

# **CASE SPECIFICATION**

**New Administration Building Construction, Sintrupvej  
13, 8220, Aarhus**

**MIRETDESIGNS**

# 1. Table of Contents

## *Project Specific Specifications*

### **1. Orientation**

- 1.1. General
- 1.2. The Project Background
- 1.3. Summary of Contracts/Works
- 1.4. Project Documents
- 1.5. Project Organisation

### **2. GC 92 (General Conditions of Contract)**

- A. Contractual basis
- B. Performance bond and insurance
- C. Performance of the contract
- D. The employer's obligation to pay
- E. Extension of time limits and delay
- F. Handing-over of the work
- G. Defects
- H. 1-and 5-year inspections
- I. Special provisions on determination
- J. Disputes'

### **3. Building Site**

- 4.1. General
- 4.2. Stipulations
  - 4.2.1 Directions from local authorities
  - 4.2.2 Permits and reports to authorities
  - 4.2.3 Other stipulations
- 4.3. Handover of building
- 4.4. Existing conditions
- 4.5. The Client's setting-out of the building
- 4.6. Establishment of the building site
  - 4.6.1 Site plan
  - 4.6.2 Demarcation of the building site
  - 4.6.3 Fencing in the building site
  - 4.6.4 Closing off
  - 4.6.5 Security
  - 4.6.6 Security against theft
  - 4.6.7 Signposting
  - 4.6.8 Screening off/blocking off against 3<sup>rd</sup> person.
- 4.7 The Site's infrastructure
  - 4.7.1 Parking
  - 4.7.2 External road and path system
  - 4.7.3 Traffic system within the building
  - 4.7.4 Sealing off of rebates and holes in traffic areas.
  - 4.7.5 Establishing barriers in traffic areas
  - 4.7.6 Lighting up traffic areas

4.7.7 Provisions for shielding against inclement weather in traffic areas.

4.7.8 Clearing and cleaning traffic areas.

4.8 Portable site cabins and storage areas

4.8.1 Conditions for Cabins

4.8.2 Storage space

4.8.3 Tent workshops

4.8.4 Skips and refuse

4.8.5 Lighting of cabin area and storage space

4.8.6 Provisions for inclement weather in Cabin/storage area.

4.8.7 Clearing and cleaning of cabin and storage area

4.8.9 First aid post

4.8.9 Fire extinguishing materials

4.9 Work areas

4.9.1 Closing off rebates and holes in work areas

4.9.2 Establishing barriers in work areas

4.9.3 Lighting work areas

4.9.4 Provisions against inclement weather in work areas

4.9.5 Clearing and cleaning work areas

4.10 Technical installations

4.10.1 Cranes and building material lifts

4.10.2 Personnel elevators

4.10.3 Scaffolding

4.11 Site utilities

4.11.1 Water, sewer and drainage

4.11.2 Electricity

4.11.3 Telephone

4.12 Special provisions for buildings in use

4.12.1 General work conditions

4.12.2 Information to tenants

## 5. Health and Safety

5.1 General

5.1.1 Organisation

5.1.2 Safety meetings

5.2 Health and Safety Plan

5.3 The work environment

5.1.3 Safety meetings

5.1.4 Limiting noise

5.1.5 Limiting damage and adverse effects of vibration

5.1.6 Limiting the adverse effects of dust

5.1.7 Limiting adverse ergonomic effects

5.4 Provisions for dangerous works

## 6. Surrounding Environment

6.1 General

6.2 Noise

6.3 Vibration

6.4 Dust

6.5 Emission to the atmosphere

## **7. Quality Assurance**

- 7.1 General
- 7.2 Project management
  - 7.2.1 Site meetings
  - 7.2.2 Kick off meetings
- 7.3 Quality Plan
- 7.4 Contractor's quality control and documentation
  - 7.4.1 General
  - 7.4.2 Quality control documentation
  - 7.4.3 Operational & Maintenance documentation
  - 7.4.5 Filing QA-documents
- 7.5 Handing over procedure (project preview)
- 7.6 Local authority inspections
- 7.7 Guarantee/warranty documents
- 7.8 Handing over
- 7.9 Quality assurance after handing over

## **8. Scheduling**

- 8.1 General
- 8.2 Time Schedules
- 8.3 Inclement weather days

## 2. Orientation

### *Basis Specification (right page)*

#### 2.1 General

The directions in the Works Specification have priority over the stipulations in the Case Specifications

In the case of the Work Specification, the Building Component Specifications (Chapter 4) and drawings have priority over the Work Specifications' Chapter 3.

#### 2.2 The Project Background

#### 2.3 Summary of Contracts/Works

### *Project Specific Specification (left page)*

#### 2.1 General

*BPS Basis Specifications – The Building Case, publication B201, edition 2001-08-06* is, together with this project specific specification, valid for this particular project. The project specific stipulations have priority over the Basis Specifications.

#### 2.2 The Project Background

The project is a new administration construction building for offices in Sintrupvej 13, Aarhus.

Had become scarce space in the old office buildings, and as the company grows, there is a need for more space. The building is three levels with main entrance on the middle floor.

Requested the floor to play truck drivers, half is used for receiving guests and central space, while administrative functions are placed on the top. South of the house located parking, a terrace, this can be used by its employees, and the main entrance. In the Basement are an archive room, a toilet and the women and men dressing rooms. Ground floor are the cantine, a kitchen, a common toilet, an economy office, an office, a meeting room and a copy / Print room. The 1st floor are forwarder departments and 2 offices and a common toilet. An elevator is installed next to the main staircase.

