

Tendering of Demolition Projects



THREE GUIDES ON THE DEMOLITION PROCESS

This guide is one of three Værdibyg guides focusing on the value-creating demolition process:

TENDERING OF DEMOLITION PROJECTS

ENVIRONMENTAL SURVEYING AND DEMOLITION

CIRCULAR DEMOLITION

The three guides provide specific recommendations on how to plan, tender and implement demolition projects in connection with development or renovation for the greatest possible benefit to the environment, the work environment and the collaboration between the parties involved.

BETTER TENDER BASIS FOR DEMOLITION PROJECTS

Today, tender prices for demolition projects typically fluctuate more than is the case for other types of construction work, and the final price is often higher than expected. Often, conflicts arise between the parties about whether the demolition work has been carried out as agreed with regard to scope and quality, with critical delays as a consequence.

The conflicts between the parties are typically because the basis of the tender has been unclear. There are many reasons for this, but it primarily seems to be that the actors in the construction industry are generally uncertain about how demolition projects are described and tendered in practice.

The purpose of this guide is therefore to better prepare clients and the construction industry's other actors for the future tendering of demolition projects. Better tendering of demolition projects will lead to a better competitive basis and an increased certainty that the work will be carried out as expected.

This guide supplements Værdibyg's other guidelines on tendering, such as Bedre entreprise udbud, Dialog i udbudsprocessen and Effektiv prækvalifikation (in Danish). The focus of this guide is on the special conditions that apply in connection with demolition, and the target group is primarily clients, client consultants and technical consultants. The guide will also support contractors in their dialogue with the client and contribute in general to an increased understanding of principles and concepts in relation to demolition.

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TENDERING OF DEMOLITION PROJECTS

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The authors have been assisted by the following expert group:

Bygherreforeningen: Kathrin Ginette Beeck (Casa Consult), Peter Aulfeldt (Kuben Management), Per Bager (BO-Vest) | **Dansk Byggeri:** Anders Sørensen (Enemærke & Petersen), Martin Olsen (Dansk Miljø-Analyse), Martin Mark Nielsen (KPC København), Michaela Gudberg (LH Hockerup), Rasmus Krag (G. Tscherning), Thomas Sinding (J. Jensen) | **Danske Arkitektvirksomheder:** Christian Wittrup (Lendager Up) | **Foreningen af Rådgivende Ingeniører – FRI:** Jesper Ring (DOMINIA), Filip Lau (Norconsult), Jytte Jensen (OBH Rådg. Ingeniører), Mads Sørensen (Rambøll), Mikael Weiling (MOE), Olga Truelsen (TRUST / DOMINIA), Ulla Baggesgaard (INGENIØR'NE) | **Værdibyg:** Nina Koch-Ørvad (Værdibyg)

Consultant and author: Niels Trap (Golder)

Layout: Resonans Kommunikation | Tryk: Jungersen Grafisk |
Translation: Proofreading.dk

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THE TENDERING PROCESS AND STRUCTURE OF THE GUIDE

When demolition projects have to be planned and tendered, the client must be familiar with a number of crucial issues and have made careful considerations about them. First and foremost, it must be emphasised that a demolition project is an important and value-creating process that forms the basis for the further work – be it a new building or a renovation.

In connection with the demolition process, essential knowledge is built up about the existing building, about the specific environmental considerations and potentially about whether there are valuable resources that can be reused and reutilised. All this forms the basis for the demolition itself being carried out in a safe and efficient manner, and also provides good conditions for the further work on the existing building in the case of renovation. However, it requires good planning and a well thought-out tender process to carry out a value-creating demolition.

This guide focuses on the decisive considerations prior to the good tendering of consulting and contracting tasks that can be of benefit to both the client and the tenderer, and which can form the basis of a good and efficient demolition process. Initially, the guide examines the tasks and special duties of the parties involved in connection with demolition projects. This is to ensure that everyone involved – not least the client – is aware of their particular areas of responsibility when they are part of a demolition project.

