NOVEMBER 2019 REGION OF SOUTHERN DENMARK

# CONTRACT UNDER THE THRESHOLDS WITH A CLEAR CROSS-BORDER INTEREST

LAB TESTS OF AOP-METHODS FOR TREATMENT OF CONTAMINATED GROUNDWATER FROM THE POLLUTION PLUME AT GRINDSTEDVÆRKET

TENDER TERMS INCLUDING APPENDICES, ENGLISH







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#### 1 Information about the tender

# 1.1 Preliminary description

The Region of Southern Denmark, in the following referred to as the contracting authority, wants to put the following contract out to tender, cf. the Danish Public Procurement Act, chapter 4.

This tender has been announced at udbud.dk on 26 September 2019 as 3 sub-agreements. Tenders have been received for sub-agreements 2 and 3, but no tenders were received for sub-agreement 1. Therefore, it has been decided to re-announce sub-agreement 1 in this separate tender.

Additional information about the sub-agreements is available in section 1.2 and in the special work descriptions (SAB) included in Appendix A.

The tenderer may bid on one or more sub-agreements.

The nature of the minimum requirements for economic and technical capacities (selection criteria), which must be documented in order to be considered for the project, and related documentation, is described in sections 1.10 and 1.11.

ABRf, abridged general conditions for consultancy services for building and construction works, applies to this project.

Please note the deviation from ABRf § 38, section 4, regarding limitation of the consultant's liability. The limitation of liability is replaced by an amount of DKK 10 million.

Please note the deviation from ABRf  $\S$  4, section 4, regarding the order of priority of documents.

# 1.2 Scope of contract

The contract includes test of treatment of contaminated groundwater using three different advanced oxidation methods (AOP), performed either in the lab or using a mobile plant. Groundwater contaminants include, e.g., pharmaceutical substances (the so-called Grindstedværket substances), chlorinated solvents and degradation products of the solvents, and benzene.

The contract also includes ecotoxicological tests of both untreated and treated groundwater.

SAB in Appendix A provides more details on the project.

### 1.2.1 Description of sub-agreement 1

Sub-agreement 1 involves testing three AOP methods; A-C:

A: Ozone (O<sub>3</sub>)

B:  $O_3$  + hydrogen peroxide  $(H_2O_2)$ 

C: UV+ H<sub>2</sub>O<sub>2</sub>

For all three methods (A-C), the groundwater must be pre-treated to remove iron and manganese, and after the AOP tests, the water must be post-treated with activated carbon.

Further descriptions of sub-agreement 1 are included in Appendix A.

Sub-agreement 2 includes testing of one AOP method; D:  $H_2O_2+$  fixed-bed catalyst (catalytic  $H_2O_2$ ). The winner of sub-agreement 1 receives treated water water from the winner of sub-agreement 2 (Water IQ, Holland) to post-treatment with activated carbon.

Sub-agreement 3 includes ecotoxicological tests of untreated groundwater and groundwater treated using each of the four methods tested under sub-agreements 1 and 2. The winner of sub-agreement 1 must send water samples of post-treated water from both sub-agreement 1 and 2 to the winner of sub-agreement 3 (DHI, Denmark).

Therefore, the coordination between the laboratories is very important. Precise times for the delivery and reception of water within the time schedules described in the tender material must be agreed upon when starting the project.

#### 1.3 Tender documents

The tender documents include the following documents:

- > Draft agreement
- Present tender terms in English
- Appendix A Special work descriptions (SAB)
- > Appendix B Basis for payment and measurement (TAG1-TAG3)
- Appendix C Bills of quantities (BoQ-BoQ3)
- > Appendix D Solemn declaration in Danish and English
- > Appendix E ABR Abridged (Abridged general conditions for consultancy services for building and construction works), applies to this project.

In case of discrepancies between the Danish and the English versions of the tender terms or special work descriptions, the Danish version prevails.

# 1.4 Indicative schedule for the tender process

The table below shows the indicative schedule for the tender process.

Schedule for tender process			
Announcement at udbud.dk	12. November 2019		
Deadline for submission of questions	29. November 2019		
Deadline for answers to questions	4. December 2019		
Deadline for submission of tenders	11. December 2019 kl. 12 (CET)		
Notice of award and contracting	20. December 2019		
Kick-off meeting (potential)	8. January 2020		

# 1.5 Master time schedule for the project

The project is expected to be carried out according to the below master time schedule:

Time schedule for the project, sub-agreement 1 (this tender)			
Supply/pick-up of water	20-21. January 2020		
Performance of tests	20. January -14. February 2020  Last post-treatment test is performed after receipt of water from winner of sub-agreement 2. Deadline for performance of post-treatment tests is week 7 2020.		
Post-treated water must be <u>received</u> by the winner of sub-agreement 3	Not later than 17 February 2020		
Deadline for preliminary report	28 February 2020		
Deadline for final report	27 March 2020		

Time schedule for the project, sub-agreements 2			
Supply/pick-up of water	20-21. January 2020		
Performance of tests	20. januar-10. February 2020		
Post-treated water must be <u>delivered</u> to the winner of sub-agreement 1	Not later than 10 February 2020		
Deadline for preliminary report	28 February 2020		
Deadline for final report	27 March 2020		

Time schedule for the project, sub-agreement 3			
Receipt of water	20-21. January 2020 (untreated water) 17. February 2020 (treated water)		
Performance of ecotoxicological tests	20. January -22. February 2020 (Untreated water, week 4) (treated water, week 8)		
Deadline for test report	27 March 2020		

As described, there is shipping/transport from the laboratory winning subagreement 1 to the laboratory performing sub-agreement 3 (DHI, Denmark) and from the laboratory performing sub-agreement 2 (Water IQ, Holland) to the laboratory winning sub-agreement 1. Therefore, compliance with the time schedule is very important. Precise times for the delivery and reception of water within the time schedules described in the tender material must be agreed upon when starting the project.

# 1.6 Questions regarding tender documents

As soon as possible, the contracting authority should be notified of any discrepancies in the tender documents and/or questions by the below emails.

Anne Krag, COWI, at: <a href="mailto:akra@cowi.com">akra@cowi.com</a>, and Jarl Dall-Jepsen, COWI, at <a href="mailto:jad@cowi.com">jad@cowi.com</a>, copy to Hanne Nielsen, the Region of Southern Denmark, at <a href="mailto:hni@rsyd.dk">hni@rsyd.dk</a>

Any questions must be submitted in writing not later than 29 November 2019.

Questions will be answered continuously, and the last answers will be uploaded

### 1.7 Deadline for submission of tender

Tenders must be submitted to the emails below:

to udbud.dk, not later than 4 December 2019.

