*Siemens Thameslink Rolling Stock Project*

# Document Management System: Handover Report

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## Contents

# Overview

## Context

Siemens TRSP commissioned two new rolling stock maintenance depots, at Three Bridges in Sussex and Hornsey in North London. The former entered operation in mid-2015, the latter a year later. I was employed from November 2017 to create a Document Management System (DMS) for the Production Services Team, who maintain both depots.

From design to completion sign-off stages of the depot build project, documentation checking systems were ad hoc or only partially implemented. The two depots' separate project teams took independent approaches to the production of depot documentation: the disparities arising and resulting confusion necessitated the creation of a uniform TRSP-wide DMS to allow Production Services to find the data required for their roles in maintaining the site, buildings, equipment and installations.

## Definition of DMS function

As distinct from ongoing reporting (which is handled in other dedicated spaces such as ZetaSafe, CorMap and 4Projects) DMS provides a fixed reference library for each depot in two parts:

(1) Build
(2) Operation and Maintenance

Documents are therefore categorised as relating either to Build or O&M and grouped by location within a given depot.

## DMS structure and file-naming convention

The Build section contains Construction Assurances, Health and Safety files, Layout and Schematic Drawings and Test Reports.

The Operation and Maintenance section contains instructions for installation, operation and maintenance, training and equipment decommissioning, as well as product data sheets and brochures.

DMS is designed for quick searching and browsing. Document types and subject matter are encoded to filenames. For step instructions in using DMS, see *DMS-UserGuide-and-Dictionary.pdf*.

The DMS file-naming convention permits sorting by file type and content. Abbreviations used in the file-naming convention allow comprehensive description of a file's contents to be searchable by the user.

Abbreviations used to make file content searchable are listed in alphabetical order in *DMS-UserGuide-and-Dictionary.pdf*, by

[1] Document Type (130 categories)

[2] Document Subject [Equipment, installation, system] (568 categories).

The master copy of DMS resides on an external hard drive (disk@shur) security-protected by numeric code. To obtain the external drive security code, contact Ryan Pull, Plant and Facilities Engineer at Hornsey depot (ryan.pull@siemens.com).

Any changes made to the master copy should be duplicated to the Syncplicity site, in order to enter data updates into service as soon as possible.

## Problems, solutions: Development of DMS

In numerous original document sources, inconsistent nomenclature and categorisation made the completion of series and the compilation of manuals problematic, (presented as they were in many instances as separate constituent parts of a document including Front Cover as one document, Contents as another etc.).

These anomalies were removed, either by identifying a file missing from one source folder at an alternative location or requesting the missing items from the contracting firm responsible. Series have been completed and, where possible, combined into a single document. For example, 108 separate drawings of the Three Bridges footbridge now comprise a single document: TBBD-EXT FBR ALL.pdf

In the Hornsey site-wide combined O&M H&S file [*HEOM-HSF VFL OM Manual.pdf*], lists of ostensibly submitted documents provided were compared to the actual resources available to us at TRSP. Documents to which reference was made but of which copies could not be found, were obtained from the contracting firm.

Large folder size discrepancies indicated that the smaller of two analogous resources may be incomplete. Where identifiable by document name or number, those missing elements were requested specifically. In cases requiring the review of a subject expert, help was obtained from depot engineers. In this way, errors and omissions were identifiable in the installation of Yard Telephones, Drainage and Ducting, External Lighting and CCTV. These were remedied by the issuing contractor unless the installations were prior or carried out by a different organisation, such as Network Rail.

More general requests were also submitted, for example for all drawings of the Hornsey Carriage Wash Machines. This proved a valuable addition to the documentation we held in the DMS. Similarly, VFL's provision in early September 2018 of a new revision of their depot data for Three Bridges, filled many gaps that had run through all their previous submissions.

An overview of DMS folder content and sizes was maintained during development to highlight anomalous areas such as folders with little or no information. This has now been simplified to a Folder Map for each depot, in *DMS-UserGuide-and-Dictionary.pdf* on pages 10 (Hornsey) and 11 (Three Bridges).

Over 100,000 individual electronic files were examined during development, a large proportion of which were either duplicates or drafts. DMS now contains 22, 593 unique files, of which around half are combinations such as Layout series (e.g. steel frames, ducting routes or water services). These series range from 2 to 100+ drawings of a given installation or type of equipment.

DMS was developed iteratively as content was identified and the required distribution of files determined, with systems of checks and a review process which will be outlined below. A significant and pervasive issue was massive duplication, overlap and mixing of drafts with approved versions. There were often a dozen or more instances of a given file spread across different folders.

Duplication and co-existence of drafts with approved versions has been solved, thereby further reducing the total number of files required for a comprehensive record. Problematic documents were compared (Revision Number, evidence of final Approval, date of publication, handwritten notes, etc.) and their replacements either found or requested from the originating firm.

DMS contains only latest versions of depot data and, where available, As Built revisions (drawings).

## DMS data verification

Hundreds of layout drawings containing handwritten remarks like ‘NRV here’ had been included in ostensibly complete series. Hundreds of files were found with titles like ‘sheet 9 of 19’, the other 18 being absent until provided on request.

### Version Control

Some files provided in draft form, when As Built revisions were requested from the contractor, were said to have been inexplicably discontinued: “that file no longer exists” was a common answer to requests for As Built revisions of drafts that had nonetheless been included in contractor documentation submissions.

