



Archiving Post-Industrial Heritage

Post-industrial heritage plays a key part in the preservation and dissemination of British material culture. It informs education from school age through to advanced research that creates new products, reflective art practice and historical studies. This text examines how we can preserve the heritage of the post-industrial landscape of North Staffordshire through construction of an Image Management System (IMS) taking the form of a repository of digitised archival material. This will safeguard important archival heritage and make it available for education, artistic and historical research, ensuring that it is accessible for both the specialist and the general public. It will also offer artists and designers an accessible collection of visual and text based information to generate responses and create artefacts. Furthermore, this repository will provide an invaluable resource for cultural commentators and human scientists looking at anthropological behaviours and practices as found in the demographics of industrial history.

With regard to the British ceramics industry, an ideal image management system will record lost and endangered heritage, haptic practices and manufacturing technologies as well as provide examples of 18th, 19th and 20th century industrial practices. The High Wycombe Furniture Archive (HWFA), is explored as a potential model as a successful digital archive for post-industrial heritage. High Wycombe throughout the 19th and 20th centuries was a furniture-making town that grew its production to compete on the world market. At the point of demise of the British furniture industry in the late 1980s valuable archival material was thrown away by the diminishing industry, as it was perceived to be of no value by the companies that produced it. In short, they threw their history into skips, academics pulled it out and kept it, seeing it's potential. This short-sightedness by the companies proved to be a poor decision as they realised later that this rich material had great value, especially with those companies that managed to survive and reinvent themselves as is witnessed in the first two decades of the twenty first century.

High Wycombe Furniture Archive (HWFA)

In November 2009 the High Wycombe Furniture Archive (HWFA) at Bucks new University was made public through its website with 5,727 digital assets being available to browse. The collection comprises a wide range of furniture related material representing furniture companies from this furniture-manufacturing town (Fig. 1). An Arts and Humanities Research Council major award funded the project, where over 16,000 borne digital assets were created from the primary archival material. Apart from an extensive record of two major furniture brands, Ercol and G-Plan (E.Gomme Ltd.) the collection holds material on trade union activities (1920s to 1980s), which includes discourse on WW2 activities, the utility scheme, labour conditions and collective bargaining as well as factory conditions.

This comprehensive database holds information and drawings on design heritage such as the work of designers Lesley Dandy, Lucian Ercolani, Donald Gomme, Ib Kofod-Larsen, Don Peddle and Vic Wilkins (amongst others). The archive has been cited and images used for many applications, books, PhD theses, television documentary and research into fashion, set design and advertising. The business records illustrate correspondence between retailers and the manufacturers discussing matters such as advertising through film footage and newspaper copy.

Between 2009-2015, the HWFA has been very successful achieving over 7 million views, which equates to an average of approximately 100,000 views per month. To access more digital assets users can register and then log in to the repository free of charge where they will have access to over 10,000 assets. Researchers in the team are currently working on further digitisation of the William Birch Archive that supplied 'art furniture' for Heals, Harrods and Liberty's of London at the early part of the twentieth century. The major British



Fig. 1. Chair maker spokeshaving a windsor bow in the Jack Goodchild workshop, Naphill, Buckinghamshire. High Wycombe Furniture Archive, Bucks New University
Photographer unknown

manufacturer Stag Furniture Company from Nottingham has donated its archive to the HWFA, which includes some exceptional designs by John and Sylvia Reid. The HWFA is currently working with Nanjing Forestry University in China on generating 3-D computer models of furniture from 1960s Ib Kofod-Larsen design drawings for G-Plan.

Image Management System Models

A successful Image Management System (IMS) requires functions that capture and organise data. This can be achieved through a variety of functions, which are described below and these relate to the Image Management System used by the High Wycombe Furniture Archive. The front end of the IMS is the visible website which connects to the back end database which holds and organises the data (visual and textual assets). The IMS manages both ends and draws down information which is requested by the user and displays this on the website, such as images and or text. Various access levels allow users to gain graduated amounts of information. Access rights are authorised by the IMS administrator.