The guide is aimed at entire demolitions or major demolitions in connection with renovations.

THE TASKS AND SPECIAL DUTIES OF THE PARTIES INVOLVED

It is often found that there is uncertainty among the parties involved about their specific responsibilities in connection with demolition projects. These include the tasks and duties that are the responsibility of the

client, the project planner and the contractor with regard to the environment and work environment, preliminary studies and design.

	CLIENT	PROJECT PLANNER	CONTRACTOR
ENVIRONMENT	<p>According to the Danish Statutory Order on Waste (Affaldsbekendtgørelsen), the client is responsible for ensuring that buildings that are demolished are screened and surveyed for PCBs and other environmentally harmful substances. This means that the client must ensure that the buildings are examined (e.g. by an environmental consultant) so that any environmentally harmful substances are identified before the demolition.</p> <p>It is also the client's duty that the waste from the demolition is reported to the municipality.</p>	<p>The project planner must inform the client of their duties.</p> <p>The project planner can, if agreed, assist the client in carrying out the tasks related to the client's duties.</p> <p>The project planner should clarify and describe what the local requirements are in relation to dust, noise, vibrations, etc.</p>	<p>The contractor must ensure that the waste is handled in accordance with the waste notification.</p> <p>The contractor should assist the client with information to be used in the reporting of waste, including quantities, recipients and transport.</p> <p>The contractor must ensure that environmental requirements are met during the construction period.</p>
WORK ENVIRONMENT	<p>According to the ministerial order on the clients' duties (Bekendtgørelse om bygherres pligter), the client must provide information on special risks, such as environmentally harmful substances.</p> <p>The client must coordinate the work in relation to health and safety when there is more than one employer on the site. The client must appoint an occupational health and safety coordinator for both the design and execution. The responsibility for the work environment cannot be transferred.</p> <p>The occupational health and safety coordinator must, on behalf of the client, participate in the surveying and assessment of work environment conditions and in the selection of methods for managing risks, as well as outline and coordinate work environment conditions, especially in relation to common areas.</p>	<p>According to the ministerial order on consultants' and project planners' duties (Bekendtgørelse om projekterendes og rådgiveres pligter), project planners must inform the client of their work environment duties and the necessary preliminary studies.</p> <p>The project planner must, with their statements in the project material, ensure that what is being designed can be carried out in a sound way in terms of the work environment.</p> <p>The project planner must ensure that special risks in the project are identified.</p> <p>In the project material, it can be an advantage to state how specific risks are dealt with specifically in the project, including the measures and precautions that the contractor must take during the execution of the work.</p>	<p>According to the ministerial order on employers' duties (Bekendtgørelse om arbejdsgivers pligter), the contractor must ensure that those carrying out the work are informed of the special risks associated with executing the work. In addition, those carrying out the work must have an appropriate education and be instructed in the work they are performing.</p> <p>The contractor must plan and organise their own work and ensure that welfare measures, technical aids and personal protective equipment are made available. For particularly dangerous work, there must be a written assessment of the work.</p> <p>The contractor must contribute to the coordination and collaboration on site and follow the occupational health and safety coordinator's instructions.</p>

ENVIRONMENT AND WORK ENVIRONMENT

In demolition projects, it is important that tasks and duties in relation to environmental conditions are clarified, amongst other reasons to ensure that waste and environmentally harmful substances are handled correctly. The work environment¹ also plays a crucial role in the work of the client, the project planner and the contractor, since demolition projects are considered to be particularly hazardous for those carrying out the demolition.

It should be emphasised that the requirements regarding the environment and the work environment are the same regardless of the type of contract. What is important is that the client is aware of their coordination responsibilities and clearly states the distribution of roles and the interfaces between the different parties involved.