Anne Krag, COWI, at: <a href="mailto:akra@cowi.com">akra@cowi.com</a>, and Jarl Dall-Jepsen, COWI, at <a href="mailto:jad@cowi.com">jad@cowi.com</a>, copy to Hanne Nielsen, the Region of Southern Denmark, at <a href="mailto:hni@rsyd.dk">hni@rsyd.dk</a>

Tenders must be received by: 11 December 2019 at 12:00 Central European Summer Time (CET)

Tenders received after this deadline will not be considered.

### 1.8 Opening of tenders

It will not be possible to witness the opening of tenders.

#### 1.9 Notification

All tenderers will be notified in writing simultaneously of the award decision.

# 1.10 Requirements for submission of tender

All communication must be in Danish or English

The tender must include the following:

- > Tenderer's company name, address, email address and telephone
- Annual accounts, approved by auditor, for the tenderers' last two completed accounting periods, which must state the following key figures for each financial year:
  - > Net turnover
  - > Equity.
- Project description (15 pages maximum) per sub-agreement
- > List of references
- > CVs for the person(s) responsible for project implementation
- > Filled-in Appendix D, solemn declaration
- Filled-in bill of quantities for the sub-agreement(s) tendered for

A valid liability insurance with limit of cover corresponding to at least DKK 10 million for material and personal injury. Documentation must be included in the tender.

If the tenderer does not meet the above requirements for submission of tender, the tenderer may be declared non-compliant. In that case, the tenderer will not be evaluated any further.

### 1.11 Requirements for suitability

Below are listed the minimum requirements for economic capability and technical capability in relation to assessing the suitability of tenderers for the project.

The contracting authority carries out this suitability assessment based on an overall assessment of, in particular, the submitted project description, which should convince the contracting authority that the tenderer is able to handle the project.

If the contracting authority assesses that a tenderer is not suited for handling the project, the contracting authority reserves the right to reject the tenderer as being unsuited, due to failure to fulfil the listed minimum requirements, including minimum requirements for economic and technical capabilities. Further details are presented below.

# 1.11.1 Financial ability

- 1 The tenderer is to state *key figures*, i.e. the tenderer's **net turnover** for the last two completed financial years.
  - It is a minimum requirement that turnover in each of the two completed financial years is at least DKK 1 million.
- The tenderer is to state *key figures*, i.e. the tenderer's **equity** for the last two completed financial years.

It is a minimum requirement that equity in each of the two completed financial years is **positive.** 

# 1.11.2 Technical capability

1 The tenderer is to submit a project description of a maximum of 15 pages.

#### Content:

Based on the special work descriptions for each sub-agreement, the project description must describe the tenderer's approach to the project.

It is a minimum requirement that the project descriptions for sub-agreements 1 and 2 contain the following:

- 1.1 A description of and arguments for the procedure chosen for testing each method covered by the sub-agreement tendered for, including choice of filtering method for pre-treatment.
- 1.2 A list of all analyses and measurements that will be carried out during the tests, in addition to the tests that, cf. the special work descriptions, will be sent to Eurofins in Denmark for analysis.
- 1.3 Information about expected water volume required for carry out all tests under the specific sub-agreement, including all analyses and measurements, including the water volume to be used for all analyses prepared by an external lab (Eurofins).
- 1.4 Information about expected volume of treated water generated during the tests.
- 1.5 A description of how the water samples will be handled at the location; how the water will be transported to the lab; and how the water will be stored and handled in the lab or at the mobile plant to minimise the loss as well as degradation of the many volatile compounds such as benzene and chlorinated substances.
- 1.6 A description of any special requirements or specifications in connection with supply of groundwater.
- 1.7 A time schedule indicating test sub-activities.
- 1.8 A preliminary schedule for reporting the results.
- 1.9 A health and safety plan for the project.

It is a minimum requirement that the project description for sub-agreement 3 contains the following:

- 1.10 Information about how the water will be stored and handled in the lab to minimise the loss as well as degradation of the many volatile compounds such as benzene and chlorinated substances.
- 1.11 Information about how results will be reported
- 1.12 A time schedule for project implementation.
- 2 The tenderer is to provide a list of references.

It is a minimum requirement that the list of references demonstrates relevant experience from at least three and no more than five comparable references for the past eight years, describing the deliverables/services, project period, contract sum size, and contact person for the specific customer, including telephone and/or email information.

The contracting authority reserves the right to contact the contact persons included in the references in order to verify the information.

- 3 The tenderer is to submit CVs for the person(s) responsible for project implementation. This includes the CV for the project manager as well as CVs for two technical key staff members. The following minimum requirements apply:
- > At least five years of relevant experience (applies to the project manager)
- At least two years of relevant experience (applies to technical key staff members)
- > References for at least two projects included in the list of references (applies to the project manager).

#### 1.12 Award criterion

The award criterion for assessing submitted tenders is "lowest price".

# Appendix A Special work descriptions (SAB)

# Appendix B Basis for payment and settlement (TAG1)

#### Basis for payment and settlement, sub-agreement 1 (TAG1)

Present TAG1 covers all work regarding testing of three selected AOP methods for treating contaminated groundwater from the Grindstedværket factory site. Furthermore, the work also includes pick-up of water samples in Grindsted, pretreatment of water prior to AOP as well as post-treatment of water from AOP treatment using activated carbon. Finally, it is expected that at least one Skypemeeting regarding the work will be held during the project. The work is described in more detail in SAB and BoQ1, which further specify what the test activities include.

As stated in SAB, the tenderer is free to suggest other test procedures than the suggested test procedures, as long as the criteria listed under project purpose are met. Whether the tenderer chooses to do so or not, all main items and subitems in the bill of quantities must be filled in. Deviations must be included in the tenderer's project description, and the costs must be included in the bill of quantities items.

#### B.1.1 Bill of quantities items, sub-agreement 1

Numbering refers to the numbers in BoQ1.

#### 1 Pick-up of water samples

#### 1.1 Pick-up, handling and transport

The item must include all costs, including staff, materials, proper storage, safety equipment, any import licenses and transport to the lab in connection with pick-up and handling of groundwater supplied at the described address in Grindsted, Denmark.

#### 2 Pre-treatment tests

#### 2.1 Small-scale test involving chlorine dosing

The item must include all costs, including staff, machinery, chemicals, analyses and equipment needed to carry out the described preliminary dosage test.

#### 2.2 Large-scale oxidation test

The item must include all costs, including staff, machinery, chemicals, analyses and equipment needed to carry out the described oxidation test.

#### 2.3 Removal of excess chlorine

The item must include all costs, including staff, machinery, chemicals, analyses and equipment needed to carry out the described tests for removal of chlorine.

#### 2.4 Decanting and filtering

The item must include all costs, including staff, machinery, chemicals, analyses and equipment needed to carry out the described decanting and filtering tests.

#### 2.5 Reporting

The item must include all costs of the test report, which must describe test procedure as well as all results, assessments and conclusions.