#### 2.3 Summary of Contracts/Works

01. Ground work contract;
02. Concrete contract;
03. Scaffolding contract;
04. Blacksmith contract;
05. Masonry contract;
06. Carpentry contract;
07. Plumbing contract;
08. Glazing contract;
09. Elevator mechanics contract;
10. Ventilation Contract;
11. Electrical contract;
12. Painting contract;
13. Cleaners contract;

**2.4 Project Documents**

The project documents are structured in accordance with *BPS Structure for Specifications, edition 2001-08-06*

**2.4 Project Documents**

There is a list of drawings in which all the drawings are listed.

**2.5 Project Organisation****2.5 Project Organisation**

- The Client: Niels Nissen A/S
- Users of the Building: Employees
- The site Address: Sintrupvej 13, 8220 Brabrand, Aarhus, Dk.
- Local authority journal number: Plot XXX
- Client's consultant or project administrator: carmARCH Desgins
- Designer with field of responsibility: Miret Desgins
- Project management and its organisation: Tendered main contractor that will provide the site manager.
- Health and Safety organisation: Refer to section 5 in this document

## 3. GC 92

General Conditions for Works and Supply 1992 (GC92), is valid for the works, within the following changes and additions (for further information see GC92 Extended):

**§1, Subs. 6.** All documents shall be drafted in English, Negotiations, including site meetings, shall be conducted in a language that can understand all participants (mainly English).

**§2, Subs 1.** The tender material must contain a list of all documents and drawings that are included in the tender material, so that no misunderstandings come up by sending and receiving the tender material between employer and tenderers.

**§2, Subs. 5.** Bids shall be open for acceptance for a period of 40 workdays from the closing date.

**§2, Subs. 7.** Unsuccessful bidders will be notified of the result of tender in 5 working days by the employer.

**§7, Subs 1.** The employer provides no security bond.

**§9, Subs 1.** The working schedule will be included in the tender documents, but the contractor is authorized to make alterations after the contracting.

**§11, Subs 3.** The contractor is obligated to inform the employer about important processes in the building site – start of execution, changes of main execution phases, defects and problems.

**§12, Subs 1.** If the employer delivers materials to the work done by the contractor, the contractor must control the quality of materials and inform the employer about defects of materials in 5 working days.

**§15, Subs 4.** The tender materials do not contain analysis of groundwater and soil conditions. The Contractor will provide these tests, if needed, for own costs.

**§22, Subs 1.** Upon written request to the employer, the contractor shall be entitled to receive payment once a month for work performed, etc. Within 30 days of receipt of such request, cf. Subs. 11, the employer shall effect payment of the amount for which works and materials in accordance with the contract have been provided on the site.

**§25, Subs 2.** If the contractor delays according to the work plan, he has to pay penalty to the employer: for the first 5 days – 1 % per day of the contracted sum including VAT, but at least DKK 500 per working day; after the 5 day period - 2% per day of the contracted sum, but at least DKK 1,000 per working day.

## 4. Building Site

### 4.1. General

### 4.2 Stipulations

#### 4.2.1. Local authority regulations

#### 4.2.2. Permission from and notification to local authorities

#### 4.2.3. Other stipulations

### 4.1. General

### 4.2 Stipulations

#### 4.2.1. Local authority regulations

Aarhus Municipality Local Regulations are in force as follows:

#### 4.2.2. Permission from and notification to local authorities.

- Permission from police to close partly the street around the building
- Permission from the local electricity board to connect to electricity source situated on the street.

#### 4.2.3. Other stipulations

#### 4.3. Transfer and handing over

#### 4.3. Transfer and handing over

The **Main Contractor** must convene a meeting, with the participation of the project management and the road authorities, to examine the road network before the start of works.

The contractor must make a registration of existing building components bordering up to the work area. Any damage to the aforementioned structures must be noted before work begins.

The localities are taken-over in a condition cleared of loose items and furnishings. Respective contractors, to the extent it is stated in the work specifications, must remove fixed furniture and equipment.

Covering and protection of building components must be undertaken by **The Main Contractor**:

- Fencing of site
- Covering of materials, holes, installations;
- Winter precautions, etc.

#### 4.4. Existing conditions

Buildings, crossings, pavements, roads, masts, piping and conduits, courtyards, fences, signposts, trees and bushes, must not be damaged.

The necessary provisions must be taken to maintain plants. The cutting and trimming of trees and bushes must not be done without the prior permission of the project management.

It is the duty of the contractor to notify the owner of conduits, pipes and cables (public authorities, companies and private persons) of works and conduct the work in accordance with their directions.

Before excavation near existing piping, the owner must be summoned by the contractor to show the location of said piping, etc.

If gas, water, sewer- and other piping is to be severed from the main pipe, it will be done at the contractor's arrangement and at his/her expense and liability.

#### 4.4. Existing conditions

The existing conditions on site are shown on drawing number:

- BDe\_SP\_01 - Site Plan
- BDe\_SP\_02 - Building Site Plan

The **Main Contractor** must come up with the following information about cable, pipes and conduits:

- Plans of Temporary installations on site;
- Connections to supplies

#### 4.5. Marking out by the employer

The expense for any marking out above and beyond that of the employer's marking out must be included in the individual contracts.