THE CLIENT'S DUTIES WITH REGARD TO PRELIMINARY STUDIES

According to AB 18, the client has a duty to disclose in the tender documentation occurrences of environmental and health hazardous substances that may constitute an obstacle in connection with carrying out the demolition work. To the extent that obstacles are not described, the measures to remove the obstacle will be additional work that the contractor will charge for. It is therefore recommended that the client prioritises conducting the necessary preliminary studies, including an environmental survey of the current project².

AB 18 and ABT 18 are the same regarding the client's duty to carry out the necessary preliminary studies. Therefore, preliminary studies must be prioritised regardless of the type of contract.

CONTRACTOR DESIGN

When tendering and completing the demolition work, it is important that the client is clear about the extent to which the contractor is expected to design. AB 18 states that the contractor only has a duty and responsibility to design the demolition project if this is agreed contractually.

If the demolition work is carried out as a turnkey contract, it is normally the contractor carrying out the work

CONTRACTOR DESIGN CF. AB 18 § 17

The contractor must only plan if this is agreed (split consulting). To the extent that the contractor's work in the agreement is described by specifying functional requirements, the contractor must carry out the necessary design for this. The contractor's submission of proposals that the client implements does not imply that the contractor undertakes the design or has any risk or responsibility for the proposal.

who is responsible for planning to the extent necessary. If the client has planned parts of the project himself, it is important that this is disclosed to the turnkey contractor. It is also important for the client to indicate whether this is a conceptual design for inspiration to the turnkey contractor or whether it is a project element that the turnkey contractor is expected to carry out as described.

TYPICAL DESIGN WORKS IN CONNECTION WITH DEMOLITION WORK

The client must ensure that either the consultant or the contractor draw up plans (descriptions, drawings, etc.) that specify how the work should be carried out for the following topics:

- Disconnection/rerouting of utilities
- Implementation of environmental clean-up
- Implementation of works with special risks
- Temporary reinforcement
- Redirection of traffic
- Limiting dust, noise and vibrations
- Waste management
- Re-establishing interfaces with neighbouring buildings
- Work near train tracks in use
- Filling and building-in of excavation

1 Read more about duties and responsibilities in accordance with the work environment legislation at byggeproces.dk

2 See Værdibyg's guides [Forundersøgelser i renoveringsprojekter](#) (in Danish) and [Environmental Surveying and Demolition](#)

PROCUREMENT OF CONSULTING

Demolition projects require thorough planning and also place special requirements on competencies and services – amongst other reasons, due to particular safety risks associated with demolition projects. The client should therefore always consider whether there is a need in the demolition project to engage a client consultant and/or a technical consultant to assist with planning, designing, preliminary studies, tendering, contracting, supervision, etc.

A client consultant can advise the client in the various phases of the demolition project, including the planning of the contractual tendering. A technical consultant specialising in the environment and work environment can provide advice and execution of selected technical parts of the project (e.g. screening and surveying³ of environmental and health hazardous substances as well as waste management).

DEMOLITION REQUIRES COMPETENCIES AND EXPERIENCE

If, in a specific demolition project, the client believes that there is a need to purchase services from a client consultant, it is recommended to choose a client consultant with experience in planning and managing demolition work. It can also be important for the client consultant to be familiar with old building methods, since demolition projects rarely contain adequate drawings. Finally, it can be an advantage for the client consultant to have knowledge of the market for demolition contractors if part of the service is to prepare the contract tender.

It is recommended that the client demands that the people, the consultant attaches the CVs of in the offer, are in fact the actual people who will carry out the task.

CLIENT CONSULTANT'S COMPETENCIES

It is recommended that a client consultant for demolition projects has experience in:

- Planning and designing demolition works, including preliminary studies
- Risk assessment of demolition work
- Dialogue with the authorities, including obtaining permits and reports
- Tendering and contracting of demolition work
- Construction management, supervision and control of demolition work
- Knowledge of work environment risks in demolition work

CLEAR SERVICE DESCRIPTIONS LEAD TO PRECISE OFFERS

When consultancy offers are gathered, it is important for the client to be clear about which consultancy services are to be included – is it client consultancy in general, or is it selected technical consultancy services, e.g. environmental surveying and work descriptions? Experience has shown that unclear service descriptions often lead to errors and misunderstandings.