#### 3 AOP tests using ozone (A)

#### 3.1 TOC measurements

The item must include all costs, including staff, machinery, chemicals, analyses and equipment needed to carry out the described TOC measurements.

#### 3.2 Blank and screening tests

The item must include all costs, including staff, machinery, chemicals, analyses and equipment needed to carry out the described blank and screening tests.

#### 3.3 Optimum dosage and reaction time

The item must include all costs, including staff, machinery, chemicals, analyses and equipment needed to carry out the described determination of dosage and duration of reaction time.

#### 3.4 Over-dosage and long reaction time

The item must include all costs, including staff, machinery, chemicals, analyses and equipment needed to carry out the described over-dosage tests with long reaction time.

#### 3.5 Under-dosage and short reaction time

The item must include all costs, including staff, machinery, chemicals, analyses and equipment needed to carry out the described under-dosage tests with short reaction time.

#### 3.6 Sample preservation, storage and transport

The item must include all costs, including staff, machinery, chemicals, analyses and equipment needed to preserve and store water samples from tests and send the samples to Eurofins and to the winner of sub-agreement 3 for ecotoxicological test. Any import licenses and transport must also be included.

#### 3.7 Reporting

The item must include all costs of preparing a preliminary report including test description and test data as well as results of measurements during the tests. The item must also include all costs of preparing the final report including assessments and conclusions as well as all analysis results from Eurofins.

#### 4 AOP tests using ozone and H<sub>2</sub>O<sub>2</sub> (B)

#### 4.1 Blank and screening tests

The item must include all costs, including staff, machinery, chemicals, analyses and equipment needed to carry out the described blank and screening tests.

#### 4.2 Optimum dosage and reaction time

The item must include all costs, including staff, machinery, chemicals, analyses and equipment needed to carry out the described test with optimum dosage and reaction time.

#### 4.3 Over-dosage and long reaction time

The item must include all costs, including staff, machinery, chemicals, analyses and equipment needed to carry out the described over-dosage test with long reaction time.

#### 4.4 Under-dosage and short reaction time

The item must include all costs, including staff, machinery, chemicals, analyses and equipment needed to carry out the described under-dosage tests with short reaction time.

#### 4.5 Sample preservation, storage and transport

The item must include all costs, including staff, machinery, chemicals, analyses and equipment needed to preserve and store water samples from tests and send the samples to Eurofins and to ecotoxicological tests. Any import licenses and transport must also be included.

#### 4.6 Reporting

The item must include all costs of preparing a preliminary report including test description and test data as well as results of measurements during the tests. The item must also include all costs of preparing the final report including assessments and conclusions as well as all analysis results from Eurofins.

#### 5 AOP tests using UV and $H_2O_2$ (C)

#### 5.1 Blank and screening tests

The item must include all costs, including staff, machinery, chemicals, analyses and equipment needed to carry out the described blank and screening tests.

#### 5.2 Optimum dosage and reaction time

The item must include all costs, including staff, machinery, chemicals, analyses and equipment needed to carry out the described test with optimum dosage and reaction time.

#### 5.3 Over-dosage and long reaction time

The item must include all costs, including staff, machinery, chemicals, analyses and equipment needed to carry out the described over-dosage tests with long reaction time.

#### 5.4 Under-dosage and short reaction time

The item must include all costs, including staff, machinery, chemicals, analyses and equipment needed to carry out the described under-dosage tests with short reaction time.

#### 5.5 Sample preservation, storage and transport

The item must include all costs, including staff, machinery, chemicals, analyses and equipment needed to preserve and store water samples from tests and send the samples to Eurofins and to ecotoxicological tests. Any import licenses and transport must also be included.

#### 5.6 Reporting

The item must include all costs of preparing a preliminary report including test description and test data as well as results of measurements during the tests. The item must also include all costs of preparing the final report including assessments and conclusions as well as all analysis results from Eurofins.

#### 6 Post-treatment with activated carbon

#### 6.1 TOC measurements of untreated water

The item must include all costs, including staff, machinery, chemicals, analyses and equipment needed to carry out the described TOC measurements.

#### 6.2 Screening tests with activated carbon

The item must include all costs, including staff, machinery, chemicals, carbon, analyses and equipment needed to carry out the described screening tests.

#### 6.3 Complete tests with untreated water

The item must include all costs, including staff, machinery, chemicals, carbon, analyses and equipment needed to carry out the described tests on untreated water.

#### 6.4 Tests of water from treatment with ozone

The item must include all costs, including staff, machinery, chemicals, carbon, analyses and equipment needed to carry out the three described treatment tests.

#### 6.5 Tests of water from treatment with ozone + H2O2

The item must include all costs, including staff, machinery, chemicals, carbon, analyses and equipment needed to carry out the three described treatment tests.

#### 6.6 Tests of water from treatment with UV + H2O2

The item must include all costs, including staff, machinery, chemicals, carbon analyses and equipment needed to carry out the three described treatment tests.

#### 6.7 Tests of water from treatment with H2O2 + catalyst

The item must include all costs, including staff, machinery, chemicals, carbon, analyses and equipment needed to carry out the three described treatment tests.

#### 6.8 Sample preservation, storage and transport

The item must include all costs, including staff, machinery, chemicals, analyses and equipment needed to preserve and store water samples from tests and send the samples to Eurofins and to ecotoxicological tests. Any import licenses and transport must also be included.

#### 6.9 Reporting

The item must include all costs of preparing a preliminary report including test description and test data as well as results of measurements during the tests. The item must also include all costs of preparing the final report including assessments and conclusions as well as all analysis results from Eurofins.

#### 7 General

#### 7.1 Project management

The tenderer is to price hours and resources for general project management beyond the test work.

#### 7.2 Meetings

It is expected that Skype meetings will be held during the project between the region, COWI and the tenderer. The tenderer is to state a price per meeting with a duration of two hours maximum. The price must include preparation and participation.

# B.2 Basis for payment and settlement, subagreement 2 (TAG2)

Present TAG2 covers all work regarding testing of oxidation method based on hydrogen peroxide and fixed-bed catalyst for treatment of contaminated groundwater from the Grindstedværket factory site. Furthermore, the work also includes pick-up of water samples in Grindsted and pre-treatment of water prior to AOP. After-treatment of treated water with activated carbon will not be a part of sub-agreement 2 but will be prepared by the company winning sub-agreement 1. The AOP-tests may be carried out using a mobile plant on site. Finally, it is expected that some information meetings regarding the work will be held during the project. The work is described in more detail in SAB and BoQ2, which further specify what the test activities involve.

As stated in SAB, the tenderer is free to suggest other test procedures than the suggested test procedures, as long as the criteria listed under project purpose are met. Whether the tenderer chooses to do so or not, all main items and subitems in the bill of quantities must be filled in. Deviations must be included in the tenderer's project description, and the costs must be included in the bill of quantities items.