An important function of an IMS is to provide the ability to edit the copy content. This covers fields such as page copy, menu copy, browser titles and message templates, in fact, all the copy that may be viewed by users within the various the visible areas of the front end website. This process is typically described as managing content.

The ability for users to create a slide box is a desirable tool and this allows the option of downloading images and text, storing them in the slide box. What is permissible for download needs to be decided carefully at an early stage when building the database. For the HWFA a management user list is employed which specifies what can be downloaded and for what purpose. When users request a download, after they've filled their slide box, they have to complete a form that asks what they are going to use the material for. This is where charges can be introduced in order to commercialize the database and its contents. Images may be purchased at a range of resolution sizes with higher resolution being more expensive. The master files with the highest resolutions are kept in the backend database. Digitisation standards are useful in guiding resolution size when analogue material is captured through scanning or photography. The HWFA used a range of resolutions depending on the asset being created, being guided by archivist/digitisation standards.

As part of organizing the database it is prudent to create categories and sub categories that will structure the repository and importantly assist the search functions, which includes key search terms/words. These functions are given codes which can be cross referenced when users operate the search tool to look at terms or references which may bring up a number of assets. It is therefore important that the categories follow benchmarked guidance. The archivists entering content when building the database must adhere to strict sets of language that is understood and commonly used by the project team.

An example of the deeper level of category in the HWFA is 'people'. Within 'people' there are four sub-categories; 'people at work,' 'management and other staff,' 'social' and 'education.' How these sub categories are constructed will depend on the information available and the choice of classification so that users can access the repository in a simple and effective way. The number of sub categories per category depends upon the information available and the extent to which these layers will be effective.

Fields or attributes may be organised in two ways, firstly for what is seen and secondly for what lies beneath the surface. In other words what is visible to the user on the website and what is available as metadata, which has technical and analytical uses. Searching is a key function of any website or repository and this important function must be correct if users are to return to the site. The standard approach is to have a simple intuitive route and an advanced route for the more serious searcher. The HWFA has an advanced search that offers features that will allow the user to specify what they are seeking in a precise way. For example a search can be done if the identification number of the asset is known and this will be take the user to the asset immediately. In addition to search functions a browsing function, which allows users to search quickly and intuitively, is recommended. Users can search by category such as 'people' and click on searchable text or images this will take users to the sub category level where they can choose 'people at work.'

This will open the asset and provide the images details. The image can be observed plus some information about the image is available (www?????????????). There are two types of information, descriptive and functional. This is visible when viewing through a logged in status, which provides this level of information. The image may be enlarged through a magnification function. This provides a more detailed view of the image and the watermark may be observed. The HWFA uses a watermark to stop unpermitted reuse of images. The administrator has authority to remove watermarks for certain purposes, such as publishing.

Possibilities for the Spode Mould Archive

Returning to the Spode collection, similar issues to those seen in High Wycombe are currently occurring in Stoke and in particular with Spode's collection of extant

moulds. This collection has value not only with the Georgian and Victorian artefacts, but also with the twentieth century and especially post-war design, which until now has been to some degree undervalued and ignored. A range of benefits from digitising the HWFA may be applied to a digitised Spode collection as listed here,

- Large number of views per month
- In the top list on Google searchers
- Simple maintenance and support system
- Widens dissemination and reach
- Preserves a record of an endangered material
- Can generate income through sales of images (rights)
- Create impact on local, national and global communities
- Provides an educational resource
- Generate interest in archival material previously inaccessible
- Create citations in text, film and exhibitions
- Web fertilisation of images such as 'Pinterest' (Fig 2)
- If digitisation of the Spode collection proceeded what would be the challenges for this digital archive?

A critical aspect of building a successful repository is to ensure that the textual data that describes the artefacts is accurate. This requires an agreed set of languages/terms. These terms should be benchmarked and be nationally recognised. Another aspect is to establish who owns copyright of the newly borne digital material. This may depend on where the funding comes from to construct the repository as this may come with conditions around IPR.