#### 4.5. Marking out by the employer

The employer marks out, once and for all, **3** nos. main reference lines and **6** nos. reference levels as stated in drawing **BDe\_SP\_02 - Building Site Plan**

- The **Main Contractor** is responsible for maintaining these settlements and levels. The **Main Contractor** marks-off and maintains **6** nos. fixed level settings for other contractors use, as describe in drawing no. **BDe\_SP\_02 - Building Site Plan**



#### 4.6. Organisation of the building site

##### 4.6.1. Site drawing

The Health and Safety coordinator updates the site plan, for example, as part of the completing and revising the Plan for Health and Safety.

##### 4.6.2 The building site boundaries

The boundaries of the site are shown on the site plan. If a contractor wishes to extend the site area beyond the boundaries shown, he/she must secure the necessary permission for this after prior agreement with the project management.

##### 4.6.3. Fencing-in the building site

##### 4.6.4. Closing-off

##### 4.6.5 Security guard

##### 4.6.6. Security against theft from the site

##### 4.6.7. Signposts

Each individual contractor is responsible for signposting

#### 4.6. Organisation of the building site

##### 4.6.1. Site drawing

BDe\_SP\_02 - Building Site Plan

##### 4.6.2 The building site boundaries.

The site boundaries are shown on site plan:

BDe\_SP\_02 - Building Site Plan

##### 4.6.3. Fencing-in the building site

The **Main Contractor** establishes moves, maintains, and removes the site fencing. The scope of the building site fencing is shown on drawing **BDe\_SP\_02 - Building Site Plan**.

The boundary fence has a height of **2,2** m. The material used for the fence is **steel mesh**. The time for establishing the fence is stated in the tender time schedule.

##### 4.6.4. Closing-off

The **Main Contractor** must establish, maintain and take down any interim covering/protection to the building. Holes for windows must be closed-off with wooden frames clad with plastic foil. Door openings must be closed-off with interim wooden doorplates with a lock system.

The **Main Contractor** must ensure daily opening at **7.00** and closing at **18.00** of the building site.

##### 4.6.5 Security guard

The employer does **not** establish the security guard system.

##### 4.6.6. Security against theft from the site

The employer does establish the security system against theft from the site.

The security system against theft from the site is managed by the **Main Contractor** and includes **daily checking of the building site before and after work as well as a security alarm provided by Falck which must be working during no-working time**.

##### 4.6.7. Signposts

The **Main Contractor** delivers and sets-up the following

the door of own portable site cabins.

Each individual contractor is responsible for signposting own site work areas.

signs in the common traffic and work areas at the beginning of construction on site and removes them after the completion of construction:

- 3 nos. sign board with the text “Mandatory helmet area”
- 3 nos. sign board with the text “ No trespassing”

#### 4.6.8 Screening off /cordoning off of 3<sup>rd</sup> person.

It is the responsibility of each individual contractor to secure that traffic around buildings and roads/pathways are screen off and secured against falling building materials and other objects from the site.

#### 4.6.8 Screening off /cordoning off of 3<sup>rd</sup> person

The Main Contractor establishes, maintains and removes screens and other provisions towards streets, around buildings, etc that are set-up in the interest of public safety. The screening is minimum 2.4 m high and made in waterproof plywood.

#### 4.7. Building site traffic areas

##### 4.7.1. Parking

#### 4.7. Building site traffic areas

##### 4.7.1. Parking

Private parking is provided at in the south façade of the building, in front of the main entrance of the building..

##### 4.7.2. Outdoors traffic areas

The outdoor traffic areas are shown on the site drawing. The site roads can be used by heavy lorries and trailers, e.g., element trailers, earth dumpsters, and mobile concrete mixers. All roads are drained and secured against the weather conditions. Outdoor traffic area may, under no circumstances be partly or wholly blocked off with the permission of the project management

##### 4.7.2. Outdoors traffic areas

The Main Contractor establishes, maintains, secures against weather conditions, relays and removes building site roads, crossings in accordance with the Tender time schedule and the building site drawing no. BDe\_SP\_02 - Building Site Plan

##### 4.7.3. Traffic areas inside the building

Traffic areas and corridors must under no circumstances be blocked off wholly or partly without the permission of the project management.

##### 4.7.3. Traffic areas inside the building

Common traffic areas in the building or building excavation comprise areas which, after the completion of the building, will constitute internal corridors, passages, staircases, etc.

The Main Contractor will deliver, set-up, maintain, move and remove the interim staircases and gangways, etc.

Staircases and gangways can be given a load of up to 300 kg/sq.m. The interim staircases and gangways will, during the course of construction, be replaced by permanent ones.

##### 4.7.4 The covering of holes and rebates in the traffic areas.

##### 4.7.4 The covering of holes and rebates in the traffic areas

Holes, such as light-shafts, wells, etc, in traffic areas is to be covered with boarding or lids that are fixed.

The responsibility for covering holes and keeping them covered is that of the contractor who makes the holes.

The aforementioned contractor does any temporary removal, screening off and re-establishing of these covers during construction.

#### 4.7.5. Establishing of railings in traffic areas

Guard railings must be set-up along all traffic areas where there is a level jump of more than 2 metres. Any temporary removal of railings because of a contractor's work must be re-established by the same contractor after the work is completed. During the work, the contractor must take measures to prevent accidents until the railings are re-established.

#### 4.7.6. Lighting of traffic areas

The extent of the lighting is shown on the building site plan.