Due wide variations between revision numbers in a series or across submissions more generally, early iterations of DMS included “ABD” [As Built Drawing] in the filename. As DMS grew to tens of thousands of items and drafts were replaced with As Built or “Revision Z” versions, the ABD part of filenames became redundant, although this remains in some cases. (There was no perceived benefit in the lengthy bulk removal of “ABD” from file names). Therefore while the abbreviation remains, it is no longer a definitive distinction of the file from other sources in a folder.

To ensure a single authoritative version of data, duplicates were removed where they were standalone documents. Where they are embedded (e.g. drawings within a DPAC) they remain. Drawings within DPACs are generally late or final revisions but these should always be compared with the versions held within the HEBD- (Hornsey-Build-Design Docs) or TBBD- (Three Bridges-Build-Design Docs) folders.

While every effort has been made to obtain accurate and approved versions of documents there are still problematic areas, such as the AIF buildings and VEMS equipment for both sites.

Hornsey combined OM/HSF lists all Design Packs (DPACs) and O&M manuals ostensibly submitted. Many were missing so these were duly requested. At time of writing (2018.10.15) the following (6 times requested) documents are outstanding for Hornsey. Production Services Team colleagues have copies of emails containing the same detail and contacts are given below for those who can provide the data.

Hornsey: DPACs

| DPAC number | Subject |
|---|---|
| HOR - 09 | Yard Telephones |
| HOR - 17 | TWS Foundations |
| HOR - 46 | Shunters M&E |
| HOR - 84 | TWS & CET N Plant Room Doors |
| HOR - 94 | Phase 1C Temporary Connections |
| HOR - 95 | OLE Bonding Phase 1C |
| HOR - 45 | OLE Phase D |
| HOR - 51 | Ancillary Civils |
| HOR - 31 | MFB Doors & Louvres |
| HOR - 20 | MFB Gantries & Beams |
| HOR - 84 | MFB Doors (Crawford) |
| HOR - 06 | Drainage Storm & Foul |
| HOR - 43 | UFC Gantry |
| HOR - 65 | Ancillary Buildings M&E/Interlocking REB M&E |

Hornsey: O&Ms

| O&M number | Subject |
|---|---|
| 16 | Footpaths |
| 20 | RRAPs |
| 29 | Equipment Bases |
| 30 | OLE |
| 33 | MFB Hoists |
| 36 | Screenwash |
| 37 | Shunters cabin Building |
| 38 | Utilities Doors |
| 39 | Utilities Door lourvre (sic) |
| 41 | TWS Plant Room Doors |
| 51 | MFB Doors Louvres |
| 52 | MFB Floor |
| 54 | Floor Painting |
| 56 | Ancillary Civils |
| 57 | interlocking REB frame |
| 58 | Interlocking REB Doors |
| 59 | Interlocking REB Foundations |
| 60 | UFC Glazing |
| 65 | UFC Fire stopping |
| 66 | UFC Floor Painting |
| 67 | UFC Gantries |
| 68 | UFC GRP Gantries |
| 69 | UFC Precast |
| 71 | UFC Steelwork |
| 73 | Wireless access Points for Train to shore |

Hornsey: Other

(1)
Complete series of 19 drawings, containing
UA003744-HYD-DRG-CV-HOR0561 UFC TRACK SLAB SHEET 09 OF 19

(2)
Revision Z / As Built version of
DRG. No. VO32 - G59 REV. B
Hornsey Maintenance Facility B
GENERAL ARRANGEMENT AND ONSITE MODS TO BEAMS Job No. J13148

(3)
Revision Z / As Built version of
MFB Floor Finishes:
UA003744-HYD-DRG-CV-HOR02017

## File names and document titles

Document names used in the combined O&M/HSF were changed for their final versions. This means that when a filename cited in the reference manual is requested, it can no longer be found solely by using the exact title cited in the reference manual.

## Design Pack numbers

Any two VFL-issued DPACs may share a number (e.g. HOR-015). Thus, when *Signalling and Points Power* is requested, our correspondent at the contracting firm searches by DPAC number and instead sends *Boundary Gates* or *Controlled Emissions Toilet*, if these documents have the same reference number.

## Redundant or repetitive content

The Hornsey site-wide combined OM/HSF [*HEOM-HSF VFL OM Manual.pdf*] contains 400+ pages within Signal Sighting Forms hand-marked as 'not applicable'. There are three 200 page geophysical reports where the 2nd is a facsimile of the first. Over the document's 2,020 pages, hundreds are redundant, unindexed and un-bookmarked and the ToC is wildly inaccurate.

The purpose of DMS is to remove such time-consuming obstacles to obtaining clear and accurate data.

## Next stages of DMS development

Three principal elements remain to be concluded for DMS to be verifiably complete and for its data to be rapidly accessible: completion of review of existing documents, indexing of large documents and import of all data from 4Projects.

### *DMS Review*

The review process has begun and the steps necessary are outlined below. In the ***DMS_other-docs*** folder you will find all required data and templates to complete the DMS Review.

### *DMS Indexing*

The indexing process has begun and should result in the creation of standalone Index documents for all manuals, design packs and construction assurances that are too long rapidly to browse for required content.

It is suggested that any document longer than 30 pages should be accompanied by an index.

For an example, see the 2,028 page ***HEOM-HSF VFL OM Manual.pdf*** and its accompanying index file, ***HEOM-HSF VFL Index.pdf***.