#### B.2.1 Bill of quantities items, sub-agreement 2 (TAG2)

Numbering refers to the numbers in BoQ2.

#### 1 Pick-up of water samples

#### 1.1 Pick-up, handling and transport

The item must include all costs, including staff, materials, proper storage, any import licenses and transport to the lab in connection with pick-up and handling of groundwater supplied at the described address in Grindsted, Denmark.

#### 2 Pre-treatment tests

#### 2.1 Small-scale test involving chlorine dosing

The item must include all costs, including staff, machinery, chemicals, analyses and equipment needed to carry out the described preliminary dosing test.

#### 2.2 Large-scale oxidation test

The item must include all costs, including staff, machinery, chemicals, analyses and equipment needed to carry out the described oxidation test.

#### 2.3 Removal of excess of chlorine

The item must include all costs, including staff, machinery, chemicals, analyses and equipment needed to carry out the described tests for removal of chlorine.

#### 2.4 Decanting and filtering

The item must include all costs, including staff, machinery, chemicals, analyses and equipment needed to carry out the described decantering and filtering tests.

#### 2.5 Reporting

The item must include all costs of the test report, which must describe test procedure as well as all results, assessments and conclusions.

#### 3 AOP tests using H<sub>2</sub>O<sub>2</sub> and fixed-bed catalyst (D)

#### 3.1 TOC measurements

The item must include all costs, including staff, machinery, chemicals, analyses and equipment needed to carry out the described TOC measurements.

#### 3.2 Blank and screening tests

The item must include all costs, including staff, machinery, chemicals, analyses and equipment needed to carry out the described blank and screening tests.

#### 3.3 Optimum dosage and reaction time

The item must include all costs, including staff, machinery, chemicals, analyses and equipment needed to carry out the described determination of dosage and duration of reaction time.

#### 3.4 Over-dosage and long reaction time (low flow)

The item must include all costs, including staff, machinery, chemicals, analyses and equipment needed to carry out the described over-dosage tests with long reaction time.

#### 3.5 Under-dosage and short reaction time (high flow)

The item must include all costs, including staff, machinery, chemicals, analyses and equipment needed to carry out the described under-dosage tests with short reaction time.

#### 3.6 Sample preservation, storage and transport

The item must include all costs, including staff, machinery, chemicals, analyses and equipment needed to preserve and store water samples from tests and send the samples to Eurofins and to laboratory performing ecotoxicological tests. Any import licenses and transport must also be included.

#### 3.7 Reporting

The item must include all costs of preparing a preliminary report including test description and test data as well as results of measurements during the tests.

The item must also include all costs of preparing the final report including assessments and conclusions as well as all analysis results from Eurofins.

#### 4 General

#### 4.1 Project management

The tenderer is to price hours and resources for general project management beyond the test work.

#### 4.2 Meetings

It is expected that Skype meetings will be held during the project between the region, COWI and the tenderer. The tenderer is to state a price per meeting with a duration of two hours maximum. The price must include preparation and participation.

# B.3 Basis for payment and settlement, subagreement 3 (TAG3)

Present TAG3 covers all work related to ecotoxicological tests of untreated, contaminated groundwater and of treated groundwater from the four different AOP-methods.

Treated groundwater will be supplied by the company that wins sub-agreement 1, whereas untreated groundwater will be supplied by the client (possibly via Eurofins in Danmark) upon commencement of the project.

The work is described in more detail in SAB and BoQ3, which further specify what the test activities involve.

#### B.3.1 Bill of quantities items, sub-agreement 3

Numbering refers to the numbers in BoQ3.

#### 1 Receipt, storage and disposal of water samples

#### 1.1 Receipt, storage and disposal

The item must include all costs, including staff, materials and proper storage and handling of the groundwater samples received. Two rounds of water supplies may be expected: One supply of untreated contaminated groundwater, as well as one supply from the lab performing work under sub-agreement 1.

#### 2 Ecotoxicological tests

2.1 OECD guideline method no. 201 (Rev. 2011)

The item must include all costs, including staff, machinery, chemicals, analyses and equipment needed to carry out the test described in OECD guideline 201 using one of the recommended species of green algae, e.g. Pseudokirchneriella subcapitata. The definitive test must be carried out with a minimum of five (5) concentrations that cover a suitable interval, cf. the guideline.

#### 2.2 OECD Guideline method no. 202

The item must include all costs, including staff, machinery, chemicals, analyses and equipment needed to carry out the tests described in OECD guideline 202 (2004).

#### 2.3 Reporting

The item must include all costs of preparing a test report describing procedures, as well as all results, assessments and conclusions.

# Appendix C Bills of quantities

	Master Bill of quantities	s, sub-agreement 1	
Lab-tests of AOP r	nethods for treatment of pollutior	plume at Grindstedværket, sub-agreeme	ent 1
Region	of Southern Denmark in accordance amount ekskl. VAT	carry out the above mentioned work for the ce with the tender matarial of september 20	
Main Item: Transfe	erred from BoQ		
1 Pick on	of water samples etc.	DKK	
2 Pre-trea	atment tests	DKK	
3 AOP-te	sts using ozone (A)	DKK	-
4 AOP te	sts using ozone and H2O2 (B)	DKK	
5 AOP tes	sts using UV and H2O2 (C)	DKK	
6 Post-tre	eatment with activated carbon	DKK	
7 Genera	I	DKK	
Total su	um excl. VAT	DKK	
Reservations	Eventual reservations are listed l	nere	
SIGNATURE:	The undersigned confirms that have been made in relation to mentioned in the bills of qouati	other appendixes	
SUPPLIERS NAME:			
ADRESS:			
PHONE:			
E-MAIL:			
	Date	Suppliers signature	
AUTHORIZED PERSO	ON		
Name		Phone number	

ALTERNATIVE AND SPECIAL INFORMATION		
EVT. SUBCONTRACTOR		
EVI. SUBCONTRACTOR		
Type of work	Name	
	Adress	

