# Working efficiently and reliably using ELFF software

## Newsletter #3 Oct 2015

The year 2015 is drawing to an end and as predicted our ELFF software has been employed in the design of countless kilometres of overhead contact lines. Since the issue of our first ELFF newsletter in May of this year, a lot has happened in Series 1 and subsequently in ELFF. To further facilitate the designer's daily work a considerable volume of new material has been made available; furthermore our ELFF software has been enhanced with several new functions. Together with the development team we work with relentless dedication to satisfy an ever evolving demand and to ensure that we react rapidly and efficiently to our customers' specific needs.

One specific request has been addressed in the attached BoQ checking guidance, to make sure that users can make best use of ELFF and are aware of where special attention is required to ensure correctness.

*Martin Begré*
*Licence manager*

---

**Included within the next ELFF update by end of November:**
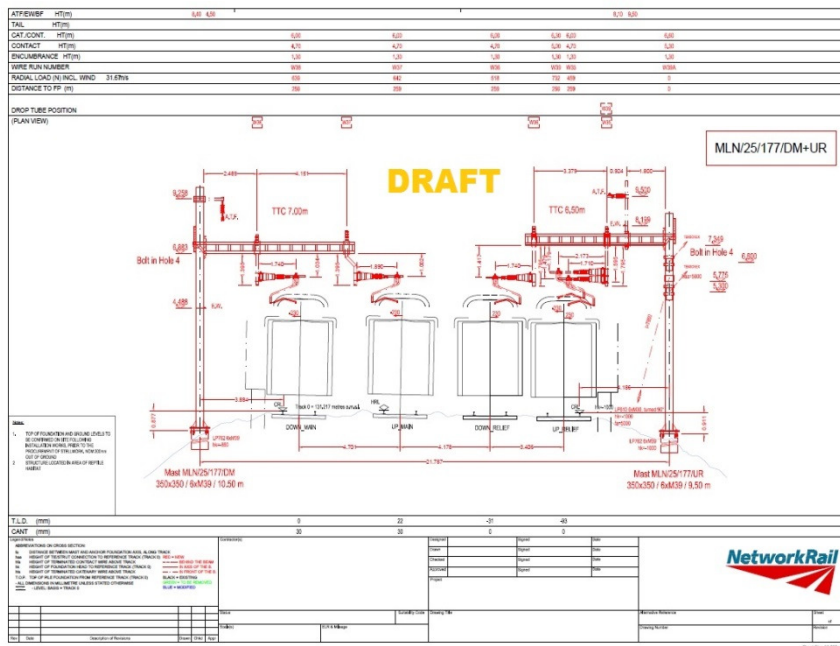
➢ **Automatic cross section dimensioning**

➢ **New material available from the Series 1 system**

- Tensorex on MAB beam splice
- New ATF insulators
- SIC/ RESIC on mast 250
- Heel setting according to B.03.01.04
- ....

**>> Dec. 2015 User-session <<**
(Further details will follow)

---

When the updated is released, we strongly recommend for you to take the time and read the instructions and descriptions that come with it. These contain valuable information about update functions and give you reference to the latest system manuals.



(ELFF generated XS with automatic dimensioning. Please note that the XS shown is just a DRAFT)

Reacting to requests from several customers the ELFF team has worked diligently on an automatic cross section dimensioning tool. A prototype cross section was designed by the corresponding people from Network Rail, Atkins/LDO, Balfour Beatty and Furrer + Frey. Together we agreed to a consistent dimension style which will be available with the November ELFF update. This was the epitome of interdisciplinary collaboration and in my opinion another milestone for our software. I want to take this opportunity to express my thanks to everybody involved.

We have decided to offer another ELFF user session in the UK, in the beginning of December (open to all users). The following topics will be covered: Contents of the latest update, general question and answer session, inputs & concerns for the ELFF programme in future, all from a user's view.

Subsequent to our last user session in July of this year (with a rather casual enrolment procedure) we now require a slightly more formal registration for the December session. Feedback from the relevant super users concerning the potential attendees in their team will be necessary. This is to permit a more streamlined and efficient organisation of catering and facilities. Please get back to me by email at *mbegre@furrerfrey.ch* by latest Friday the 6th of November. Depending on the interest shown in attending in this user session, we reserve the right to discontinue this offer.

# Steps to generate and build a proper BoQ

1. **Make sure the layout model has been updated to the most current update/state**
    a. Check that boom is correct (Q boom e.g. boom length Q80 & Q100/A boom/Mono boom)
    b. If generated before latest update, reassign EW and ATF using ELFF element change, make sure correct ATF bracket is selected
    c. Choose correct drop tube type if you have a front and rear boom assembly or cranked tube
    d. Choose correct Registr. Arm type (length and/or reach over)

2. **Generate XS**
    a. Add the additional Material where necessary (struts for drop tubes/DEP material/inspan material) and assign it to the correct wirerun

3. **Extract BoQ txt file**

4. **Input into Excel**
    a. When importing txt file make sure that the data format of the slots is text and not standard, this ensures that the article no. will be complete and no zero at the end will be deleted

5. **If you didn't change anything manually in the XS 99% of the material will be generated correctly**
    a. Things to check: Attachment angles for A booms to HEB masts for midpoint anchors, check half tension lengths of tensorex anchors for correct tensorex type

6. **Spot check the assemblies (Anchor Assemblies/Single Arm Cantilevers/Mast lengths and size/Boom lengths and size/Strut lengths)**
    a. Use previously completely checked standard assemblies to compare similar ones for faster checking

7. **Any additional Material that hasn't been generated with ELFF (in the Model or in XS) like the push off registration arm, the cable clamp assembly turned downwards or catenary support assemblies to name a few, need to be manually integrated into the XS. You can then use the command generate/change article to give the blocks their correct article no. according to the assembly drawings.**
    a. We do this because some of the articles are present in the databank and when making the BoQ will be added in the listing. Though it needs to be made sure that it is under the correct wirerun
    b. Any article not in the database will be shown as an error message while generating the BoQ file so these can be added manually in the excel