> Note:
>
> I have made extensive use of the invaluable free online resource for merging, splitting and rotating PDF files at http://ilovepdf.com . If budget can be obtained for an Acrobat licence, all the better. Acrobat is not available via the Siemens software download sites, although various other tools, such as Visio (for folder map layouts) are.

### *4Projects Data Import*

There is a vast resource in 4P dating from the build project stage. This was managed at that time by document controller Patricia Mitchell, who has now moved to another part of the business.

It is possible to download the complete series of documents without incurring a cost, but the licence limitation permits only a maximum of 100 files to be downloaded at once. After the download is complete and verified, the file contents need to be checked against the contents of the DMS.

As it is determined that the DMS contains the latest version, a 4P file download may be discarded.

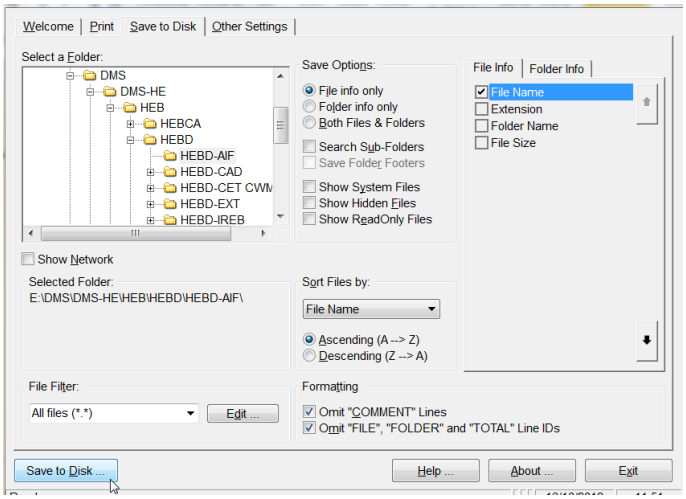
As any discovery is made that the 4P data supersedes data in the DMS, it should be saved under the same file name as used in DMS and the DMS file version overwritten.

# Document review process

## Review Setup

Once the process of checking all sources was complete, a file review process was begun. This remains to be completed.

The process is a simple one, using a freely available tool for printing directory contents to file, Directory Printer v5.3.3. This can be downloaded here: https://www.karenware.com/powertools/ptdirprn

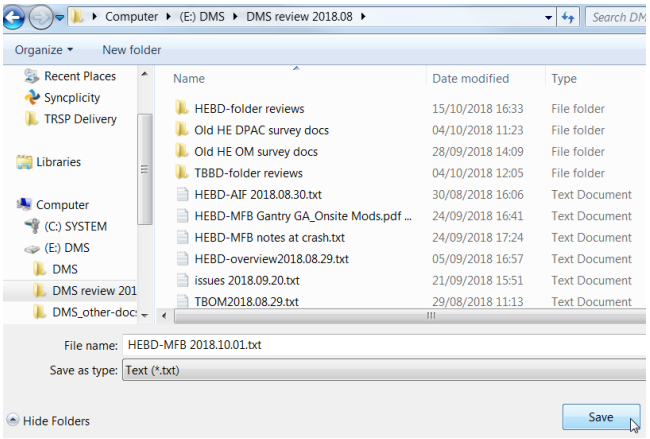



By selecting the 'Save to Disk' option and specifying the folder whose contents to list, a text file can be generated, of file names.

Remember to untick the options for other data [check boxes on right of application window] in order only to list file names and exclude columns of other information and subfolder contents.

Specify the folder whose contents to list, then click 'Save to Disk'.

A dialogue prompt requires the output file name and destination folder:



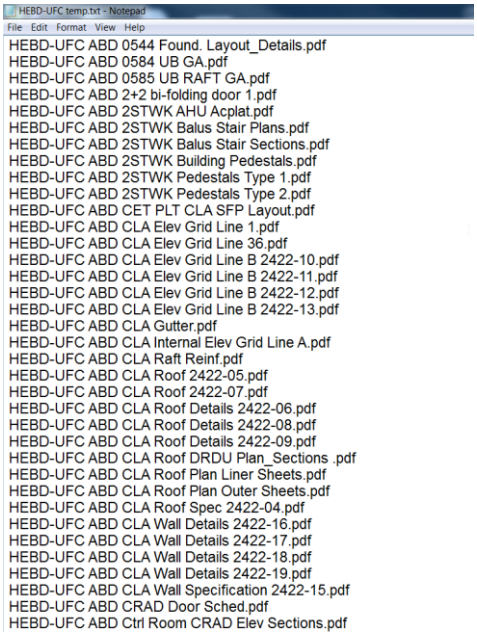

Given the scale of the review it is recommended to maintain separate HE and TB review folders, with a report for each folder within, the date of last edit included in the file name and the initials of the editor.

These precautions help avoid repetition of checks already performed or two reviewers simultaneously reviewing a given folder.

A text file is generated and saved to the specified destination folder, listing all file names in the folder in alphabetical order.

Open, select all (Ctrl+A), and copy (Ctrl+C).

With the contents of the text file copied to the clipboard, open the review template in MS Excel and paste the contents into the Filename column.