### Bills of quantities, sub-agreement 1

				T		
Main Item	Item	Describtion	Fixed price, DKK	Total excl. VAT		
1	Pick	op of water samples etc.				
	1.1	Pick-up, handeling and transport				
Total r	main it	tem 1 to transfer to master bills of quantities				
2	Pre-	treatment tests				
	2.1	Small-scale test involving chlorine dosing				
	2.2	Large-scale oxidation test				
	2.3	Removal of excess chlorine				
	2.4	Decanting and filtering				
	2.5	Reporting				
Total		Total price for Pre-treatment tests (2.1-2.5), to transfer to master bill of quant	tities			
3	AOP	-tests using ozone (A)				
	3.1	TOC measurements, for calculating comspumption of ozone				
	3.2	Blank and screening tests				
	3.3	Optimum dosage and reaction time				
	3.4	Over-dosage and long reaction time				
	3.5	Under-dosage and short reaction time				
	3.6	Sample preservation, storage and transport				
	3.7	Reporting				
Total		Total price for AOP-tests using ozone (3.1-3.7), to transfer to master bill of qu	ıantities			
4	AOP	tests using ozone and H2O2 (B)				
	4.1	Blank and screening tests				
	4.2	Optimum dosage and reaction time				
	4.3	Over-dosage and long reaction time				
	4.4	Under-dosage and short reaction time				
	4.5	Sample preservation, storage and transport				
	4.6	Reporting				
Total		Total price for AOP-tests using ozone and H2O2 (4.1 til 4.6), to transfer to master bill of quantities				
5	AOP tests using UV and H2O2 (C)					
	5.1	Blank and screening tests				
	5.2	Optimum dosage and reaction time				
	5.3	Over-dosage and long reaction time				
	5.4	Under-dosage and short reaction time				
	5.5	Sample preservation, storage and transport				
	5.6	Reporting				
Total		Total price AOP test using UV and H2O2 (5.1 til 5.6), to transfer to master bill	of quantities			
6	Post-treatment with activated carbon					
	6.1	TOC measurements of untreated water				
	6.2	Screening tests with activated carbon				
	6.3	Complete tests with untreated water				
	6.4	Tests of water from treatment with ozone				
	6.5	Tests of water from treatment with ozone + H2O2				
	6.6	Tests of water from treatment with UV + H2O2				
	6.7	Tests of water from treatment with H2O2 + catalyst				
	6.8	Sample preservation, storage and transport				
	6.9	Reporting				
Total		Total price Post-treatment with activated carbon (6.1 til 6.9), to transfer to master bill of quantities				
7	Gen	eral				
	7.1	Project management				
	7.2	Meetings, price for 1 Skype-meeting, 2 hours duration				
		(7.2 attendance at meetings is only honored if the meetings are held)				
Total		Total price, General, to transfer to Main bill of quantities				
Tota	Leui	b-agreement 1, to transfer to Master Bill of quantities				
1 ULA	ı, su	agreement 1, to transfer to master bill of qualitities				

# Appendix D Solemn declaration

### **Solem declaration**

The undersigned tenderer hereby solemnly declares that the company does not have unpaid due debt to public bodies which exceeds DKK 100,000 at the time of the tender.

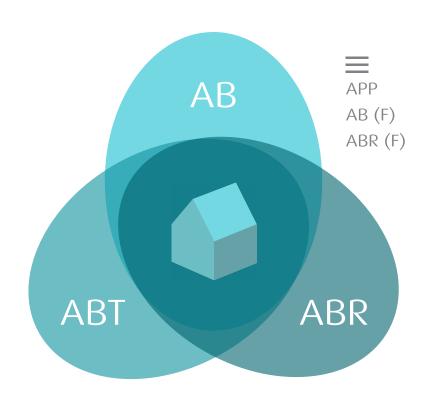
The tenderer declares that the company unpaid due debt to public bodies at time of the tender				
amounts to: DKK				
On behalf of the company (Name, address and CVR no.)				
Date				
Signature, and company stamp				



Appendix E ABR Abridged (Abridged general conditions for consultancy services for building and construction works)

# Abridged general conditions

for consultancy services for building and construction works (ABR Abridged)



These 'Abridged general conditions for consultancy services for building and construction works' (ABR Abridged) have been prepared by a committee appointed by the Minister for Climate, Energy and Building in accordance with Report 1570 issued on 21 June 2018, comprising representatives of the following organisations:

# • BL, Danmarks Almene Boliger

BL - Danish Social Housing

# • Bygherreforeningen

Danish Association of Construction Clients

# • Bygningsstyrelsen

Danish Building and Property Agency

# • Danske Arkitektvirksomheder

Danish Association of Architectural Firms

# • Dansk Byggeri

Danish Construction Association

# Danske Regioner

Danish Regions

# • Dansk Industri

Confederation of Danish Industry

# • Foreningen af Rådgivende Ingeniører

Danish Association of Consulting Engineers

# Kommunernes Landsforening

Local Government Denmark

### • Kooperationen

Danish Cooperative Employers' Association

# • SMVdanmark (tidligere Håndværksrådet)

SMEdenmark (formerly the Danish Federation of Small and Mediumsized Enterprises)

# TEKNIQ

TEKNIQ - Danish Mechanical and Electrical Contractors' Association

# Vejdirektoratet

Danish Road Directorate

# Voldgiftsnævnet for bygge og anlægsvirksomhed

Danish Building and Construction Arbitration Board

# **Prevailing Language**

The Danish language version of these general conditions shall be controlling in all respects and shall prevail in case of any inconsistencies with translated versions.

English version published 7 February 2019

# Abridged general conditions for consultancy services for building and construction works (ABR Abridged)

# A. Contractual basis

# Clause 1 Application

Subclause (1) These abridged general conditions are intended for use in relation to contracts on consultancy services for building and construction works when the client is not a consumer and when the assignment involves technical advice without design or with design to a limited extent. The conditions apply once they have been accepted by the parties to the contract.

Subclause (2) Deviation from the conditions is only valid if the points to be deviated from are clearly and explicitly specified in the contract.

# **Clause 2 Definitions**

Subclause (1) All amounts are exclusive of VAT unless otherwise stated.

Subclause (2) 'Working days' are all weekdays from Monday to Friday, with the exception of public holidays, Labour Day (1 May), Constitution Day (5 June), Christmas Eve (24 December) and New Year's Eve (31 December).

# Clause 3 Governing law

Subclause (1) The legal relationship in its entirety is to be governed by Danish law.

# Clause 4 The consultancy contract

Subclause (1) A consultancy agreement is entered into once a consultancy contract is signed or a tender submitted by the consultant is accepted in writing.

*Subclause* (2) The contract must include provisions concerning the following:

- a) the scope of consultancy services, including the services to be provided by the consultant and any requirements concerning documentation;
- b) the consultant's fee, including fee type and rates;
- c) the financial framework for the consultancy services and the budgetary assumptions on which it is based;
- d) the decisions to be made by the client in connection with the provision of the consultancy services:
- e) the form of the consultancy services to be provided; and
- f) a time programme specifying the end and start dates for the provision of the services.