#### 4.7.7. Provisions for inclement weather in traffic areas

Inclement weather provisions are planned and set in action in good time and to such a degree that they are able to ward off the adverse effects on time schedules and quality of work.

Clearing of snow and similar work must be, as far as possible, done in the period before normal work starts.

#### 4.7.8. Clearing and cleaning common traffic areas

The contractor must constantly participate in keeping the traffic areas cleared and cleaned.

#### 4.8. Portable cabins and storage areas

#### 4.7.5. Establishing of railings in traffic areas

**Scaffolding contractor** sets-up, maintains and removes the railings along common traffic areas - **the scaffolding is a work platform combined an electric drive system.**

#### 4.7.6. Lighting of traffic areas

**The Main Contractor** establishes, maintains and removes lighting in traffic areas.

Lights in building site traffic areas are mounted on light-masts.

Traffic areas in buildings are lit with orientation lights with a minimum strength of 25 lux. This is done with light-chains. Building site lights are controlled using "twilight relays" with a switching on clock device with 24-hour and week programme.

The employer pays for the cost of lighting common traffic areas.

#### 4.7.7. Provisions for inclement weather in traffic areas.

**The Main Contractor** is responsible for providing inclement weather provisions in common traffic areas of the building site.

#### 4.7.8. Clearing and cleaning common traffic areas

**The Main Contractor** cleans and clears the common traffic areas in the building for dust and the like, which cannot be identified to a specific contractor

#### 4.8. Portable cabins and storage areas

**4.8.1. Portable site cabin conditions**

The location of portable cabins is given on the site plan. The situation of the individual contractors' site cabins must be agreed with the project management if it is not stated on drawings.

**4.8.1. Portable site cabin conditions**

**The Main Contractor** must establish, run, maintain and remove the following cabins, which are at the disposition of all contractors during the course of construction:

- **Two** Portable cabin for **5** persons with toilet, shower, washbasin and locker facilities, and dining room.
- Meeting and office facilities for holding site meetings, etc. The cabin contains a meeting room for **10 persons** and **1** separate office with **2** office stations. The cabin is fitted with toilet and washbasin.

**The Main contractor** must take care of daily cleaning of the cabins and ensure the supply of soap, toilet paper and paper towels.

Re-establishing of the terrain after the portable cabins is to be done by **Cleaners contract**

**4.8.2. Storage areas/ Storage yard**

The location of storage areas is on the building site drawing.

The storage space for individual contractors within the total site storage area must be agreed with the management. Storage of materials in traffic areas is strictly prohibited.

**4.8.2. Storage areas/ Storage yard**

**The Main Contractor** establishes, maintains, secures against inclement weather and re-establishes the storage areas shown on site plan **BDe\_SP\_02 - Building Site Plan**

The paving on site storage areas is **steel plates**  
No storage is to be place inside the building.

**4.8.3. Tent workshops**

Tent workshops can only be established by individual contractors to the extent shown on the site drawing.

**4.8.3. Tent workshops****4.8.4. Handling of refuse and refuse containers**

The individual contractors is obligated to remove his refuse from work sites and storage depots and deposit them in containers and skips or remove them from the site completely, on a regular basis.

All contractors must sort and handle building refuse in accordance with the council's regulations in this area.

Containers and skips are placed in accordance with the building site drawing.

**4.8.4. Handling of refuse and refuse containers**

**The Main Contractor** must establish, mark and empty the refuse containers during the course of the construction period and remove them once the construction period is finished.

Building-refuse must be sorted in the following fractions:

- **Recyclable**
- **Flammable**
- **Inflammable**

Packaging, etc., must be wrapped up and placed in the skip so that it takes up as little space as possible.

All costs in connection with removal of refuse from the containers and skips, including environmental and refuse surcharges, are to be borne by the employer based on documentation of these costs.

**4.8.5. Lighting of portable cabin area and storage areas****4.8.6. Provisions against inclement weather in the portable cabin and storage areas**

Inclement weather provisions are planned ahead of time and set into action so as to ward off the negative effects of the weather on time schedules and the quality of work.

Clearance of snow and similar work must, where possible, be done before the beginning of normal working hours.

**4.8.7. Cleaning in the portable cabin and storage area.**

The individual contractors are obligated to clean their respective storage areas.

If the project management's directions are not followed on this matter, the work will be done at the expense of the said contractors - - the expense being deducted from accounts owing them.

**4.8.8. First Aid Post****4.8.9. Fire fighting materials****4.9. Work areas****4.9.1. Covering of holes and rebates in work areas**

Rebates and holes in work areas, such as floor slabs and roof surfaces, etc., must be securely covered with fixed covers and boarding.

The responsibility for closing these and maintaining the covers is that of contractor making the hole or rebate in the first place.

**4.8.5. Lighting of portable cabin area and storage areas**

**The Main Contractor** establishes, maintains and removes lighting appliances in accordance with the building site drawing using minimum 25 lux light strength in common traffic areas, in portable cabin and storage areas.

**4.8.6. Provisions against inclement weather in the portable cabin and storage areas**

**The Main Contractor** is assigned the tasks in connection with inclement weather provisions in portable cabin and storage areas.

**4.8.7. Cleaning in the portable cabin and storage area.****4.8.8. First Aid Post**

**The Main Contractor** supplies the First Aid Box and has the responsibility of ensuring that it, at all times, has the necessary minimum content of items cf. The Factory Inspection's requirements.

The First Aid Box is situated **at site cabins** and is accessible when work is being done on site.

