Ballasttrust
Understanding Technical Records

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At the Ballast Trust we have dealt with technical drawings from a variety of businesses since 1988. Our definition of technical records refers to those plans, drawings and photographs typically found in business archive collections such as those for the construction, engineering, architectural, design and manufacturing industries. These records provide evidence of the creation and development of a product or structure and will complement the administrative records for a full understanding of business operations.

We have produced the following guidance to encourage the better understanding and management of technical records. These types of collections are often voluminous, refer to technical subject matters and their appraisal and description can appear daunting to custodians of such collections. However, there are some simple principles of approach that can be applied to all types of technical records to aid in their understanding and management.

Know the business

This is the first step. Before you can appraise and describe a collection of plans you need to know what the company did and what the plans represent. Things to consider:

- What did the company manufacture or build? Having a sense of product ranges, the key products within that range and also those individual examples that are historically important will help inform appraisal and reveal how representative the collection is.
- How did the drawing office operate? In some industries such as shipbuilding it is possible to identify a set of plans for a single ship by the yard number used. For others where standard drawings were used for component parts of an object meaning that drawings were used for multiple orders it makes it more difficult to select a set of drawings for one order.
- What was the production process, who was involved and how did plans fit into it? This is useful to help understand what the numbers on a plan represent (order, drawing or yard numbers).
- Who were the key people involved in the production of technical records? Are there key people whose initials or signatures you should look out for eg company architects or engineers?
- Make use of other business records in the collection to help with this process, such as drawing registers, product catalogues and order books.

Appraisal

Appraisal of technical drawings is essential due to their size and nature.

- Assess the collection of plans. Is it a handful of plans that have survived or the entire contents of a drawing office's store? This will dictate whether significant appraisal of the plan collection is necessary.
- Define a core list of plans that you wish to keep. See our example of core list for shipbuilding plans.
- Decide if you are keeping core plans for every object/structure or whether you will make exceptions for significant orders or firsts in a series/class/design of object or structure and keep more for this examples.
- Be prepared to make exceptions to your core list (see above).
- Look for plans labelled 'as-built' or 'as-fitted' as this is the term used to describe the set of plans that represent the final object or structure and will be the

preferred copy to keep unless other copies have significant additional information on them.
- Are there staff members or knowledgeable enthusiasts who can assist with interpretation of plans?

Specialist help
The Ballast Trust has made use of subject specialists to aid in the processing of technical records from its earliest days. We have developed our method of processing to make use of volunteer knowledge to enhance the understanding of technical records. Volunteers from a variety of backgrounds (engineers, draughtsmen, railway enthusiasts, naval captains and shipbuilders) have willingly shared their experience of different industries to help us understand the subtleties of complicated technical drawings and records.

Things to consider:
- Clear cataloguing guidelines and structure.
- What level of detail to capture? Is it just what is present on the drawing or do you want to make use of the extra knowledge they have and capture that to?
- Consider whether the extra knowledge held by specialists is better captured in a guide to the record series instead. For example, detail about carriages and wagons that were built and later used during WW1.
- Plan handling guidance. Handling plans in an archive collection will be different to their handling in a drawing office environment.

Describing Technical Drawings
Define what fields you are going to use to describe your drawings. For example: title, date, creator, material, dimensions, scale, extent, order or works numbers.

Much of the information used to describe technical drawings will be present on the plan itself either from the title block or information written elsewhere in stamps or signatures. A title block refers to the practice of recording information in one corner of the drawing which emerged in the 20th century. Depending on the level of detail in the title block it will show:
- Title or type of plan (elevation, section, etc)
- Dates
- Order/job/contract numbers
- Company name
- Names or initials of architects, engineers, designers, draughtsmen and/or tracers who worked on the plan can also be recorded.
- Scale

The importance of the title block cannot be minimised as it includes all the information which enables the drawing to be interpreted, identified and archived. If your plan does not have a title block then information may appear all over the plan and also on the reverse. For early plans you may find that there is no identifying information.

As well as the descriptive information recorded from the plan itself, additional information fields are necessary for a plan description to record details such as the dimensions and format of the plan. Dimensions should be recorded as the height by width in millimetres to the physical edge of the plan and can help with reproduction requests. The material of the plan and type of reproductive technique if known can inform conservation needs.

A sample description could look like this:

Caledonian Railway Third Class Bogie Carriage

General Arrangement plan of Caledonian Railway Third Class Bogie Carriage 68'0", drawing no. 14200. Order no. H.239, built at St. Rollox Locomotive Works. Dated 17 June 1907. Tracing showing half side elevation, half longitudinal section, end elevation and sectional end elevation.

John F Macintosh, Engineer.

Multiple scales. 910 x 2430 mm. Linen.

Common plan types

As you learn more about your collection you will recognise plan types and know what types to expect in certain business archive collections. Below is a list of some of the more general and common types found in technical and also architectural collections that we have worked with.

Plan	Information Shown
Assembly drawing	How a product is put together and illustrates fit and function.
Block plan	Buildings and layouts in simplified, un-detailed form.
Detail drawings	A small part of the construction at a larger scale, to show how the component parts fit together.
Elevations	A vertical view of a building or object seen from one side, a flat representation of one façade.
Floor plan	The view from above of a building – illustrate the arrangement of spaces/rooms in a building.
General Arrangement	An overall view of the product and may also show how the component parts will fit together.
Site plan	The whole context of a building or group of buildings. Gives an overview of the entire scope of the work.
Sections / cross-sectionals	A view of the building or object cut along an axis to reveal the interior.

Storage

The preferred storage for plans is flat storage in boxes or drawers. This is the best choice if you have the space and resources for all your plans and drawings. However, plans will rarely all fit in flat storage and they are also commonly stored in rolls.

Rolled storage allows for most efficient use of space but can lead to damage to the ends and retrieval of single drawings is more awkward. For these reasons, you may wish to roll plans around an inner tube is advisable and limit the number of plans to a roll to 10-15.

Contact us

We are happy to discuss your technical records with you and offer advice where we can. Please contact us by email ballasttrust@gmail.com