Subclause (3) If the contract concerns building and construction works, the client and the consultant must decide in the consultancy contract whether and to what extent the consultant is to provide the following services:

- a) design management
- b) construction management
- c) supervision
- d) project follow-up

Subclause (4) If the contract is based on a tender submitted by the consultant following a call for

tenders by the client, the following order of priority will apply in the event of conflict between the provisions of the contract documents unless otherwise provided by general principles of interpretation:

- a) the consultancy contract;
- b) letters exchanged, minutes of meetings or written material containing agreed changes to, additions to or clarifications of the tender documents or the actual tender, and which are after the tender date:
- c) the consultant's tender;
- d) letters exchanged, minutes of meetings or other written material containing agreed changes to, additions to or clarifications of the tender documents which are after the date of the tender documents, but before the tender date;
- e) the client's tender documents;
- f) ABR Abridged.

# Clause 5 The client's call for tenders

Subclause (1) The tender documents must contain information about the conditions that will apply to the consultancy contract.

Subclause (2) If the consultant is requested to submit a tender for a fixed fee, a fee based on construction costs or a fee based on hours spent with a maximum amount, the tender documents must provide information about all the matters stated in clause 4, subclause (2).

*Subclause (3)* If the services involve the design of building or construction works, the tender documents must also contain information about the following:

- a) The total financial framework for design and execution if such a framework has been determined;
- b) The time limit for the consultant's preparation of a service provision schedule in accordance with clause 11 and the expected end date for the execution of the contract; and
- c) the type of organisation in which the contract is to be executed.

*Subclause* (4) In addition, the tender documents must include information about other matters that are considered to be of significance to the consultant's tender.

Subclause (5) Tenders are submitted on the basis of the information contained in the tender documents. Depending on the level of detail of the documents, the fee type and the services to be provided, the documents must be drafted in such a way that both the services and the terms and conditions are clear.

### Clause 6 The consultant's tender

Subclause (1) The tender includes only services that are designated as forming part of the contract according to the tender documents or the tender.

Subclause (2) Any consultant reservations regarding or deviations from the tender conditions must be clearly and collectively stated in the tender.

*Subclause (3)* The tender acceptance period is twenty working days from the date of the tender.

# Clause 7 Subconsulting

Subclause (1) To the extent that it is customary or only of minor importance for services to be provided under a subconsultancy contract, the consultant may entrust the provision of the

services to third parties. The parties may agree, however, that all or specified parts of the services are to be provided by the consultant or by a specific subconsultant, with the effect that the client's approval is required if the consultant desires to subcontract the provision of such services.

Subclause (2) At the client's request, the consultant must submit documentation as soon as possible to prove that a contract has been concluded with a subconsultant and that the subconsultant has acknowledged that the provisions of clause 7 also apply where a subconsultant entrusts others with the services and that the client is entitled to bring a claim for defects directly against the subconsultant in accordance with clause 7, subclauses (3) and (4).

Subclause (3) If it is considered to have been substantiated that the client is not able, or is able only with great difficulty, to pursue a claim for defects against the consultant, the client is entitled to bring the claim directly against the consultant's subconsultants if their services suffer from the same defect.

Subclause (4) Any direct claim is subject to the limitations following from the contracts both between the client and the consultant and between the consultant and the subconsultant, including liability exclusions and limitations set out in both contracts. Such a claim is also subject to the provisions of chapter J on dispute resolution. The client waives any claim for non-contractual damages against subconsultants in respect of matters covered by a direct claim for defects. If the direct claim has been caused by an intentional or grossly negligent act of the subconsultant, the first and third sentences do not apply.

Subclause (5) The provisions of clause 7, subclauses (1) to (4), also apply where a subconsultant entrusts others with the provision of the services.

# B. Insurance

# Clause 8 Liability insurance

Subclause (1) The consultant and, if applicable, the subconsultants must take out usual professional liability insurance and business liability insurance unless project liability insurance has been taken out to cover the consultant's liability for such errors and omissions.

*Subclause* (2) On request, the parties must provide documentation proving that the insurance policies are in force.

# C. Performance of consultancy services

# Clause 9 Services to be provided by the consultant

*Subclause* (1) The services must be provided in accordance with the contract, good consultancy practices and the client's instructions. The consultant must perform quality assurance of its services.

Subclause (2) If the consultant finds that the completion of the project requires special consultancy services in addition to the consultancy services the consultant agrees to provide, the consultant must notify the client of this before the contract is concluded.

Subclause (3) If the services include the preparation of budgets and the client has defined a financial framework for the provision of services, the consultant must review the client's budget and budget assumptions when the provision of the consultancy services begins.

Subclause (4) In connection with the commencement of the provision of the consultancy services the consultant and the client must also review the assignment with a view to clarifying the provision of the services and their prerequisites.

# Clause 10 Consultancy stages

Subclause (1) If the consultancy services are to be provided in stages, the parties must specify the contents of each individual stage in the contract and the scope of the consultant's quality assurance in connection with the completion of the stages.

Subclause (2) The client must as soon as possible after completion of a stage inform the consultant whether the client can approve the services provided in that stage as a basis for the consultant's further work.

# Clause 11 Service provision schedule

Subclause (1) The consultant must prepare a time schedule for the services to be provided by the consultant and the client (service provision schedule) if this has been agreed. The service provision schedule must be updated on an ongoing basis.

# Clause 12 Design

Subclause (1) The consultant must perform design services to the extent specified in the contract.

# Clause 13 Information about methods or materials

Subclause (1) If the consultant is to provide design services and the design involves the use of methods and materials that have not been thoroughly tested, the consultant must inform the client in writing of this as well as of any associated risks.

# Clause 14 Client instructions concerning the execution of services

*Subclause* (1) The client may issue instructions concerning the execution of services.

Subclause (2) The consultant must obtain the client's decision if the contract and the basis for it do not provide sufficient guidance for the execution of services.

Subclause (3) If the consultant finds that the client's instructions under clause 14, subclauses (1) and (2), concerning the execution of the services involve a variation of the services as stated in clause 15, the consultant must notify the client of this as soon as possible.

### Clause 15 Variations to services

Subclause (1) The client may order variations in the provision of the services or the basis for it if such variations are naturally linked to the services agreed upon.

Subclause (2) The consultant is entitled to carry out a variation ordered, unless the client shows that there are special reasons for having others perform the services.

# Clause 16 Additional payment and cost reductions

Subclause (1) If a variation involves extra work, the consultant is entitled to corresponding adjustment of the consultant's fee based on hours spent unless otherwise agreed.

Subclause (2) If the scope of the consultant's services is reduced, the consultant must credit the expenses that are saved or should have been saved to the client, the maximum amount being the amount at which the work has been calculated in the consultancy contract.

# Clause 17 Price and time after variations

Subclause (1) Any claim by the parties concerning amendments to the contract in terms of price and time resulting from a variation to the services or changes in the conditions for executing the services must be submitted in writing as soon as possible.

# **Clause 18 Obstacles**

Subclause (1) If the consultant finds that the services cannot be performed in accordance with the contract entered into, the consultant must notify the client accordingly as soon as possible and then follow the client's instructions.