**4.8.9. Fire fighting materials**

**The Main Contractor** supplies fire fighting equipment and materials.

**4.9. Work areas****4.9.1. Covering of holes and rebates in work areas**

Any temporary removal of covers due to work processes by any contractor must be followed by the same contractor replacing and fixing the cover.

**4.9.2. Establishing guard railings in work areas**

Where slabs, work platforms, scaffold floors and gangways are elevated more than 2 m over the surrounding area, guard railings must be fixed along their free edges.

Any temporary removal of railings due to work by any contractor must be followed by provisions for preventing falls before and during the period of removal, followed by replacement of the railings after the work by the same contractor.

**4.9.3. Lighting in common work areas**

The contractor must supply own light source during work in his own work areas.

**4.9.4. Provisions against inclement weather in work areas**

Inclement weather provisions are planned and set into action in good time and to such an extent as to minimise the effects of the weather on milestones in the project and on work quality

Clearance of snow and similar work shall, as far as possible, be done before the beginning of normal working time.

**4.9.5. Clearing-up and tidiness in work areas**

It is the duties of each contractor at all times to keep their work areas tidy from refuse, materials and tools and remove the aforementioned if they are an obstacle for the progress of the construction.

The project management can appoint one contractor to co-ordinate the cleaning-up and tidying-up process together with other contractors on the site's common work areas.

Removal of dust from the building must be by vacuum cleaning.

If a contractor does not withhold the management's directions about tidiness, the management has the right to tidy up the work areas at the expense of the said contractor. The cost for such work will be deducted for the contractor's amount due.

**4.9.2. Establishing guard railings in work areas**

**The Main Contractor** sets-up, maintains and removes railings in work areas.

Individual contractors are responsible for setting up railings in their own work platforms and scaffolding, etc.

**4.9.3. Lighting in common work areas****4.9.4. Provisions against inclement weather in work areas**

**The Main Contractor** is assigned with the task of providing interim heating and drying-out of the building.

**The Main Contractor** is assigned with the task of clearing snow, de-icing and gritting (spreading gravel on) common work areas.

**4.9.5. Clearing-up and tidiness in work areas**

**4.10. Technical aids****4.10.1. Cranes and material lifts**

If contractors decides to use a crane and/or lift above and beyond that stated in the tender documents, they must give a written account for setting-up, power supply, use and maintenance, before the equipment (after permission for the management) is put to use.

Setting up a crane or lift must only take place with the explicit permission of the project management.

**4.10.2 Personnel elevators****4.10.3. Scaffolding**

Individual contractors must supply their own scaffolds in their own working areas.

Setting-up and dismantling scaffolding must be done after approval from the project management.

The scaffolding system must be labelled with a plate Raquel

informing about the erecting contractor, the rental company, and the permissible load.

The contractor must participate in rationalising the collective site's work by allowing others to use his scaffolding when it is appropriate and does not inconvenience the contractor and rental company, and if the scaffold does not suffer any damage.

**4.11. Supply to the site****4.11.1. Water and sewer**

Tap points are established in accordance with the site drawings.

The individual contractors must make their own provisions, and pay for, the connection of their portable cabins to the main water and sewage system of the site. Connection must be made from the connection points shown on the site drawing.

**4.10. Technical aids****4.10.1. Cranes and material lifts**

**The Main Contractor** sets-up, maintains and removes material lifts, cf. The building site drawing no.

**BDe\_SP\_02 - Building Site Plan**

Crane for free use of all contractors will not be set-up

**4.10.2 Personnel elevators**

**Work platform combined an electric drive system.**

**4.10.3. Scaffolding**

**The Main Contractor** erects, re-builds, maintains and removes common scaffolding. The scaffolding is a **work platform combined an electric drive system**.

The scaffold is at the disposal of all contractors in connection with the following works:

- **Sealant in Concrete work;**
- **Carpenter work;**
- **Steel work;**
- **Glass element installation**

The scaffold will be at the disposal of contractors in the period **during all construction period because it works as elevator also, both personnel and material.**

The project management co-ordinates the work on common scaffolding.

**4.11. Supply to the site****4.11.1. Water and sewer**

**The Main Contractor** establishes, maintains and removes the water supply system for use in construction on behalf of all contractors.

**The Main Contractor** connects-up, maintains and removes interim water- and sewage systems to common portable cabins and meeting and office units, cf. Section 4.8.1.

The supply is established with frost proofed design by Contractor **Plumber Contract** if the supply is needed in the winter period.

The employer pays for water consumption and sewage surcharges.

**4.11.2. Electricity**

The main electrical boards' shows on the site drawing are installed.

The individual contractors must bear the cost of connecting their own electrical material up to the main boards.

The employer cannot be held responsible for interruptions in the supply of electricity.

Each contractor must uncouple connections from his sub-board to the main board at the end of each workday.

**4.11.2. Electricity**

**The Electricity Contractor** installs, maintains and removes the power supply for construction on behalf of all contractors.

**The Electricity Contractor** installs, maintains and removes the power supply to common portable cabins and meeting and office facilities, cf. Section 4.8.1.

Similar supplies to own portable cabins, material containers, etc., is the responsibility of the individual contractors.

The electricity consumption is paid by the **employer**.

**The Main Contractor** is responsible for mandatory inspection of electrical installations shown on site drawing no. **BDe\_SP\_02 - Building Site Plan**

**4.11.3 Telephone**

Each contractor is responsible for subscribing, paying for and operation of own phone.