³ See clarification of terms at the end of the guide

TYPICAL CONSULTING SERVICES IN CONNECTION WITH DEMOLITION WORKS

- Schedules and budget estimates
- Preliminary studies
- Design
- Obtaining permits from authorities
- Reports on behalf of the client
- Occupational health and safety coordination (design phase – and potentially during execution), including preparation and updating of the health and safety plan (PSS), holding of safety meetings, etc.
- Preparation of tender documentation
- Evaluation of offers
- Contract proposals
- Inspection and follow-up
- Final accounts
- Delivery protocol

See also the service description for client consultancy (Ydelsesbeskrivelse for Bygherrerådgivning) (YBB19)

A FIXED PRICE CAN LEAD TO CHALLENGES

Demolition work is associated with a high degree of uncertainty, which is why there will typically be a need for changes and adjustments to the project along the way. It can therefore be difficult to offer client consultancy services in connection with demolition projects as 'fixed price'. It is not in anyone's interest if the client consultant does not have the budget to effectively follow up on changes and new issues that emerge as the demolition takes place. Especially when dealing with extra requirements from those carrying out the work, it is inappropriate if the client consultant does not have time to go into the details of the additional requirements.

The environmental consultant's task of conducting preliminary studies is similarly characterised by great uncertainty about the scope of the task, since it is difficult to assess in advance the extent to which, for example, there are environmentally harmful substances in the building. Therefore, it would also be inappropriate if work carrying out preliminary studies is offered as a fixed-price task. Preliminary surveys are typically conducted to reduce uncertainties in the project and increase the client's certainty regarding the budget. Low-cost and limited preliminary studies will rarely benefit the client in the long run⁴.

Tendering based on a stipulated scope of the assignment, and where payment is made in stages, will typically be the most appropriate.

FIXED PRICE LEADS TO INCREASED RISK PREMIUM

In ABR 18, a principle has been introduced that the consultant must cover 5% of the client's extra costs during the project. Requiring a fixed price for preliminary studies entails a risk that the consultant will include a significant risk premium in their offer as security for covering any additional costs, which is neither in the client's nor the project's interests.

⁴ Værdibyg's guide [Forundersøgelser i renoveringsprojekter](#) (in Danish) contains advice on prioritising which preliminary studies should be carried out.

PRELIMINARY CONSIDERATIONS ON CONTRACT TENDERING

When the client – and potentially the client consultant – begin planning the contract tendering of a demolition project, there are often two questions that are frequently discussed: Should the demolition be offered independently or as part of a potential later new build or renovation project? And what type of contract is most suitable when it comes to demolition? There are no clear answers to some of these questions, since in practice it depends on the demolition project and the context it is a part of.

TEAR DOWN AND BUILD UP – TOGETHER OR SEPARATELY?

In assessing whether the demolition project should be tendered together with the new construction or renovation project, it may be relevant to consider if the contractor has the necessary competencies to both demolish and build. The client should therefore require the contractor to document their subcontractor's competencies in relation to demolition.

If the project is pressed for time, it can be an advantage to let the contractor, who are to carry out the build-up, manage the demolition so that any delays do not fall back on the client. If the project is not pressed for time, it will reduce the uncertainties in the new building or renovation project if the site or existing building is ready before startup. This will optimise the time and cost of the construction – as well as the collaboration.

Regardless of whether the demolition is carried out as a separate contract or as part of a new building or renovation project, it is important that the client arranges sufficient preliminary studies and that existing conditions and relevant interfaces are well described. If soil management is included (e.g. for contaminated soil), it is important to clarify in which part of the project soil management is included. The same applies to tanks, pipes and cables in the ground, which require an accurate environmental survey⁵.

