



Minutes of Effc Technical Working Group

Lisbon, Portugal

3rd – 4th May 2018

Venue: Meeting Facilities, Office Teixeira Duarte, Lisbon

Attendees

Austria	T. Kirchmaier	TK	Keller Grundbau GmbH SEE
Belgium	M. Verlinden	MVE	Fondedile Eiffage
Denmark	O. Møller	NOM	Per Aarsleff A/S
France	J-M Jeanty	JMJ	Soletanche Bachy France
Germany	G. Dausch	GDA	Bauer
Germany	T. Garbers	TGA	Franki Grundbau GmbH
Hungary	E. Chovanyecz	ECH	Hidepitö Solétanche Bachy Foundation
Italy	A Rigazio	ARI	Icop
Italy	G Magnani	GMA	Trevi S.p.A.
Netherlands	B.J. Admiraal	BAD	Volker Staal en Funderingen
Poland	J. Rybak	JR	Wroclaw University of Technology
Portugal	I. Rosa	IRA	Teixeira Duarte Engenharia e Construções S.A.
Spain	G. Marote Ramos	GMR	Terratest.
Sweden	J. Romell	JRL	Skanska Sverige AB
Switzerland	D. Moore	MDU	Implenia Bau AG Spezialtiefbau
U.K.	D. Hard	DHA	Bachy Solétanche Ltd.

Apologies

Romania	L. Sata	SLL	Soletanche Bachy Fundatii (SBR)
Czech Republic	V. Racansky	VRA	Keller Grundbau Ges.mbH

<u>Item</u>	<u>Notes</u>	<u>Action</u>
1	Opening	
	<ul style="list-style-type: none"> Welcome Meeting was opened by BAD, who welcomed all the delegates to Lisbon.	
	A short video was presented by IRA on the history of Teixeira Duarte who were hosting the meeting.	
	<ul style="list-style-type: none"> Members, attendance Apologies had been received from Vaclav Racansky (Czech Republic) and Lorand Sata (Romania).	
	<ul style="list-style-type: none"> Compliance A compliance statement was read out by BAD, and agreed by the delegates.	
	<ul style="list-style-type: none"> Adoption of the Agenda The agenda proposed by BAD was reviewed, no items were added.	
2	Minutes from 17th TWG meeting, Haarlem, 2017	
	The minutes from the previous TWG meeting were reviewed by the group. Accepted without comments.	
	<ul style="list-style-type: none"> Action items from previous minutes 	



	The preparation of a document relating to Working Platform design remains currently with the H&S committee. The document is due to be released later in 2018 at which point the TWG will clarify whether TWG involvement is necessary.	
3	EFFC	
3.1	<p>3 sets of minutes from Executive Committee meetings were tabled.</p> <p>The feedback from the Exec on their view of the TWG is that they have questioned, more than once, the purpose of the TWG and why it only meets once a year. The question as to what the TWG is producing has not been accompanied by any suggestions of topics it should look at. It has been explained to the Exec that the TWG is committed to the production and upkeep of the execution standards and in the future the concrete tremie guide, plus there are plans for some future topics (dewatering, secant/diaphragm wall joints) if there is enough interest from the members.</p> <p>This view was explained to the TWG meeting but there was no specific feedback from the attendees.</p>	
3.2	The AGM saw a change in the President of the EFFC, Jose Candela of Terratest Group will hold the position for the next 2 years.	
4	CEN/TC 288	
4.1	No comments were made on the minutes from the CEN/TC 288 meeting last year.	
	A topic that has been raised is that there are overlaps between decisions made by TC groups (such as CEN/TC 250 and CEN/TC 104) but there is not always communication between the effected groups to ensure that the viewpoints are taken into consideration. The risk is that one group will make a decision which will override current items that effect foundations, and that these TCs do not always understand the effects of introducing such "rules".	
4.2	CEN/TC 250 liaison.	
	<p>In 2017 it became apparent that CEN/TC 250 were reviewing the contents of the execution standards with the intent of removing wording that they considered were related to design aspects, and should be moved into the revision of EN1997 part 3. This is in part driven by the inclusion of a section on "execution" in this new revision. CEN/TC 288 have now engaged with CEN/TC 250 to try and agree mutually what changes should or might be made as it is CEN/TC 288 that have control of the execution standards and not CEN/TC 250.</p> <p>An ad hoc committee has been formed comprising of individuals from both CEN/TC 250 & 288 to try and identify exactly which clauses will be removed and which will remain.</p>	
	<p>There was then a general discussion on the proposed creation of the new EN1997 part 3 and what part the TWG could play in trying to influence the content.</p> <p>At the end of this discussion some common themes had been reached:</p> <ul style="list-style-type: none"> • As long as the information is kept does it matter whether it is in the execution standards or Part 3? The key is reviewing to make sure nothing is lost. • There is an argument that moving clauses to EC7 raises their profile as Consultants are more familiar with the codes than the execution standards. • The TWG would approach CEN/TC 288 to advise that it was happy to act as a "mirror group" though this would require swift action when the draft Part 3 is issued. • It is important for countries to ensure that their national representative attends the CEN/TC 288 meeting as it is at the meetings that change can be affected, rather than via comments submitted. • At the same time, if comments are submitted then it is key to put forward solid proposals as alternatives and not just highlight what is not wanted. • It was felt that if CEN/TC 288 could have an individual, or more, at CEN/TC 250 meetings it would be beneficial. 	