Whilst researching the artefacts to establish reliable information to describe the images, an opportunity to develop lasting relationships with industry personal should be recognised. In the case of the High Wycombe furniture archive key people from the industry were interviewed revealing valuable networks. This helped provide additional information for the repository. During the project stage focus groups were conducted with various stakeholders to find out what users required. This helped set the parameters of the architecture of the image management database. At the project commencement period an advisory group of subject specialists from a variety of organisations, both academic and industrial was convened to guide the project.

Another challenge for the Spode proposal is the sheer volume of material that exists (Fig. 3). It will be expedient to sample but this will require that selection is conducted in an objective manner that will represent what is required by stakeholders now and in the future. Is a scoping study required to set parameters for the selection process or can a working group of experts provide a set of criteria that can be applied in the selection process?

Currently, the Spode moulds are not accessioned and therefore an inventory will have to be constructed followed by visual recording at proposal stage. At project stage in order to capture the precise detail of the moulds digital 3D scanning will be necessary. Three-dimensional scanning has been used effectively to capture accurate surface topology of historic artefacts. Discussions have begun with the University of Brighton who are part of a European consortium named 3DCoform (Three dimensional collection formation). The core research is centred on 3D scanning technologies where a surface in 3D is digitally captured 'observing how light behaves on the surface of the object.' This allows for a number of outcomes; such as reconstruction, 3D printing and presenting on screen.

A digitally captured 3D scan will allow investigation through comparison, which is useful for authentication and observing how objects are made revealing identifiers, such as tool marks. This type of interpretation of an object's surface



Search

hwfurniturearchive.bucks.ac.uk



Asset Preview #1

Anne Brockett
1950s Interiors and Acces...



Asset Preview #2

Anne Brockett
1950s Interiors and Acces...



Asset Preview #1

Anne Brockett
1950s Interiors and Acces...



Asset Preview #1

Anne Brockett
1950s Interiors and Acces...



Asset Preview #3

Anne Brockett
1950s Interiors and Acces...



Asset Preview #1

Anne Brockett
1950s Interiors and Acces...



HW Furniture Archive | #1

E Gomme Ltd, G-Plan
design drawing...

Mistpowerflower
Mid Century Furniture



Learn more at hwfurniturearchive.b...

HW Furniture Archive | #1

Annabel Ellome
Sitting room



We have this dining suite in stock! If you are looking for a... #2

India Street Antiques
Danish Modern San Diego...



513 #1

V Briggs
g plan 411 Siesta chair



Fig. 2. Web fertilisation of images from High Wycombe Furniture Archive on Pinterest

will guide conservation and curation. This will require significant resources such as, training for volunteers, a major funding award and the appropriate technologies provided by specialists. The technology exists and in the University of Brighton they have employed a German conveyor belt system, which allows for 3D laser scanning to be conducted accurately and quickly. This mobile system could be set up at the Spode site. This will require the funding bodies recognition that this is a proposal that needs priority funding.

Beyond the comparison of the HWFA other indigenous British industries have preserved their heritage such as the textiles industry which is illustrated through a number of mills in Lancashire, 'Saltaire' and 'Quarry Bank' both living museums with catalogued collections showing artefacts, industrial processes and the lives of the workforce. The steel industry in Sheffield is represented through a number of museums such as the 'Blade' collection in Sheffield Art Gallery and Museum. The National Glass Centre in Sunderland brings together social and industrial heritage celebrating through exhibitions, collections and activities as well as supporting the modern glass movement and its research.

These centres share a common theme of collaboration between industry, city and university. This seems to be a successful mix that attracts funding and drives the projects forward. It then becomes part of the British historical and cultural landscape impacting on tourism, education and a city's culture. Regionally it improves morale, builds new activities and maintains identity encouraging and driving economic growth.