CHOICE OF CONTRACT FORM

The choice of contract form depends on the demolition project's scope and complexity, the client's competencies and needs, etc. It should be emphasised here that demolition projects should not be considered as an initial process that simply need to be completed before the actual new build or renovation work can begin. In demolition projects, it is no less important to carefully consider the basic premises for the task in order to ensure an efficient and, not least, safe process.

The work to be done is the same regardless of the contract form. The price of the work is therefore in principle the same regardless of the contract form. What sets contract forms apart is the extent to which the client chooses to entrust the planning and management of the project to the contractor. The contractor is of course paid for this service.

Similarly, the client can, via a turnkey contract agreement, transfer part of the uncertainty to the contractor. The contractor will typically include a risk premium for handling uncertainties. In demolition projects, which are often characterised by considerable uncertainty and complexity, this premium can be quite substantial. The contractor's risk is limited the more accurate and precise the preliminary studies are.

The turnkey contractor often hires a consultant himself, who in the project will be the turnkey contractor's consultant and not the client's. The client may choose to hire their own client consultant to handle the dialogue with the turnkey contractor and ensure that he performs the task as required. In addition, in the case of contractor design, it may be necessary for the client to appoint a project manager to coordinate the design work with the contractor.

⁵ Read more in Værdibyg's guide [Environmental Surveying and Demolition](#)

Listed below are a number of advantages, disadvantages and other aspects of offering a demolition project in different contract forms:

	ADVANTAGES	DISADVANTAGES	OTHER
INDIVIDUAL TRADE CONTRACTS	The client has great influence on the choice of demolition contractor and the specific solution for the project.	The demolition project must be well described. In addition, it requires resources and management from the client throughout the entire demolition process.	An individual trade contract is typically chosen for defined demolition projects, e.g. in connection with small renovation projects.
MAIN CONTRACT	Like individual trade contracts, but the client avoids having to coordinate between several contractors.	Like individual trade contracts, but the client loses influence in regard to the subcontractor's specific performance.	The main contract is typically chosen for demolition projects where work other than demolition is included.
TURNKEY CONTRACT	A number of conditions and uncertainties regarding planning and designing the demolition project are transferred to the contractor, thereby minimising the client's risk.	The client loses influence in the planning and execution of the demolition project. The client gains certainty regarding the budget, but typically pays a risk premium.	A turnkey contract is typically chosen for larger demolition projects involving many tasks or for demolition projects with high complexity.

The client's tasks and duties in relation to the environment and the work environment are the same regardless of the contract form. Certain duties can be passed on to the contractor; however, work environment obligations in relation to coordination and boundaries cannot. If the contractor does not carry out the task, it is ultimately the client who is responsible to the authorities.

Last but not least, it is important to remember that not all demolition contractors have equal experience in working as a turnkey contractor. Unfortunately, this is often only first discovered during the project. Therefore, in connection with the request for tenders, it is recommended to ask the contractor for references relevant to the assignment, and to ensure that there are references for the consultant who the contractor intends to use on the project.

PROJECT MANAGER CF. AB 18 § 17. PT. 2.

If the contractor is to carry out the planning, the client must appoint a project manager. The project manager represents the client to the contractor with regard to the plan's preparation and execution. The project manager can give and receive messages regarding the design as well as instructions regarding the preparation of the different contractors' design in their internal relationships.

THE DEMOLITION PROJECT – WHAT IS IMPORTANT TO DESCRIBE?

A clear description of the demolition project is a central requirement for the client to be able to get reliable prices and get the project done at the desired quality. All too often, the demolition project is described in general terms like ‘existing constructions are removed’, supplemented by a drawing of the new constructions. This is neither satisfactory nor appropriate for the client, the contractor or the project in general. Especially when it comes to environmental clean-up, it is important that the work is described clearly and unambigu-

ously so that the task can be carried out in a safe and efficient manner.

The table below lists a range of areas that are important to describe and include as a central part of the tender documentation. These lead to more accurate offers, better planned processes and safe execution.