**4.11.3 Telephone**

**The Main Contractor** is responsible for establishing a landline phone for emergency calls for the duration of the work on site.

**4.12. Special conditions for buildings in use****4.12.1 Work conditions generally**

If the localities are in use during the construction period, special consideration to them must be taken.

The following are valid if work is in progress in or around the building:

The contractor is obliged to man the project with persons who are able to show the necessary consideration to tenants/employees in the building. If a person repeatedly fails to show consideration, the project management can expel said person from the site.

Tools must be chosen so that they cause the least possible nuisance for any tenants/employees using the building with regard to noise, dust, vibration and emissions.

Radios and the like must not be used in the locality.

Access to localities in use must happen in accordance with the following rules:

**4.12. Special conditions for buildings in use****4.12.1 Work conditions generally**

Work must start at earliest **7.00** and must be finished by **18.00**.



All of the contractor's employees who have access to the localities in use must be furnished with identity cards. The contractor has an obligation to report lost ID's immediately.

Keys to dwellings must be administrated as follows:

Before the work is initiated, the keys to the dwellings are collected. Tenants can, instead of handing in a key, be at home between the hours of 08:00 and 18:00.

The contractors own site manager must keep a receipt list for keys so that he can always account for who is in possession of the keys. The receipt list must be available for the project management.

Keys that are not used shall be kept in a locked security box, which in turn should be kept in a locked container. If the key gets lost, the contractor must immediately inform the tenant and the project management, and the locks in the apartment in question must be changed at the expense of the contractor.

Keys that are handed-in must not be copied.

The apartments/dwellings must, at all times, be locked - - both when work is being done on them and when the apartment is empty.

**The Main Contractor** is responsible for administration of keys. **The Site Manager** receives **3** sets of keys.

#### 4.12.2. Information for tenants

#### 4.12.2. Information for tenants

The project management co-ordinates enquiries from the tenants. The project management is also responsible for informing the tenants.

**The Main Contractor** is in charge of the daily notification to tenants about access to the dwelling with regard to the current construction work.

Notice must be given in writing, by 16:00 on the day before. A copy of the notice must be delivered simultaneously to the project management.

## 5. Health & Safety

### 5.1. General information

### 5.1. General information

**The Health and Safety plan is in force.**

**Before the beginning of the construction time, the Main Contractor will hand-in the Health and Safety to each sub-contractor.**

#### 5.1.1. Organisation

#### 5.1.1. Organisation

The project's stakeholders are following:

Employer: **Sintrupvej 13 - 8220 Brabrand, Dk**

Project management **Miret Designs**  
 Safety Co-ordinator: **Main contractor**  
 Site Inspection: **Miret Designs**  
 Design Manager: **Miret Designs**

### 5.1.2. Safety Meetings

The safety coordinator convenes safety meetings and prepares the minutes. All the companies on site must be represented at the meetings by a representative for their site leadership and one from the operatives (safety rep) - if it is required that there are safety groups on site.

Any comments to the safety meeting's minutes must be voiced at the following safety meeting. If this does not happen, the former minutes will be considered as approved.

### 5.2. Plan for Health and Safety

The person to whom the employer has transferred the duty of completing the Health and Safety Plan and coordinating safety work on site is named the Safety Coordinator.

The contractor must participate with the Safety Co-ordinator's work with and follow up of the Health and Safety Plan.

The reporting of the building site to the Factory Inspector, before work starts, is the duty of the Safety Coordinator.  
 Inspection of the required safety provisions is the duty of the contractor appointed to do it.

If another contractor's health and safety provisions are insufficient, the first named contractor must elevate the problem without costs to the employer.  
 During pauses in or at the end of the works in question, the contractor must establish or re-establish the health and safety provisions so the safety requirements are fulfilled at all times.

Transfer of the contractor's responsibilities for inspection and maintenance of the respective health and safety provisions can only be achieved after written approval from the safety coordinator.

### 5.3. The work environment

#### 5.3.1. General information

### 5.1.2. Safety Meetings

**Safety meetings will be held every second week, starting from the second week of the construction period week, Mondays at 9.00**

**Accident meeting should be held just after the accidents and in any special occasions.**

### 5.2. Plan for Health and Safety

The employer has transferred his obligations to complete and follow-up the Health and Safety Plan, together with his co-ordination duties, to the **Main Contractor**.

Proposal for the content of the Health and Safety Plan:

1. Plan for Health and Safety (copy of chapter 5.1 and 5.2 from BSB with contractor supplements)
2. Orientation (copy of chapter 2 from BSB with contractor supplements)
3. Time Schedule and Work Plan (new section)
4. Building Site (copy of chapter 4 from BSB with contractor supplements)
5. Work environment (copy of chapter 5.3 from BSB with contractor supplements).
6. Provisions in connection with dangerous works (copy of chapter 4 from BSB with contractor supplements)
7. The surrounding environment (copy of chapter 6 from BSB with contractor supplements)
8. readiness-, evacuation-, and exercise/drill plan (new section: Fire-fighting equipment, rescue equipment, etc)
9. Building Site Plan

### 5.3. The work environment

#### 5.3.1. General information

**Special conditions regarding the work environment**

should be used:

1. Areas where work can cause:

- Dust or other forms of air pollution
- Radiation
- High/low temperatures
- Noise
- Problems with smells
- Falling
- Debris

2. Areas where several types of work are performed:

- Co-ordination
- Securing against unnecessary risks from work

3. Work tasks that can cause ergonomic strain.

- Heavy lift (carrying, push, pull, etc.)
- Awkward working positions (twisting, etc.)
- Long reaching distances
- High/low clearance height
- Long transport ways for building materials
- Mounting elements
- Work on roofs, scaffolding, basic building structures and open constructions

4. Technical aids:

- Suitable type
- Suitable roadways
- Sufficient space conditions

5. Special requirements:

- Work processes with special requirements for chemical and poisonous substances, asbestos and cancer-causing substances.
- All material shall comply with the Danish norms and standards and meet all requirements concerning health and safety.