	<p>It is not clear if the TWG could actually submit comments as a group as the process requires response by country. DHA would approach Andrew Bond to get his view on the most effective method of returning comments. It is likely that whilst he will be open to receiving comments they will have to be unofficial.</p>	DHA
4.3	<p>CEN/TC 182 Testing of Grouted Anchors. Standard is finished and delivered to BSI in January 2018. Formal vote is expected in June 2018.</p> <p>This is a separate document from EN 1537 Ground Anchors as this new standard relates purely to testing. The title of EN 1537 will need updating to reflect the new title of “Grouted Anchors” but this will be part of the next systematic review.</p> <p>A discussion developed on self drilling anchors/hollow bar anchors and their place in the current suite of documents. For the purposes of this new standard they are considered to be a tension piles rather than an anchor but this is disputed as it is possible to install one with a free length. This lead to whether self drilled bars could be a permanent solution due to concerns over corrosion.</p> <p>Corrosion protection is an area where there was a feeling that it is only really grouted anchors that are adequately addressed, other types such as soil nails are still not fully covered.</p> <p>This is an area possibly for research rather than a position paper as there are many aspects to consider including aggressiveness of the soil and the grade of the steel used.</p>	
	<p>FIB Recommendations for Ground Anchors. This appears to be a document aimed at Consultants and is a substantial document but does not refer to current EN standards, and has been produced in isolation from the geotechnical community.</p> <p>It states it is “state of the art” but conflicts with EC7 and EN 1537.</p> <p>The discussion centred around whether this document was considered a problem and what action the TWG should take if it was felt to be.</p> <p>Ultimately it is a guidance document not a code and as such sits lower in the hierarchy but it could still be a source of conflict. As it is written as an international document and not European specific it does not have to be totally compatible with the Eurocodes.</p> <p>It was felt however that FIB should be approached and asked to harmonize their document with the content of the Eurocodes.</p> <p>It was noted that there is some good content such as the work on definition of soils in terms of aggressiveness and the degree of protection required. This was of interest given the points raised earlier (see CEN/TC 182 Testing of Grouted Anchors).</p> <p>The conclusion was that the TWG should review this document and collate their comments. These would then be fed back to FIB via Chris Irwin of DSI who is part of this Task Group but also known through the CEN/TC 288 working groups relating to anchors. The feeling was to try and guide in a positive fashion so that there were common terms of reference.</p>	
4.4	<p>Environmental aspects for CEN/TC 288. Formally this still sits with Bob Essler but there have been no developments.</p>	
5	Special geotechnical works standards	
5.1	<p>EN 12716 (WG17) Jet Grouting. The standard is completed, the last changes were editorial ones required to remove references to ASTM standards and replace with EU standards. Final draft out for formal vote in June 2018.</p>	
5.2	<p>EN 12715 (WG18) Grouting. There have been 3 meetings in the last year. The document is finished, including rock grouting, and ready to be issued for national enquiry. This could be July 2018 but is not fixed. As a result the Work Item has been activated. There are some references to ISO codes that may need to be removed/replaced in a similar fashion to those that were in EN 12716.</p>	