THE WORK ITSELF	<p>What does the work include?</p> <p>Drawings stating the scope of the work. It is important to clarify the boundaries of the project – this far, but no further</p> <p>Descriptions of the execution of the work</p>
INTERFACES	<p>What interfaces exist and how should they be handled?</p> <p>Interfaces can be physical boundaries in relation to building parts that must be preserved but also organisational interfaces between different trade groups</p>
PERFORMANCE REQUIREMENTS	<p>How much is to be removed?</p> <p>How should the parts that are left of the building appear?</p> <p>Are there any special requirements for cleanliness or cleaning?</p>
FRAMEWORK AND DISTRIBUTION OF ROLES FOR THE WORK	<p>Organisation plan – who has what roles in the project?</p> <p>What permits must be obtained?</p> <p>What permits have already been gathered?</p> <p>Who is responsible for coordinating occupational health and safety?</p> <p>Has the occupational health and safety coordinator prepared the PSS?</p> <p>Does the work require special training?</p> <p>Are there parts of the work that the contractor has to plan?</p> <p>Who is responsible for final inspection?</p>

6 In 2020, Molio will release basic descriptions, guidance and paradigms for demolition. This guide will then be updated with relevant references.

DIFFERENCE BETWEEN PROCESS AND METHOD

It is debatable to what degree of detail it is appropriate – and possible – for the client to describe the demolition project in the tender documentation. On the one hand, a thorough and detailed description helps to ensure accurate offers and a better basis for the described tasks being carried out as the client wants. On the other hand, it also increases the client's responsibility – the more the client describes and requires, the more responsibility lies with the client himself. Often, it can also be value-creating to utilise the expertise and experience of those carrying out the work, which again speaks against very detailed descriptions and requirements.

In principle, it is recommended that the project is described to a level appropriate for the PSS. In addition, it is recommended to distinguish between process and method in the descriptions. For instance, you can write 'The surface must be cleaned, e.g. with sandblasting'. Here, there are requirements for the process ('cleaning'), while there is freedom of method with regard to the method ('sandblasting'). In this way, those carrying out the work have the opportunity to come up with alternative proposals for the method and, for example, take into account the overall schedule and order of the processes so that the most appropriate method is chosen for this particular project.

EXAMPLE: RELEVANT CONSIDERATIONS REGARDING CLEAN-UP OF WALL PAINT

It is not enough simply to state in the tender documentation that the 'existing wall must be cleaned of paint'. There are a number of factors that should be specified:

- Is it just the wall paint that needs to be removed or should the wall behind also be cleaned?
- How much has to be cleaned off?
- Is it a problem if the plaster is also removed?
- Should nails and screws in the wall be removed?
- Should panels and frames be removed or preserved?
- Has the power to the plug sockets been cut?
- Does the paint contain environmental and health hazardous substances?
- Should cleanliness tests be taken of wall surfaces after cleaning?
- Should the work area be closed and should there be negative pressure?²⁷
- Should protective equipment be used during the work?
- Who performs final cleaning after the work?
- What should be done with the waste?

7 Read more about safety requirements at asbest-huset.dk

MARKET DIALOGUE CAN LEAD TO INPUT FOR DESCRIPTIONS

For expert input on the planning and description of a demolition project, the client can hold a market dialogue⁸. In practice, market dialogue means that, before the project is put out to tender, the client contacts some of the contractors who could be considered able to carry out such a project. As part of this dialogue, it is possible to enquire about how the project can best be performed, how the project can be delimited and what is important to describe. In principle, it is possible to ask about everything that is relevant to solving the project.

In public tenders, it is important to note that the market dialogue must be documented and made public. This is done to ensure that the bidders who have been part of the dialogue do not have an advantage over those who have not participated. It can also be a good idea to allow the bidders to inspect the project, but this should be an opportunity for all bidders and not just those who have participated in a prior market dialogue.