## Reviewing a DMS folder

An example of the review spreadsheet is shown below. Only edit the light green cells, as the orange cells contain formulae for reporting.

| | A | B | C | D | E | F | G | H | J |
|---|---|---|---|---|---|---|---|---|---|
| 1 | **Issuing Firm**<br>-<br>Only required if document faulty | **Drawing Number**<br>-<br>Usually at bottom right in drawing legend | **DMS filename**<br>-<br>Paste the text file generated by Directory Printer here | **Comment**<br>*e.g. Incomplete / non-final*<br>*Hand-written notes /*<br>*No title/no labels*<br>*same title / diff no. drawing etc.* | **Revision Number** | **Reviewed**<br>-<br>Put '1' when doc.checked | **Issues**<br>*Auto-fills -*<br>*do not edit* | **Resolved**<br>-<br>Put '1' when issue resolved | **Outstanding**<br>*Auto-fills - do not edit* |
| 8 | | 04381-GA1 | HEBD-CWM Side&Eaves Brush SOD.pdf | Request final | A3 | 1 | 1 | 1 | |
| 9 | | 04381-GA2 | HEBD-CWM Skirt Brush SOD.pdf | P2 of 2 only: request final and p1 | A3 | 1 | 1 | 1 | |
| | | UA003744-HYD-DRG-CV-HOR0134 | | | C02 | 1 | 1 | | |
| 10 | | | HEBD-NCWM DRDU BG_EXT.pdf | Comments all over | | | | | Y |
| 11 | | 004381-GA100 | HEBD-NCWM Overall Layout.pdf | Request final | A0 | 1 | 1 | | Y |
| 12 | | 004381-GA600 | HEBD-NCWM PLT Layout.pdf | Request final | A0 | 1 | 1 | 1 | |
| 13 | | 04381-GA102 | HEBD-NCWM PWK Schematic.pdf | Replaced with revision Z | A1 | 1 | 1 | 1 | |
| 14 | | 04381-GA600 | HEBD-NCWM RLD Layout.pdf | Renamed HEBD-NCWM Layout - Rev Z replaces prev | A0 | 1 | 1 | 1 | |
| 15 | | 04381-033 | HEBD-NCWM RLD PLT DRDU.pdf | Scribbles = request final **NOT INCL IN EMAIL SUBI** | none | 1 | 1 | | Y |
| 16 | | 04381-GA500 | HEBD-NCWM RLD Schematic.pdf | **Renamed HEBD-NCWM Schematic.pdf** | A0 | 1 | 1 | 1 | |
| 17 | | 04381-GA2 | HEBD-NCWM RLD Skirt Brush SOD.pdf | **Renamed to HEBD-NCWM Skirt Brush SOD.pdf** | A02 | 1 | 1 | 1 | |
| 18 | | 04381-GA10 | HEBD-NCWM RLD WashAp Found.pdf | Delete - Rev F of 04381-GA10 | A02 | 1 | 1 | 1 | |
| 19 | | 04381-GA103 | HEBD-NCWM RLD Water Schematic.pdf | Deleted - was duplicate of item below | | A1 | 1 | 1 | |
| 20 | | 04381-GA103 | HEBD-NCWM Spraybar Schematic.pdf | **Replace with Revision Z01 As Built** | A1 | 1 | 1 | 1 | |
| 21 | | | HEBD-NCWM TCP 2015.04.01 Apdx Tasks.pdf | **Made consistent - merged to main TCP** | | 1 | 1 | 1 | |
| 22 | | 04381-GA10 | HEBD-NCWM WashAp Found.pdf | **Replace with Revision Z01 As Built** | A1 | 1 | 1 | 1 | |
| 23 | | 02/01/8401 | HEBD-NCWM Water Tank Schematic.pdf | **Replaced with Final** | A1 | 1 | 1 | 1 | |
| 24 | | 04380-GA501 | HEBD-SCWM Brush Water Schematic.pdf | **Replaced with Final** | A0 | 1 | 1 | 1 | |
| 25 | | 04380-GA107 | HEBD-SCWM DSIS LL.pdf | **Replaced with Final** | A1 | 1 | 1 | 1 | |
| 26 | | 04380-GA102 | HEBD-SCWM PWK Routes.pdf | **Replaced with Final** | A0 | 1 | 1 | 1 | |
| 27 | | 04380-GA600 | HEBD-SCWM PLT Equipment Layout.pdf | **Replaced with Final** | A0 | 1 | 1 | 1 | |
| 28 | | 04380-GA500 | HEBD-SCWM PLT Schematic.pdf | **Replaced with Final** | A1 | 1 | 1 | 1 | |
| 29 | | | | | | | | | |
| 30 | | | **27** <- Total files in folder | | ***Reviewed*** | **27** | 26 | 20 | 6 |
| 31 | | | | | ***UnReviewed*** | **0** | | ***Resolved / Accepted*** | ***Outsanding Issues*** |
| 32 | | | | | | | | | |