Problematics

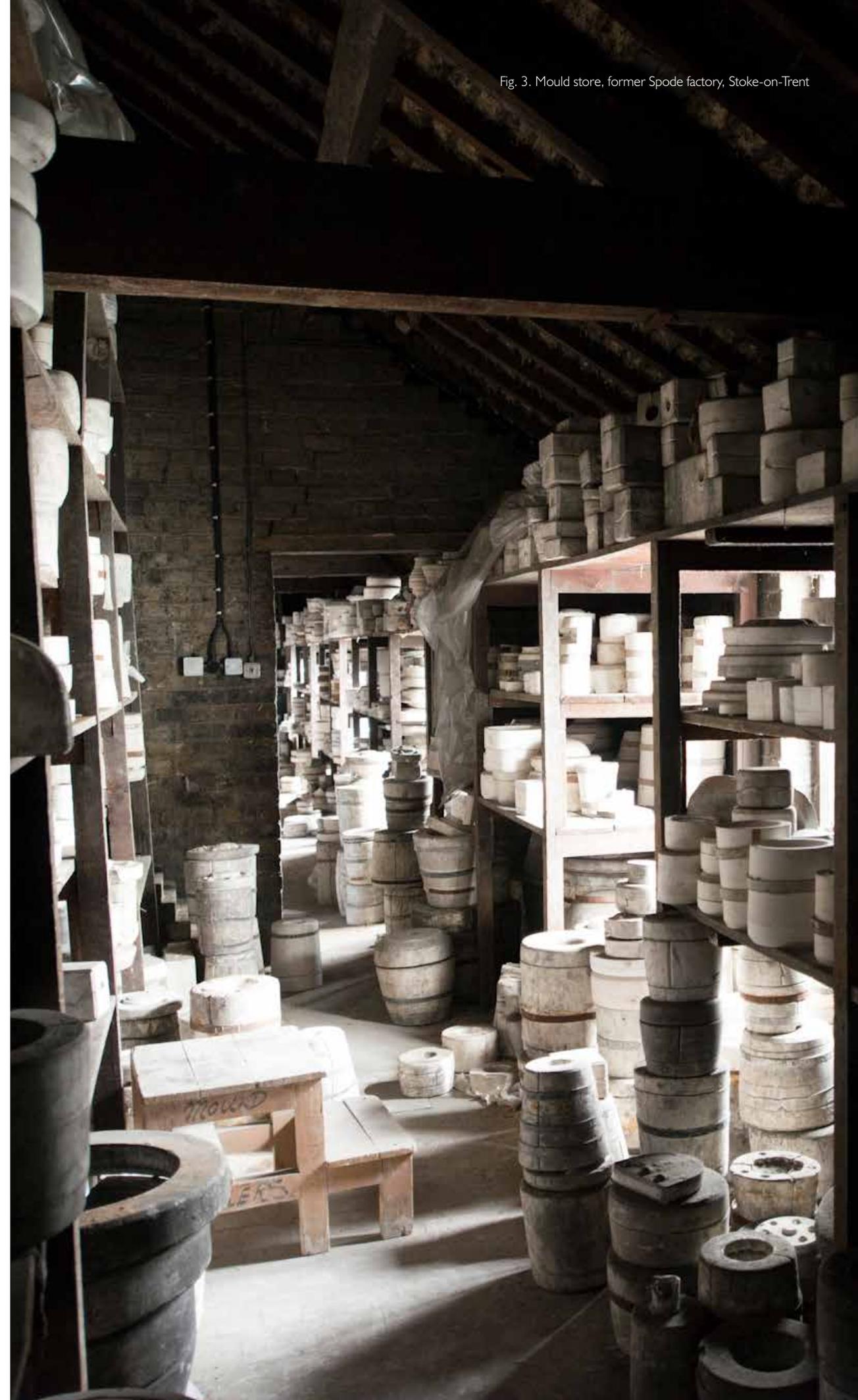
What were the problematics faced by the High Wycombe experience and will these occur in Stoke with the digitisation of the Spode collection? The challenges to setting up and running a long term project at High Wycombe were varied and included finding the right people with the requisite skills in a developing area as well as setting up technology that is continuously superseded by newer technology.