Most often, the contractors are positive about participating in a market dialogue, as it is also relevant for them that the project is put to tender in a good and appropriate way. However, the client should be aware that there may be contractors who will argue for particular solutions and methods where they themselves have a particular advantage. At the same time, there is a risk that others will be reluctant to put forward all the good ideas and solutions prior to the tendering so as not to weaken their own position.

USE TENDERING WITH NEGOTIATION

Since it can be difficult for the client and the client consultant to describe the demolition task absolutely clearly and unambiguously, it can be a good idea to use the opportunity for dialogue on the demolition project with the tenderers in 'tendering with negotiation'⁹. Here, it is possible for the client and the demolition contractors to talk about the bids and any uncertainties in the tender documentation after the first tender has been submitted, but before the final tender.

In this way, the client has the opportunity to clarify the tender if he finds that the tenderers have not given a price for the same project. This provides greater opportunity for the tenderers to include the whole project in the offer. In the end, it gives the client more comparable offers as well as greater assurance of getting the 'right' prices and avoiding a lot of additional bills and conflicts later. It will usually be sufficient to have one dialogue/negotiation round.

8 See Værdibyg's guide [Dialog i udbudsprocessen](#) (in Danish)

9 See Værdibyg's guide [Udbud med forhandling](#) (in Danish)

TENDERING WHERE THE CRITERIA IS SOMETHING OTHER THAN PRICE

In line with the growing interest in reusing materials from demolitions and the increased focus on the work environment, more and more clients are opening their eyes to considering things other than price when demolition projects are tendered. The following examples can be included as qualitative sub-criteria¹⁰ for the allocation in demolition projects:

- **Organisation:** Description of the proposed organisation and CVs of the specific individuals that the offer is based on.
- **Communication and collaboration:** Description of how the contractor will ensure good communication and good collaboration with the client and the other parties involved through the different phases of the project.
- **Risk management:** Description of how the contractor will carry out particularly critical elements of the project and how the contractor will address and limit the associated risks.
- **Time schedule:** Description of how the contractor will carry out the demolition project within the client's submitted main time schedule. This also includes a description of the specific risks the contractor sees in the time schedule and how the contractor will address them so that the time schedule can be met or optimised further.
- **Quality assurance:** Description of the contractor's system for quality assurance and self-regulation focusing on selected quality-critical conditions.
- **Work environment:** The contractor's special measures, in addition to compliance with applicable legal requirements, to ensure and optimise safety during the execution of the work.
- **Resource utilisation:** The contractor's specific suggestions on how the amount of materials for reuse and reutilisation can be optimised¹¹.

It is recommended to use 2–3 qualitative sub-criteria besides price.

The client should be aware that those of the contractor's descriptions that are a positive part of the evaluation of the tender should be included later as requirements in a future project contract. The client should also remember to follow-up and ensure that the services offered are also carried out as agreed.

¹⁰ Read more in Værdibyg's guide [Kvalitet som tildelingskriterium](#) (in Danish)

¹¹ See also Værdibyg's guide [Circular Demolition](#)

CONTRACTING AND NEW CONDITIONS

Before the demolition work is started, a written contract must be agreed and signed by the client and the contractor. The contract can be concise and must in principle simply refer to the tender documentation and the contractor's tender. There are a number of examples of standard contracts available from various organisations (e.g. the Danish Construction Association [Dansk byggeri]) that can be used as a starting point.

Often, however, the client will have their own contracts with standard terms and conditions. Here, again, it is important that the contract clearly refers to the tender documentation and the contractor's tender. The contract can also refer to other documents, permits, etc. It is best practice that the PSS is attached to the tender.

It is important to note that the documents listed first in the contract have legal precedence over documents listed later in the contract. The order is typically: contract, contractor tender, tender documentation (including changes and additions to AB).

It can be beneficial to send a draft contract together with the tender documentation so that the bidders can respond to any special conditions and requirements prior to submitting tenders. Similarly, it is recommended that the specific requirements with regard to collateral and the contractor's insurance are clearly stated in the tender documentation. From experience, it can be difficult to get the contract in place if the contractor does not have previous knowledge of the client's specific requirements and wishes.