### 5.3.2. Limiting noise inconvenience

The contractor must use tools that causes as little inconvenience/nuisance re noise to the user and others on the site.

For persons using noisy tools and equipment, the Factory Inspection's rules as stated in Departmental Order 801, of 4 October 1993, must be observed.

This means that no persons, not even other contractors, must be exposed to noise levels over 85 dB (Airborne) - - without the use of hearing protectors. For noise levels over 80-dB (A), hearing protectors must be available.

### 5.3.2. Limiting noise inconvenience

All noise shall be kept to minimum at all times as much as the contractor possible can.

Workers using heavy, noisy machinery must be provided with noise protection tools and, if needed to working persons nearby.

### 5.3.3. Limiting of damage and inconvenience from vibrations

### 5.3.3. Limiting of damage and inconvenience from vibrations

The contractor must choose tools that emanate the least hand-/arm vibrations, or use methods for suspending the tools so that they don't have to be handled as such. If vibrations exceed 130 dB(HA), the contractor must vibration-curb the tool or use other work methods.

#### 5.3.4. Limiting inconvenience caused by dust

The contractor must take steps to curb and limit dust emission from its source. Direct suction should be used on tools where it is technically feasible.

#### 5.3.5. Limiting ergonomic inconvenience

The contractor must avoid manual transport that causes lift, carrying, push, pull and similar strain on the body. He must use technical equipment for this.

#### 5.4. Provisions to be taken against dangerous works

The respective contractors must establish specific work procedures that describe the safety aspects of the work. The contractor must plan work that involves the use of dangerous chemical substances.

The contractor must gather and revise information about chemical substances that are used in the performance of the contract, and make sure that they are handled in accordance with the stipulations issued by the Factory Inspection. A list of the materials and substances that, under the circumstances of the technical requirements, give the least possible strain on the work environment – and considerations to substitution -- must be documented for the project management.

The directions for use of for products must be accessible on site. There must be personal protection gear at the disposal of operatives as described in The Directions for Employers.

Noise level must not be more than 58dB.

Tools shall be chosen after best possible solutions for the least vibration.

#### 5.3.4. Limiting inconvenience caused by dust

Total cover must be on the house to cover the most dust coming from the house. A vacuum has to be used instead of sweepers when there is a danger of too much dust.

#### 5.3.5. Limiting ergonomic inconvenience

Crane for heavy elements and material lift for less heavy materials.

#### 5.4. Provisions to be taken against dangerous works

The dangerous works are:

- Working with drops exceeding 5 m – scaffolding, work on roof, work with steel structure, cleaning the façade;
- Up and down hoisting of materials

The contractor must avoid manual transport that causes lifting, carrying, pushing, pulling and similar strain on the body. He must use technical equipment for this.

The crane must be used for heavy elements and material lift for less heavy materials.

## 6. Surrounding Environment

### 6.1. General information

### 6.1. General information

Building site is located on private area. It is fencing with building access in east facade.

### 6.2 Noise

### 6.2 Noise

All noise shall be kept to minimum at all times as much as the contractor possible can.

In the working hours from 7.00 to 18.00 the sound level outside the building site should be lower than 80 dB. In the other time and nights no work is done, so no high level sound at all.

### 6.3. Vibration

#### 6.3. Vibration

In working hours the vibration level outside the building site should be lower than 120 dB (HA). No activities when the site is closed.

Tools shall be chosen after best possible solutions for the least vibration.

### 6.4. Dust

#### 6.4. Dust

Dust should be kept to a minimum

Total cover must be on the house to cover the most dust coming from the house. A vacuum has to be used instead of sweepers when there is a danger of too much dust.

### 6.5. Emissions to the atmosphere

#### 6.5. Emissions to the atmosphere

Emissions levels should be kept according to the EU and, if available, Danish standards.

## 7. Quality Assurance

### 7.1. General information

#### 7.1. General information

Quality assurance is described in the work Specifications.

### 7.2. Project management

The employer will carry out inspections independent of the contractor's control.

#### 7.2. Project management

The project management is responsible for coordination of the consultant's inspection on site and filling the tender control plan.

The "Tender Control plan" is made for each trade. The employer will carry out inspections

independent of the contractor's control

### 7.2.1 Site meetings

Site meetings will be held on at a fixed time and day of the week.

Any comments to the minutes of the site meetings must be put forward at the following meeting, otherwise the minutes will be considered approved.

### 7.2.1 Site meetings

The site meetings should be held at 9.00 every Monday after "Kick-off" meetings. Invitations will be send for all participants and All sub-contractors must be represented.

The project manager can call a site meeting with one weeks' notice at any time during the construction period.

Comments of minutes should be done by the Main Contractor and given to other meeting participants.