# Clause 19 Client representative

Subclause (1) The client must appoint a person to represent the client in relation to the consultant.

# Clause 20 The consultant's authority

*Subclause* (1) Before commencement of the provision of services, the client must decide whether the consultant is to be authorised to enter into agreements on behalf of the client.

# Clause 21 Start-up review

Subclause (1) If the services concern building and construction works, the client, the consultant and the contractor may, before execution of the work, review the contractor's tender and the design the contractor is to execute with a view to achieving a common understanding of the design and execution of the works.

# Clause 22 Duty of cooperation and good faith

*Subclause* (1) The parties have a duty to work together in good faith so that errors, delays and cost increases are avoided.

# D. Payment

# Clause 23 Fee and indexation

*Subclause (1)* The consultant's fee must be laid down in the consultancy contract. The fee may be agreed as

- a) a fixed fee;
- b) a fee based on time spent;
- c) a fee based on construction costs; or
- d) a combination of different types of fees.

Subclause (2) If the consultancy contract does not specify a type of fee for the provision of services, the consultant is paid on the basis of time spent.

Subclause (3) For the part of the services provided more than twelve months after the date of tender, the fixed fee and agreed hourly rates are adjusted in accordance with an index that has been agreed or which – in the absence of agreement – is considered relevant to the services.

Subclause (4) If the consultant's hourly rates are not set out in the consultancy contract, payment will be based on the consultant's usual hourly rate for similar services, and such rate must not be unreasonable.

Subclause (5) If payment is made on the basis of time spent, the consultant must present an estimate of its fee, reimbursable expenses and costs on request and must notify the client as soon

as possible if there is reason to believe that the estimate will be exceeded.

Subclause (6) In case of a fee based on construction costs, the fee is calculated as a percentage of construction costs. The consultancy contract must specify the expenses falling within the scope of construction costs and the basis on which construction costs are determined, including indexation.

Subclause (7) The fee does not include the cost of manufacturing physical models, expenses for the reproduction of drawings, descriptions, photographs and any other material used to identify the services to be provided, expenses for specialists engaged by agreement with the client, or duties and charges payable for such certificates, etc that are necessary for providing the services under the contract. Invoices for such costs and expenses must be submitted for payment by the consultant. If the consultant pays a third party by agreement with the client, the client must reimburse the consultant for the amount paid plus 5%.

Subclause (8) The fee includes all other expenses the consultant has incurred in providing services, except for expenses the client has agreed to pay in addition to the fee.

# Clause 24 Payment and retention

*Subclause* (1) On written request to the client, the consultant is entitled to receive payment once a month for services provided, etc.

Subclause (2) It may be agreed that payment is to be made in accordance with a payment schedule instead of as set out in clause 24, subclause (1).

Subclause (3) If the date of payment for extra work has not been agreed, the consultant may request payment in accordance with the provision of clause 24, subclause (1). A request for payment must be submitted within a reasonable period of time after the performance of extra work unless special circumstances prevent billing of such work.

Subclause (4) The consultant may demand monthly reimbursement in arrears of reimbursable expenses.

# Clause 25 Due date, final date for payment and interest

Subclause (1) The consultant's claims under clause 24 fall due for payment when the client receives a request for payment and are payable no later than 15 working days after receipt.

Subclause (2) Any amount receivable by the consultant carries interest from the due date at the rate of interest provided for in the Danish Interest Act. The time limit set out in clause 25, subclause (1), is the grace period.

# Clause 26 The consultant's right to stop work

Subclause (1) If the client fails to pay an amount due by the final date for payment, the consultant may stop providing services after having given written notice of five working days.

# E. Intellectual property rights

# Clause 27 Intellectual property rights

Subclause (1) The client is entitled to use material prepared for the provision of the services.

Subclause (2) The client is entitled to use other material, including registration of existing conditions, analyses, calculations and any other material which exclusively contains information

necessary for the provision of the services.

*Subclause (3)* In addition, the consultant retains all rights in ideas developed and material prepared by the consultant.

# F. Extension of time and delay

# Clause 28 The consultant's right to extension of time

Subclause (1) The consultant is entitled to extension of time if the provision of the services is delayed as a result of

- a) variations to the services ordered by the client; see clause 15;
- b) the circumstances of the client or delay on the part of another consultant or contractor;
- c) war, acts of God, fire, strike, lockout, picketing, vandalism or similar events that are without the fault and beyond the control of the consultant;
- d) failure by public authorities to provide approvals, decisions or replies or to provide material or services within the time limits set out in the consultancy contract;
- e) public enforcement notices or prohibitions which are not due to the circumstances of the consultant; or
- f) any redesign obligations that the consultant may have.

# Clause 29 The consultant's liability in case of delay

*Subclause (1)* Any delay which does not entitle the consultant to extension of time constitutes an actionable wrong.

Subclause (2) If provisions have been made for liquidated damages or other special penalties, no claim for additional damages may be brought as a result of delay.

Subclause (3) Total liquidated damages payable by the consultant cannot exceed 10% of the consultant's fee.

Subclause (4) If no provision has been made for liquidated damages or other special penalties, the client's loss is determined in accordance with the general rules of Danish law, but see also clause 38 on limitation of liability.

# Clause 30 The client's right to extension of time

Subclause (1) The client is entitled to extension of time if the client's services or decisions are delayed as a result of

- a) war, acts of God, fire, strike, lockout, picketing, vandalism or similar events that are without the fault and beyond the control of the client;
- b) failure by public authorities to provide approvals, decisions or replies or to provide services within the time limits set out in the consultancy contract; or
- c) public enforcement notices or prohibitions which are not due to circumstances of the client.

# Clause 31 The client's liability in case of delay

*Subclause* (1) A delay which does not entitle the client to extension of time constitutes an actionable wrong.

# G. Defects

# Clause 32 Definition of defect

Subclause (1) If the services do not comply with clause 9, subclause (1), there is a defect.

# Clause 33 Rectification of defects

Subclause (1) The consultant has a duty and a right to rectify defects identified at the delivery of the stages agreed or later.

# Clause 34 Lapse of the consultant's right to rectify defects

*Subclause (1)* The consultant's right to rectify defects lapses if rectification is not effected by the consultant within a reasonable period of time.

# Clause 35 Complaints

Subclause (1) The client is entitled to file defects claims or enforce liability against the consultant only if the consultant has been notified in writing within a reasonable period of time after the defects or the consultant's potential liability was or ought to have been discovered. This does not apply if the consultant has been guilty of gross negligence.

# Clause 36 Reduction in the consultant's fee

Subclause (1) If the consultant does not rectify defects as set out in clause 33, the client may demand a reduction in the consultant's fee. The client is also entitled to a fee reduction if rectification is impossible.