CHANGES AND HANDLING OF NEW CONDITIONS

The content and scope of the demolition project typically develops during the project. This is because in the case of demolition, just as with renovation, there are often significant uncertainties about the existing condi-

tions. In connection with tendering and contracting, it is therefore recommended that the principles in relation to charging for changes and extra work are clearly stated. Typically, this could be in the form of unit prices for typical work or quantity adjustment of specified items.

Note that any unit prices should be part of the competitive basis to ensure that it is not possible to speculate on pricing. Typically, unit prices will amount to 10–15% of the contract price to ensure the necessary weight in relation to the total tender price.

Stipulated services (i.e. services in the tender list that only come into play if there is a need for them in connection with the project) can also be a way to address potential new issues in the demolition project. The stipulated services can be used to cover services that are not familiar during the design phase but which there is an expectation that they could occur during the execution¹².

If a demolition contract is offered as a fixed price, it typically only applies to 'expected future conditions' and will therefore not include 'invisible, unexpected conditions', unless otherwise stated. This can, for example, be things that are hidden in closed constructions, environmentally harmful substances or contaminants that are not visible, or constructions in the ground. The client should carefully consider the risk of agreeing a fixed price for the relevant demolition project.

¹² The appendix at vaerdibyg.dk contains a list of proposals for stipulated services that can be included in the tender list

KEY CONCEPTS IN CONNECTION WITH DEMOLITION PROJECTS

TOTAL OR PARTIAL DEMOLITION

A distinction is usually made between 'total demolition', where the entire building is demolished, and 'partial' demolition, where the building is only partially demolished. Partial demolition is typically included in connection with renovation.

The rules and framework for total demolition and partial demolition are basically the same, and this guide also applies to both cases. However, it is worth noting that they are often organised in different ways. Total demolition is typically carried out as a general contract or a main contract, while partial demolition is typically carried out as an individual trade contract or a main contract and as part of the renovation.

SELECTIVE DEMOLITION

Selective demolition¹³ is demolition where materials are continuously sorted on site during the demolition. Demolition where the building is first demolished and the materials are subsequently sorted is not considered to be selective demolition. Today, there is a requirement that government buildings be demolished as selective demolition¹⁴.

Selective demolition is a key element of the Danish Environmental Protection Agency's strategy for circular economy¹⁵, where selective demolition is a prerequisite for optimal utilisation of reusable and reutilised materials.

ENVIRONMENTAL CLEAN-UP

Environmental clean-up refers to the handling of environmentally harmful substances and materials and the cleaning of contaminated surfaces. Environmental clean-up is carried out before demolishing the building's load-bearing structures.

SCREENING AND SURVEYING

Environmental clean-up requires a screening and surveying¹⁶ of the building before the occurrence of environmental and health hazardous substances.

In a 'screening', an initial assessment is made of possible occurrences of environmental and health hazardous substances. Typically, a screening will not include sampling but is primarily based on a visual inspection of the building and historical information about the building.

The 'surveying' of a building includes a closer examination of the prevalence and extent of environmental and health hazardous substances. The goal of surveying is to state precisely the extent of substances and materials that must be handled in accordance with environment clean-up. Surveying will normally include taking and analysing material samples.

PRELIMINARY STUDIES

Studies conducted early on in connection with the planning of the project. Preliminary studies may include screening and surveying of environmentally harmful substances, clarification of static conditions or structural structures, etc.

13 Principles of selective demolition are, amongst other places, described in the agreement on the demolition industry's environmental control scheme (Nedbrydningsbranchens Miljøkontrolordning [NMK 96]).

14 See Ministerial Order No. 282 of 18/04/1997.

15 Read more at mfvm.dk

16 Read more about screening and surveying in Værdibyg's guides [Forundersøgelser i renoveringsprojekter](#) (in Danish) and [Environmental Surveying and Demolition](#).