In 2006 finding an archivist with the digital technical skills was challenging. A graduate was employed from a new masters computing course at Glasgow University, whom had experience of digital capture for archives. A visual archivist who had previously worked for an American fashion house in their publication department was also employed. Managing the project threw up further challenges such as monitoring and maintaining the funding streams, organising space in a resource competitive institution and keeping track of the work flow under time pressure.

To conclude the comparative model of the HWFA used here has identified a number of solutions and also raised a number of questions that the proposed digitisation project of the Spode Mould collection will have to address. Spode offers many challenges for the preservation and dissemination of the artefact moulds and related archival material. There is considerable time pressure from agencies wishing to regenerate the site and frankly the moulds are perceived as an inconvenience slowing down change. 3D scanning represents part of the solution as this will not only record the moulds but will also allow accurate 3D printing of the moulds and the artefacts they were manufactured to produce. This will preserve history and function as well as create a repository for cultural studies. Professor Neil Brownsword, a practicing artist who has worked as a model and mould maker in the ceramic industry, reflects on the potential of the Spode moulds:

'The moulds at Spode are an under-estimated resource... as they have not been accessioned they throw up a potentially rare glimpse of rarely acknowledged practices within the design process. Prior to mainstream production, prototypes

Fig. 3. Mould store, former Spode factory, Stoke-on-Trent



would go through a sequence of trial phase but then if not selected or deemed unviable/too expensive, would not go further into production. So potentially there remains a whole body of block moulds with unique designs which may have never seen the light of day since their inception/rejection.'

This situation was also found in the High Wycombe furniture archive with the G-Plan collection where the Danish designer Ib Kofod-Larsen had been commissioned to produce drawings of furniture that were not manufactured. During 2014 collaboration with a Chinese University to convert the analogue designs of Kofod-Larsen into three-dimensional models took place.

Finally, a specific cultural benefit of the Spode mould collection is that it represents an opportunity to show the culture of labour that has been rarely acknowledged in the history of artefacts produced by the peoples of these industries.