**=COUNTA(C2:C28)**
Counts number of entries in column

**=COUNTA(F2:F28)**
Counts number of entries in column

**=COUNTIF(G2:G28, "1")**
Counts number of '1's auto-filled in column

Manually populated with a '1' if issue resolved

**=COUNTA(F2:F28)**
Counts occurrence of 'Y' in column. If '0', review complete

| A | B | C | D | E | F | G | H | I | J |
|---|---|---|---|---|---|---|---|---|---|
| **Issuing Firm**<br>-<br>Only required if document faulty | **Drawing No.**<br>-<br>Usually at bottom right in drawing legend | **DMS filename**<br>-<br>Paste file name list generated by Dir. Printer here | **Comment**<br>-<br>*e.g.*<br>*Incomplete / non-final*<br>*Hand-written notes /*<br>*No title/no labels*<br>*same title / diff no. drawing etc.* | **Rev. No.** | **Reviewed**<br>-<br>Put '1' when document has been checked | **Issues**<br>-<br>`=IF(D6<>"","1","0")`<br>***Auto-fills - do not edit*** | **Resolved**<br>-<br>Put '1' when issue resolved | **Hidden column**<br>-<br>`=G6-H6`<br>Result of G cell minus H cell. If result is a 1 (issue, not resolved), column J highlights this | **Outstanding**<br>-<br>***Auto-fills - do not edit***<br>*Displays Y for yes if issue (1) minus Resolved (0) is greater than 0* |

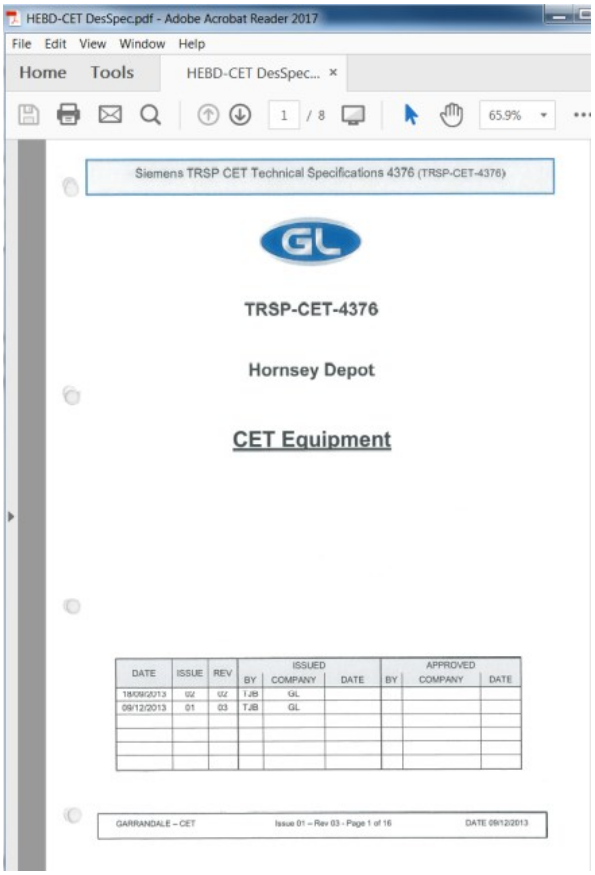
Increase/decrease the total number of rows to match the length of data imported. For example, pasting 300 file names into Column C of the review template with 50 rows requires duplication to 250 rows more, for a fully functional review mark up. To insert rows, place cursor in cell below which to add: (*Alt I, R*).

The existing review spreadsheet (DMS/ DMS_other-docs) should be adapted to each folder review. The orange cells should not be edited. After pasting the list of file names into the filename column, remove surplus or add requisite spreadsheet rows.

With your spreadsheet set-up for folder review, including names of all contained files, all other cells blank:

(1) Open the first named file in the list, and check for
   a. hand-written notes (there should be none)
   b. discrepancies, omissions, anomalies (e.g. wrong title page, missing content)
   c. revision number (should be Z or As Built)
   d. 'Approved' stamp / signature and date






First page of document reveals two shortcomings before checking other contents:

- Menu bar page-count shows a total of 8 pages, document footer claims there are 16

- Document not approved / signed off

(2) Mark as Reviewed.
(3) Comment (e.g. Request final version) and Issue cell auto-fills.
(4) Open next entry in spreadsheet list from its DMS folder
(5) Repeat until all items in list have been reviewed.
(6) Fill all spreadsheet rows where Issue to Resolve is ticked in a distinct colour.
(7) Print spreadsheet as pdf and send to contractor with request for final versions.

NB: They are slow to respond and usually reply with documents you didn't request and not those you did – make it simple, clear and be prepared to repeat your requests.

| D | E | F | G | H | J |
|---|---|---|---|---|---|
| **Comment** *e.g. Incomplete / non-final Hand-written notes / No title/no labels same title / diff no. drawing etc.* | **Revision Number** | **Reviewed** - Put '1' when doc.checked | **Issues** *Auto-fills - do not edit* | **Resolved** - Put '1' when issue resolved | **Outstanding** *Auto-fills - do not edit* |
| Request final | A3 | 1 | 1 | 1 | |
| P2 of 2 only: request final and p1 | A3 | 1 | 1 | 1 | |
| | C02 | 1 | 1 | | |
| Comments all over | | | | | Y |
| Request final | A0 | 1 | 1 | | Y |

I have found it easiest to remove all non-relevant files from the list (only include ones with problems) and simply to paste the relevant entries into a new spreadsheet, then copy only those cells into the body of an email.

Make your requests simple, clear and numbered so you can refer to numbered items in email of a given date until the request has been satisfactorily answered.

# DMS Review Completion Record

In the DMS folder entitled DMS-Review can be found the template folder review spreadsheet and PDF versions of those reports that have been completed. It is recommended that the matrices below be completed in order to determine which materials require updating to their final version.