5.3	EN 12063 (WG19) Sheetpiles. There is slow progress within this group. The key points were a perceived lack of response from the Chairman and a concern over the amount of influence that external bodies such as Arcelor, were having on the final product. The initial intent of a quick update of the document now seems to be turning into a full review.	
5.4	Ground Freezing. A Working Group has now been formed (WG 20) and a Chairman found, Mr. Andrea Rigazio. A call for experts was made in early 2018. At the moment the workgroup consists of representatives from France, Germany, Netherlands and Finland. The work has not yet started.	
5.5	<p>Dewatering. In line with the action from the last meeting a short paper was prepared by VRA, which highlighted the number of existing documents already covering this topic. There is work by CEN/TC 451 which already partly covers this topic through wells & boreholes.</p> <p>The demand for this position paper from the EFFC originally came from CEN/TC 288. They were looking for a position paper or detailed document which could then be taken forward and amended to form a standard. This is a change in philosophy by them to address the increasing problem of countries not wanting to get involved with CEN/TC 288 Work Groups due to the financial burdens CEN places on such individuals.</p> <p>If the TWG were to look at this topic it should be for the benefit of the EFFC members, and it is not clear that there is a demand from them for such a document.</p> <p>The first step is to identify what is already covered by CEN/TC 451 and then seek clarity from CEN/TC 288 on a proposed scope to see if the TWG should take this up.</p>	
6	EFFC Concrete Task Group	
6.1	<p>The final version of the 2nd Edition is ready for release for comment, with a view to being formally launched at the DFI/EFFC conference in Rome in June 2018.</p> <p>There is still a lack of knowledge about exactly what happens during the curing process in the ground but the new document contains updated and extended information on testing of fresh concrete and the parameters to check.</p> <p>A key point is that the current approach to mix design and extensive use of additives means that the stability, or instability, of the concrete is far more sensitive to changes. There are alternative methods to the Bauer filter press, namely the Austrian filter press which has been in use since 2009 and which tests a larger sample. This means that the pressures and volumes are different to those associated with the Bauer tests. The speed of the Bauer tests means that it is preferred by some contractors to the Austrian filter press. Regardless of which filter press is used it is not clear that there are definite correlations between the test results and the actual bleeding witnessed.</p> <p>A key change in the new edition is the removal of information regarding properties of support fluid which will now be addressed in a separate guide on this subject.</p> <p>The main test now identified for testing fresh concrete is the slump flow test, EN 12350-8, rather than flow table or slump.</p>	
	<p>The new guide is a very useful document, but there is no guidance on how to implement all the information contained within it.</p> <p>How this document be should implemented and promoted and what tools should be produced, and by whom has not been addressed.</p> <p>After a discussion it was felt that the TWG should wait and see what presentations are given at the conference in Rome and then see how those could be modified to help promote the new guide. Another option might be the appointment of National Champions (similar to the Carbon Calculator) to promote the guide.</p> <p>It will also be necessary to inform the suppliers respectively CEN/TC 104 as there are greater expectations on the concrete used, which they do not currently appreciate.</p>	
	Looking to the future, the next change to EN 206 and the Appendix D relating to foundation concrete should incorporate the changes to testing that this Tremie guide	

	now suggests. This is a topic for CEN/TC 288 but the TWG needs to ensure it feeds into this process. In some countries it is common for the client to supply the concrete and the foundations contractor needs the relevant standard to reflect the testing they would wish to use to prove the suitability of the concrete. The sequence however needs to be education of contractors first, then the consultants & suppliers.	
	It was proposed that a small group from within the TWG be formed to look at preparing a presentation & flowchart to explain the new guide. This will meet after the summer and will consist of BAD, GMR, MDU & MVE. DHA to be kept informed of group progress and activities. One proposal was for a one page sheet that summarises expectations & requirements for concrete for diaphragm walls, CFA pile etc similar to that prepared by the Belgium Federation.	BAD, GMR, MDU, MVE
6.2	BAD presented the latest information on the R&D being carried out on numerical modelling of concrete flow. Whilst this has produced interesting results it remains a theoretical rather than practical tool – currently takes around a week to run an analysis. A question was raised as to how realistic the actual representation of the reinforcement is in the analyses as the actual granular nature of the concrete is not actually modelled, it is treated as a fluid with a specified viscosity & fluidity.	
7	EFFC Support Fluid Task Group	
7.1	BAD gave an update on the status of this new task group. The original intention is supply guidance on the use of polymers, whilst updating the knowledge on the use of bentonite. There is currently a lot of experience and views on use of bentonite but little for polymers. The group preparing the document is a mixture of contractors & consultants but also includes suppliers. The first draft of the guide is expected to be out for comment at the end of 2018. The biggest issue to be addressed is, what tests to use for polymers and what the limits should be. It is possible that the first version of the document will only summarise the available guidelines from around the world as reaching a consensus is proving difficult. A similar process to that used for the Tremie guide, where a second edition included the results of research work done, could well be required for this guide as well.	
8	New tasks and/or working scheme for the TWG	
8.1	Dewatering See notes on section 5.5.	
8.2	Transfer of clauses to CEN/TC 250 Discussed under section 4.2. An offer will be made to CEN/TC 288 to form a mirror group	
8.3	Water tightness of retaining walls After discussion it was felt that there was a need for a small guidance document on this topic, more to educate Clients & consultants than for contractors. A group of roughly 5 people would form this group (led by GMR, plus BAD, JMJ, MVE, JR. DHA to be kept informed of progress). The first step would be a collation of the current advice available in national guidance documents or specifications.	GMR
8.4	Corrosion protection Ideas to be gathered to aid creating a proposal for discussion at the 2019 meeting	
9	Developments in special geotechnical works & foundations	
	Fibre optics & TIP (thermal integrity profiling) for integrity testing of piles, plus the use of fibre optics to replace strain gauges is being applied more often.	



10	Any other business	
10.1	BAD formally stood down as Chairman at the end of the meeting and by a unanimous vote DHA was confirmed as the new Chairman. The new vice-chairman will be MVE.	
10.2	The next meeting will probably be in London, TBC by DHA Date 9 th – 10 th May 2019	DHA
11	Closure	
	BAD closed the meeting, thanking all members for their participation. IRA was thanked by the group for hosting a well organised meeting.	