- ¹ Junaidy, D., Kaner, J., Ioras, F., Yukari, N., *Capturing Characteristics of the Conceptual Ideation Process of Master Craftsman's to Inform Design Education: A Comparative Study of Rural Craft Practitioners in Indonesia and in the UK*. Journal of Design Research. Inderscience JDR-85582, Vol 13, Issue 4, 2015, pp. 395-423.
- ² There are a number of providers of image management systems, such as Bright Interactive, <http://www.bright-interactive.com/>
- ³ Examples can be seen of material in the collection of the Spode Museum Trust <http://www.spodemuseumtrust.org/spode-collection-8.html>
- ⁴ See www.hwfurniturearchive.bucks.ac.uk
- ⁵ Reid, H., *Furniture Makers: History of Trade Unionism in the Furniture Trade*, London, 1986.
- ⁶ GPlan 1992, Bartlett 1998 and Glennister 1989.
- ⁷ Colleagues at Bucks New University, Scott Harper at Ercol 2001, and Hew Reid at G-Plan in 1991.
- ⁸ GPlan produces the vintage range <http://www.gplanvintage.co.uk/> and Ercol reintroduced design classics such as the 1950s Windsor range, stacking chair and loveseat models. See <http://www.ercol.com/ranges/windsor/>
- ⁹ www.hwfurniturearchive.bucks.ac.uk
- ¹⁰ Grant reference: 119158/1 entitled, *Creation of High Wycombe Electronic Furniture Archive*.
- ¹¹ These are held in the image management system at Bucks New University as master files at high resolution.
- ¹² Such as, Jackson, L., *Ercol: Furniture in the Making*, Richard Dennis Publishers, London and Hyman, 2013; B. & Bragg, S., *The GPlan Revolution: A Celebration of British Popular Furniture of the 1950s and 1960s*, Booth Clibborn Editions, London, 2008.
- ¹³ Kaner, J., in *Design History Society*, Newsletter Spring, 2014.
- ¹⁴ Report generated December 2016, showing hits since launch in November 5th 2009. <http://hwfurniturearchive.bucks.ac.uk/asset-bank/action/viewReport>. Accessed Feb 16th 2016
- ¹⁵ See, <http://hwfurniturearchive.bucks.ac.uk>
- ¹⁶ The William Birch Archive is part of a larger analogue archive of High Wycombe firms held by the Wycombe Museum and access is available by appointment with the curator. <http://www.wycombe.gov.uk/council-services/leisure-and-culture/wycombe-museum.aspx>
- ¹⁷ The STAG Furniture Company was an incorporated company based in Haydn Road, Nottingham. It was closed in 2000 when administrators set up redundancy for the remaining 275 workers. It's main brand names such as 'Stag Minstrel' were sold to Cornwell Parker, the parent company of Parker Knoll. The business records of the STAG Furniture Company are held at Buckinghamshire New University.
- ¹⁸ The Reeds designed for Stag in the late 1950s and early 1960s which includes successful ranges such as the C Range and the S320 dining chairs.
- ¹⁹ Nanjing Forestry University has international cooperation with Bucks New University where researchers co-author research on furniture and have worked on projects together through a visiting researcher scheme.
- ²⁰ The High Wycombe Furniture Archive holds approximately 396 drawings by Kofod-Larsen the Danish Architect/designer who was responsible for the G-Plan Danish range, produced for G-Plan between 1961 – 1974. Many of his design drawings incorporate amendment sketches and written notes. Very few designs were put into production.
- ²¹ The ability to use e-commerce should be specified in the brief to the IMS provider at an early stage as to add this function post database build is more expensive.
- ²² Selection of appropriate resolution for digitising archival material in the UK may be found at JISC. See <https://www.jisc.ac.uk>
- ²³ Categories may be referred to as 'fields'.
- ²⁴ The ability to conduct analytics can provide useful information that can measure the usage of the website and produce reports.
- ²⁵ In asset bank IMS each digitised asset has a unique 'auto id' number.
- ²⁶ Image details page, source: <http://hwfurniturearchive.bucks.ac.uk> (accessed November 5th 2015).
- ²⁷ User can apply for this access level to be approved by the administrator.
- ²⁸ Acknowledgement of the website is important for both dissemination and citation purposes
- ²⁹ HWFA has over 100,000 hits per month.
- ³⁰ This page illustrates the HWFA as the top view for a number of search terms which lead to the archive being at the top of the Google search page. <https://www.google.co.uk/webhp?sourceid=chrome-instant&ion=1&espv=2&ie=UTF-8#q=hw%20furniture%20archive>
- ³¹ A selection policy will need to be established.
- ³² <http://www.3d-coform.eu/>
- ³³ See <http://www.3d-coform.eu/> (accessed Nov 2016).
- ³⁴ See, Stenvers, B., *Museums in Cities Working Together*, Moscow, 2015. Bapty, I., 'Supporting Industrial Heritage' at *Association of Independent Museums Conference*, Ironbridge, 2014.
- ³⁵ Information about the project team may be found at <http://hwfurniturearchive.bucks.ac.uk/asset-bank/action/viewContent?index=3&showTitle=true>
- ³⁶ Discussions with Professor Neil Brownsword, 2015.
- ³⁷ Kaner J, 'Realising Lost Histories: The Three-dimensional Visualisation of Ib Kofod-Larsen drawings for GPlan,' in, Bechthold, T., and Schertzel, B., *Future Talks 011: Technology and Conservation of Modern Materials in Design*, Design Museum Munich, 2013.
- ³⁸ Nanjing Forestry University, Department of Furniture.