## Hornsey Depot documentation review summary

| | | | | | |
|---|---|---|---|---|---|
| **Hornsey: Build** | | | | | |
| \HEB\ | | | | | |
| | \HEBD\ | Hornsey - Build - Design Documents | | | |
| | | Reviewer: | Complete: | No. Files | Issues O/S |
| | HEBD-AIF | BLM | Yes | 45 | 0 |
| | HEBD-CAD | n/a | n/a | n/a | n/a |
| | HEBD-CET CWM CLE | BLM | Yes | 342 | 6 |
| | HEBD-EXT | BLM | Yes | 193 | 0 |
| | HEBD-IREB | BLM | Yes | 18 | |
| | HEBD-MFB | BLM | Yes | 310 | |
| | HEBD-MFB BDR | | | | |
| | HEBD-MFB CLA | | | | |
| | HEBD-MFB DRDU | | | | |
| | HEBD-SID | RJP | | 173 | |
| | HEBD-SID DPPS | | | | |
| | HEBD-SID OLE | | | | |
| | HEBD-SID SSF | | | | |
| | HEBD-UB | | | 45 | |
| | HEBD-UFC | IL | Yes | 229 | |
| | | | | | |
| | HEBCA\ | Hornsey - Build - Construction Assurances | | | |
| | | Reviewer: | Complete: | No. Files | Issues O/S |
| | | | | | |
| | | Hornsey - Build - Health and Safety | | | |
| | HEBHSF\ | Reviewer: | Complete: | No. Files | Issues O/S |
| | HEBHSF-AIF | | | | |
| | HEBHSF-CET CWM CLE | | | | |

| | | | | | |
|---|---|---|---|---|---|
| | HEBHSF-CET | | | | |
| | HEBHSF-NCWM | | | | |
| | HEBHSF-SCWM | | | | |
| | HEBHSF-CofC | | | | |
| | HEBHSF-EXT | | | | |
| | HEBHSF-MFB | | | | |
| | HEBHSF-SID | | | | |
| | HEBHSF-UFC | | | | |
| **Hornsey: Operation and Maintenance** | | | | | |
| | \HEOM\ | Reviewer: | Complete: | No. Files | Issues O/S |
| | HEOM-AIF | | | | |
| | HEOM-BDR | | | | |
| | HEOM-BMS | | | | |
| | HEOM-CET CWM CLE | | | | |
| | HEOM-CET | | | | |
| | HEOM-NCWM | | | | |
| | HEOM-SCWM | | | | |
| | HEOM-EXT | | | | |
| | HEOM-MFB | | | | |
| | HEOM-SBT | | | | |
| | HEOM-SID | | | | |
| | HEOM-SID DPPS | | | | |
| | HEOM-UB | | | | |
| | HEOM-UFC | | | | |

## Three Bridges Depot documentation review summary

| | | | | | |
|---|---|---|---|---|---|
| Three Bridges: Build | | | | | |
| \TBB\ | | | | | |
| | \TBBD\ | Three Bridges - Build - Design Documents | | | |
| | | Reviewer: | Complete: | No. Files | Issues O/S |
| | TBBD-AB | | | | |
| | TBBD-AIF | | | | |
| | TBBD-CAD | | | | |
| | TBBD-CET CWM CLE | | | | |
| | TBBD-EXT | | | | |
| | TBBD-EXT DRDU | | | | |
| | TBBD-EXT HGWY | | | | |
| | TBBD-IREB | | | | |
| | TBBD-MFB | | | | |
| | TBBD-SID | | | | |
| | TBBD-UB | | | | |
| | TBBD-UFC | | | | |
| | TBBD-WHL | | | | |
| | TBBD-WPP | | | | |
| | TBBD-WWS | | | | |
| | | | | | |
| | \TBBCA\ | Three Bridges - Build - Construction Assurances | | | |
| | | Reviewer: | Complete: | No. Files | Issues O/S |
| | | | | | |
| | \TBBHSF\ | Three Bridges - Build - Health and Safety | | | |
| | TBHSF-AB | Reviewer: | Complete: | No. Files | Issues O/S |
| | TBHSF-AIF | | | | |
| | TBHSF-CET CWM CLE | | | | |
| | TBHSF-CofC | | | | |
| | TBHSF-COSHH | | | | |

| | | | | | |
|---|---|---|---|---|---|
| | TBHSF-CSNG | | | | |
| | TBHSF-EXT | | | | |
| | TBBD-EXT HGWY | | | | |
| | TBHSF-MFB | | | | |
| | TBHSF-SID | | | | |
| | TBHSF-UB | | | | |
| | TBHSF-UFC | | | | |
| | TBHSF-WHL | | | | |
| | TBHSF-WWS | | | | |
| | | | | | |
| Three Bridges: Operation and Maintenance | | | | | |
| \TBOM\ | | Reviewer: | Complete: | No. Files | Issues O/S |
| | TBOM-AB | | | | |
| | TBOM-AIF | | | | |
| | TBOM-BDR | | | | |
| | TBOM-BMS | | | | |
| | TBOM-CET CWM CLE | | | | |
| | TBOM-ECWM | | | | |
| | TBOM-WCWM | | | | |
| | TBOM-EXT | | | | |
| | TBOM-MFB | | | | |
| | TBOM-SBT | | | | |
| | TBOM-SID | | | | |
| | TBOM-UB | | | | |
| | TBOM-UFC | | | | |
| | TBOM-WHL | | | | |
| | TBOM-WWS | | | | |

## Document indexing

Many VFL documents are single PDFs of 1000+ pages, having the advantage of combining related data into a single source but the disadvantage that they are either

- unreferenced (no Table of Contents or Index),
- inaccurately referenced (paginated ToC created before insertion of 100s of pages of content on unnumbered pages) or
- impossible to search (Ctrl F for text strings) because they are made up of scanned (non-OCR) mixtures of data, text and drawings.