# Clause 37 The consultant's liability

Subclause (1) The consultant is liable under the general law of damages in Denmark for errors and omissions in the provision of the services subject to the limitations set out in clause 38.

# Clause 38 Limitation of liability

Subclause (1) The consultant is not liable for any loss of business, loss of profit or other indirect loss.

Subclause (2) If the consultant and one or more other parties are liable towards the client for a loss, the consultant is liable only for the part of the client's loss which corresponds to the part of the total fault committed by the consultant (pro rata liability).

Subclause (3) If project liability insurance has been taken out, the consultant's liability is limited to the cover provided by the project liability insurance policy.

Subclause (4) The consultant's liability is limited to DKK 2.5 million unless otherwise agreed.

# Clause 39 Expiry of liability for defects

Subclause (1) The client's claims against the consultant for defects must be submitted no later than five years after the date of completion of the services. However, for consultancy services provided in connection with the execution of building and construction works, any claim by the client must be brought no later than five years after the handover of the building or construction works to which the defect relates.

Subclause (2) Regardless of the provisions of clause 39, subclause (1), the client's claims are retained in relation to parts of the services if

- a) the consultant has undertaken to extend the warranty period; or
- b) the consultant has been grossly negligent.

# H. Postponement and cancellation

# Clause 40 Postponement of services

Subclause (1) The client may postpone the provision of the services. If the provision of services is postponed for a period of more than two years, the consultant is entitled to regard the project as cancelled.

Subclause (2) If the client postpones the services after the consultant has started providing the services, and such postponement is not due to circumstances of the consultant, the consultant is entitled to receive both a fee for the work already executed and reimbursement of the expenses incurred by the consultant as a result of the postponement of the services, including wages and salaries for redundant labour and rental payments for redundant leased premises. The consultant must endeavour to keep these costs to a minimum.

Subclause (3) If any postponed provision of services is resumed, the consultant is entitled to receive a fee for any extra work and reimbursement of reasonable additional expenses associated with the resumption of the services

Subclause (4) If the provision of services is resumed, the client may demand that, if possible, the services be provided by staff with the same professional qualifications as the staff members originally assumed.

# Clause 41 Cancellation of services

Subclause (1) The client may cancel the provision of the services.

Subclause (2) If the client cancels the services, the consultant is entitled to a fee and reimbursement for expenses as set out in clause 40, subclause (2). The consultant is also entitled to receive reasonable remuneration for the client's use of the material prepared; see clause 42, subclause (1).

Subclause (3) If services are cancelled as a result of circumstances which the client ought to have foreseen or reasonably ought to have avoided, the consultant is entitled, in addition to a fee and reimbursement for expenses in accordance with the first sentence of clause 41, subclause (2), to receive compensation for the profit the consultant has lost by not completing the services.

# Clause 42 Use of material after cancellation

Subclause (1) If the client cancels services involving design after design work has started, the client is entitled to use the available design material for the project for which the material has been prepared, once the consultant has received payment in accordance with clause 41, subclauses (2) and (3).

Subclause (2) The client is entitled to use material, including registration of existing conditions, analyses, calculations and any other material which exclusively contains information necessary for the provision of the services, once the consultant has received payment in accordance with the first sentence of clause 41, subclause (2).

Subclause (3) However, the client is not entitled to use any material prepared before the cancellation of services as a basis for manufacture of products intended for sale. This also applies in cases where the services of the consultant comprise development of products intended for manufacture and sale.

Subclause (4) If the client uses any material prepared before the cancellation of services, the consultant is not liable for any defects or errors in uncompleted material.

# I. Termination with immediate effect

# Clause 43 The client's right to terminate the contract

Subclause (1) After having provided written notice, the client is entitled to terminate the consultancy contract in whole or in part with immediate effect

- a) if the consultant commits a material breach of the contract; or
- b) if the consultant engages in conduct of such a nature that the consultant cannot reasonably insist on continuing to serve as a consultant to the client.

Subclause (2) In the event that the contract is terminated with immediate effect, the client or the party completing the services on behalf of the client is entitled to use all or any of the material that has been prepared by the consultant and paid for by the client.

# Clause 44 The consultant's right to terminate the contract

Subclause (1) After having provided written notice, the consultant is entitled to terminate the consultancy contract in whole or in part with immediate effect

- a) if the client commits a material breach of the contract; or
- b) if the client engages in conduct of such a nature that it is not reasonable to insist on the consultant continuing with its duties and services.

# Clause 45 Common rules on termination with immediate effect

Subclause (1) Notice of termination must be given in writing.

Subclause (2) If either party terminates the contract with immediate effect, the other party is liable for the loss suffered in accordance with the general rules of Danish law.

# J. Disputes

# Clause 46 Dispute resolution ladder

Subclause (1) Efforts must be made to resolve and settle a dispute between the parties through negotiation as set out in clause 59, subclauses (1) to (3) of ABR 18.

Subclause (2) Mediation, conciliation, speedy resolution and arbitration may not be initiated before the negotiation procedure set out in clause 59 of ABR 18 has been completed. This also applies to expert appraisal unless the purpose of such appraisal is to secure evidence.

# Clause 47 Mediation and conciliation

Subclause (1) At the request of either party, the Danish Building and Construction Arbitration Board appoints a mediator to carry out mediation with a view to settling a dispute in accordance with the provisions of clause 60, subclauses (1) and (3) to (9) of ABR 18.

Subclause (2) Mediation cannot be initiated if a party desires speedy resolution of the dispute and files a request to that effect no later than ten working days after the request for mediation was made.

# Clause 48 Expert appraisal

Subclause (1) At the request of either party, the Danish Building and Construction Arbitration Board appoints expert appraisers to secure evidence of or assess actual conditions in accordance with the provisions of clause 61, subclauses (2) to (8), of ABR 18.

Subclause (2) If a party has requested speedy resolution, no expert appraisers may be appointed to consider the same matter until the question of speedy resolution has been finally concluded, unless the purpose of expert appraisal is to secure evidence.

# **Clause 49 Speedy resolution**

Subclause (1) At the request of a party, the Danish Building and Construction Arbitration Board appoints an umpire to effect a speedy resolution in accordance with the provisions of clause 62, subclauses (1) and (3) to (12), of ABR 18.

Subclause (2) Speedy resolution proceedings may not be initiated if there is a pending arbitral case about the same dispute.

### Clause 50 Arbitration

Subclause (1) Disputes between the parties are finally resolved by arbitration before the Danish Building and Construction Arbitration Board in accordance with the provisions of clause 63, subclauses (3) to (8) of ABR 18.

Subclause (2) Arbitral proceedings may not be initiated until four weeks after the conclusion of negotiations concerning the dispute as set out in clause 59 of ABR 18. Furthermore, arbitral proceedings may not be initiated if mediation, conciliation, speedy resolution or a decision concerning security provided relating to the same dispute is pending.