Literature
12. As Installed / Record Drawings

This list is only a guide and each project may have a different layout but should generally have the above. Some manuals are created using a combination of Microsoft Word and Excel Spreadsheets. When it comes to the electronic issues some manuals are hyperlinked to make navigation very easy throughout the document and to dart between text pages, spreadsheets, and PDFs.

From my own experience a well configured template in Microsoft Word and converting to PDF with full navigation facility are excellent. This enables everyone with a PDF reader to access the document easily. Some specialist documentation and authoring companies have customised software programs which work very well but the end user must consider the lack of flexibility such programs may give and the cost when changes are needed. Upgrades to the software are only available through the original document provider and when there are changes to the installation the manual can usually only be amended by them.