The Hornsey site-wide combined OM/HSF exists in two slightly different editions: one of 2,020 pages, the other (found later) of 2,028. [*HEOM-HSF VFL OM Manual.pdf*]

The 2,020 page edition has been indexed, summarising its contents in 13 pages of content headings and page numbers. [*HEOM-HSF VFL Index.pdf*]

For manuals of this length to be practicably usable, it is recommended that original MS Word format documents be obtained, bookmarked and indexed in the same way, with index included in a new combined document, to make each document fully searchable for all required content.

Most O&M manuals provided have Tables of Contents compiled prior to insertion of referenced contents, making the ToC non-functional. VFL manuals are generally single documents (if they weren't, they have been combined into one). N.G.Bailey manuals arrived as a tree of nested folders, with ubiquitous 'temporary.zip' files containing an approximate duplicate of the surrounding folder's contents.

An essential next step of DMS development will be to index all large documents – whether long series of drawings, O&M manuals or Health and Safety files.

By renaming files for searchability and placing them into content-determined locations, data is more readily discoverable and it is now possible to compare documents of a type or on a shared subject by searching for that term in the relevant area of DMS.

NGB documentation was separated, individually reclassified and distributed to the relevant area of the DMS. All temporary.zip files were inspected, compared and either renamed and integrated or discarded after review.

Where a 'General Information' folder contained a folder called Drawings, many of these emerged as duplicate or near-duplicates. In all such cases, all file versions were compared and only the latest retained. If this was not an approved (or As Built) version, the approved version was requested and obtained.

Once recurring duplication was identified, all files of a type or subject were moved to a temporary folder. All DPACs for Hornsey were listed together, alphabetically then by size. Parsing the complete list allowed reduction (in the case of DPAC files) of 497 distinct electronic files to 71 unique documents (426 of the total were either identical but differently-named or draft revisions which were subsequently discarded).

This repeated discovery of similar content in new locations or at revision was the most time consuming aspect of this project. Tens of thousands of duplicates were compared to final revisions and, where redundancy was ascertained, removed. Notwithstanding these (ongoing) issues, DMS now provides a verified source of data on the design, construction, layout, schematic arrangement, operation and maintenance, and eventual decommissioning and demolition of the two sites.

There remains a large-scale task to undertake for the DMS to be both complete and accurate.

The review process requires completion, to ascertain which files are missing or draft revisions. After review, complete indexing will be essential for documents longer than a few pages, to build searchability into unsearchable documents.

# 4P Data Import

Two options have been discussed:

(1) Paid service where 4P / ViewPoint provide all data for both depots.
(2) Free (fun) activity where DMS manager downloads all data, 100 files at a time and checks them against the contents of DMS one at a time.

From: Mawson, Benjamin <benjamin.mawson.ext@siemens.com> Sent: 12 September 2018 13:14
To: SM 4P Support <Support@4projects.com>
Subject: 4P bulk download
Hello
Please can you advise? I am seeking to download the complete data set for Hornsey rail depot to integrate to our Siemens-based DMS. Could you please explain how this can be done in a single action?

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From: Steven Eggleston [mailto:Steven.Eggleston@viewpoint.com] Sent: 12 September 2018 13:45
To: Mawson, Benjamin (ext) (TRSP TRAIN MAINTENANCE)
Subject: RE: 4P bulk download
Good afternoon Benjamin,
Thank you for your time on the phone earlier. As you advised, it sounds like you need a physical archive (hard-drive) of the data due to the wealth of information on the project. I would recommend speaking with your Account Manager, Ross McLaren, to get further information on how an archive can be created. Ross' details are below: Ross.McLaren@viewpoint.com 0191 525 2481 [d] 0790 0563 316 [m] Your Enterprise name is: Siemens plc

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From: Mawson, Benjamin <benjamin.mawson.ext@siemens.com> Sent: 12 September 2018 14:04
To: Ross McLaren Ross.McLaren@viewpoint.com Cc: Kevern, Paul <paul.kevern@siemens.com>
Subject: RE: 4P bulk download
Hi Ross
Thanks for your time just now explaining how we can obtain all data from the Siemens enterprise account for the Thameslink rail depots. If you could please let me know what information you require and send us a written quotation for the work (and cc my line manager Paul Kevern, copied here), I would be grateful.

_ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _

From: Ross McLaren [mailto:Ross.McLaren@viewpoint.com] Sent: 12 September 2018 15:33
To: Mawson, Benjamin (ext) (TRSP TRAIN MAINTENANCE) Cc: Kevern, Paul (MO RC-GB RS TL TSA FM)
Subject: RE: 4P bulk download
Hi Ben,
Thanks for the call.

- Just need to confirm if its an Archive or and Extract that you would like? (see attached) , sounds like an extract if you just want the files download
- Can you give me the full path to the project?
- Address to send the archive to

The cost would be £1250 for this extract ( £750 for any additional ones ordered at the same time)

_ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _

From: Mawson, Benjamin <benjamin.mawson.ext@siemens.com> Sent: 13 September 2018 12:28
To: Ross McLaren Ross.McLaren@viewpoint.com Cc: Kevern, Paul <paul.kevern@siemens.com>
Subject: RE: 4P bulk download
Hi Ross
Thanks. Could you please just clarify the distinction? The 'Archive' option appeared to be a read-only replica of the online data within an offline version of 4P. I think it is what you refer to as 'Extract' that we need - all Siemens data (both Hornsey and Three Bridges depots) and that it will be in editable files within a folder structure replicating the 4P arrangement.
If that is the case, we can request that any required paperwork be completed for this to be done.

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From: Ross McLaren [mailto:Ross.McLaren@viewpoint.com] Sent: 14 September 2018 09:30
To: Mawson, Benjamin (ext) (TRSP TRAIN MAINTENANCE) Cc: Kevern, Paul (MO RC-GB RS TL TSA FM)
Subject: RE: 4P bulk download
Hi Ben,
An Archive is basically an offline version of the live web app, an extract is just a data dump of all the files on the system in a folder structure.
I also need to know the name of the Enterprise the projects are on and the full path to the two project which can be found in the top right hand corner of the web page when you click on the projects, for example
Is this the address to send it to?
TRSP Train Maintenance
Siemens plc
RC-GB MO MLT GB-TL TSA
Hampden Road, Hornsey Depot
London N8 0HG,

A decision on how to obtain and integrate this data to DMS is pending.

# Contacts assisting with DMS development

### 1st in Rail

| | | | |
|---|---|---|---|
| Barry James | | barry@signalmaintenance.co.uk | |

### 4Projects / ViewPoint

| | | | |
|---|---|---|---|
| Ross McLaren | Client Relationship Manager | Ross.McLaren@viewpoint.com | 0191 525 2481 |

### CA Roofing Services

| | | | |
|---|---|---|---|
| Fred Jefferson | | Fred.Jefferson@cagroup.co.uk | 01388 830 262 |

### Caunton Steelwork

| | | | |
|---|---|---|---|
| Jonathan Moore | Drawing Office Manager | JonoM@Caunton.co.uk | 01773 538 329 |
| Paul Ashmore | 3D Project Coordinator | Paul.Ashmore@Caunton.co.uk | 01773 538 335 |
| Robert Weeden | Technical Director | robert.weeden@caunton.co.uk | 01773 538 322 |

### Cook Fabrications Ltd

| | | | |
|---|---|---|---|
| Richard Solley | Managing Director | richard.solley@cookfabrications.co.uk | 01303 890 051 |

### Garrandale / MTMAS Ltd T/A Garrandale MTMS

| | | | |
|---|---|---|---|
| Malcolm Prentice | | Malcolm.Prentice@mtms.co.uk | 0800 644 7200 |
| Jane Sleight | Operations Coordinator | jane.sleight@gbr-rail.com | 07702 674 940 |
| Ben Gray | Technical Apprentice | ben.gray@gbr-rail.com | 0800 949 9575 |
| Amy Budworth | Administrator | Amy.Budworth@mtms.co.uk | 07793 244 287 |

### Hegenscheidt MFD UK

| | | | |
|---|---|---|---|
| Matt Richardson | | M.Richardson@nshgroup.com | 07891 149 492 |

### Mechan

| | | | |
|---|---|---|---|
| Dean Fisher | | dean.fisher@mechan.co.uk | 07917 893 459<br>0114 257 4467 |

### MRX

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|---|---|---|---|
| James Hood | | jmh@mrxtech.co.uk | |
| Matthieu Godart | | mmg@mrxtech.com.au | |

### N.G.Bailey

| | | | |
|---|---|---|---|
| Daniel Prince | (Hornsey) | Daniel.Prince@ngbailey.co.uk | |
| Simon Davis | (Hornsey) | Simon.Davis@ngbailey.co.uk | |
| Stuart Harris | (Three Bridges) | stuart.harris2@ngbailey.co.uk | 07971 157 563 |

### Omega Red Group

| | | | |
|---|---|---|---|
| Kelsey Clarke | | kclarke@omegaredgroup.com | 0115 876 7726 |
| Chris Harrison | | charrison@omegaredgroup.com | 0115 876 7726 |

### Siemens AG Energy Management Division (Transformers)

| | | | |
|---|---|---|---|
| Anna Liebl | | anna.liebl@siemens.com | +49 7021 508-305 |

### Siemens Building Technologies

| | |
|---|---|
| Peter Colverd | pete.colverd@siemens.com |

### Volker Fitzpatrick Hornsey

| | |
|---|---|
| Katherine Sutherland (departed role) | |
| David Mutter | David.Mutter@volkerfitzpatrick.co.uk |
| Matt Ghinn | Matt.Ghinn@volkerfitzpatrick.co.uk |
| Andrew François | Andrew.Francois@volkerfitzpatrick.co.uk |
| Dannii Stephenson | Dannii.Stephenson@volkerfitzpatrick.co.uk |

### Volker Fitzpatrick Three Bridges

| | |
|---|---|
| Jim Munro | Jim.Munro@volkerfitzpatrick.co.uk |
| Steve Morris | (departed role but happy to take calls after 2200 hrs and Sundays) 07879 434 021 |