### 7.2.2. "Kick-off" meetings

A kick-off meeting is held before the start of works

### 7.2.2. "Kick-off" meetings

The time and date for the kick-off meeting is agreed with the project management.

### 7.3. Quality Plan

It is the task of the contractor to establish a quality plan.

The Quality Plan must comprise the following subjects:

- Organisation of the contract
- Control of documents
- Control of purchases
- Qualifications
- Process scrutiny
- Control Plans
- Demands to subcontractors and suppliers
- Processing mistakes and shortcomings in materials and work processes (rejections)
- Processing deviance from project documents.

### 7.3. Quality Plan

At latest 5 workdays after the work being awarded the contractor, he/she must send the Quality Plan to the project management.

At latest 5 workdays after the working-in revisions to the Quality Plan, the contractor must send the revised Quality Plan to the project management.

### 7.4 The contractor's control and documentation

#### 7.4.1. General information

Control and documentation is part of the contractor's services.

The contractor must ensure that:

- a) running quality control of the works and deliveries is done
- b) produce documentation that the control has been performed and the specified quality demands have been achieved.

Where the supplier of deliveries to the contract is a member of a public approved quality control system, it is considered sufficient to specify the type of control system in the work specifications.

If the project management evaluates that control and/or documentation should be extended, because of failure or

### 7.4 The contractor's control and documentation

#### 7.4.1. General information

Sharing of responsibility is dealt with in GC 92. Shortcomings with services can result in GC 92's §36 and §40 being used.

mistakes in the works, the contractor must follow this request without cost to the employer.

The contractor must keep quality assurance and O&M-documentation separate during implementation and at handing over.

#### **7.4.2. Documentation of quality**

The control activities of the control plan must be documented and demanded. Documentation must be accessible for the project management during the construction process. Documentation includes sub-works and supplies from subcontractors and suppliers.

#### **7.4.2. Documentation of quality**

Every sub-contractor should follow the quality control, and archive the control documents. They should be handed in to the client every time he wants them.

The Control plan must be available 2 weeks before work start.

#### **7.4.3. Operation and Maintenance documentation (O&M)**

The contractor must deliver information about materials and components, used in the contract, for aiding the working-up of the operational plan for the building. This must include amounts and times for the materials, etc. used and built-into the construction as described in the work specifications.

#### **7.4.3. Operation and Maintenance documentation (O&M)**

Quality assurance and O&M documentation must be kept separate.

#### **7.4.4. Archiving the documentation**

The contractor must immediately establish a systematic archive system and maintain it for the duration of the project. The system must include all the documentation that comes in during the project regarding quality of materials, equipment, construction, and prefab components and the qualifications of the staff who may be required to have special qualifications.

#### **7.4.4. Archiving the documentation**

Quality assurance and O&M-documentation must be kept separate. The extent of the archive system must be adjusted to the size and type of contract and project. "The system" can, in many cases, be an arch-lever file with separators.

#### **7.4.5. Management of the performance documentation**

The contractor must establish an archive system for identification and steering of performance documents and alterations/supplements to these. The system must also include documents of the subcontractors.

#### **7.4.5. Management of the performance documentation**

The design team must ensure that the Main contractor receives valid performance documents.

The system must minimum have the following elements:

Registration of valid documents

The list should be able to be altered and the alterations should be registered.

The lists must be sent to all document users.

A procedure must be agreed as to how alterations are marked in documents and how the documents and their alterations are identified.

**7.5 Project preview**

The contractor must participate in “project preview” before construction start under the chairmanship of the project management.

Before the process of project preview, contractors must thoroughly go through all the project documents, drawings, etc., and make a detailed study of the processes necessary to implement the plans. This result must be available in writing.

Before the process of project preview, contractors must evaluate how they will use their resources and other production apparatus to execute the work.

During project preview, the designers will report on conditions, which will require special care in execution because these may deviate from ordinary practice and require special control procedures.

Project preview does not alter the distribution of responsibility and risk between employer and contractor, not even if it results in alterations to the project.

The project management will convene the “project preview” process and work out an agenda and do the minutes of the meeting.

The purpose of the project preview is, through dialogue between contractor and the designers, to:

- Utilise the contractors trade abilities better
- To uncover aspects that may be risky or lead to failure and be difficult to execute.
- To solve interpretation problems in the project
- To discuss possible adjustment to the control plan
- To review the Health and Safety plan and review questions about the environment.

**7.6. Local authority inspection****7.7. Guarantee**

If it is required that a special guarantee is given for a service, the contractor must notify the project management as soon as the guarantee is available.

**7.8. Handing over**

When the work is reported finished to the project management, the contractor must deliver the required copies of quality assurance- and O&M-documentation for the completed works.

**7.5 Project preview****7.6. Local authority inspection****7.7. Guarantee**

The guarantee must be furnished at latest **5** workdays after the works in question are completed or the delivery is delivered. 20 10

**7.8. Handing over**

Quality- and control documentation must be delivered in **3** copies.



**7.9. Quality Assurance after handing over**

The contractor's repair of shortcomings after handing over is subject to the same conditions for quality assurance as the other, original services.

The contractor hands over the quality assurance documentation for repair of shortcomings, to the project management, after the handing over procedure for the repair work on the shortcomings.

**7.9. Quality Assurance after handing over**

## 8. Scheduling

**8.1. General Information****8.2. Time Schedule**

The tender document's time schedule shows the different contracts' start and end dates and main site based activities.

After accept, the contractor is obligated to participate in working up a detailed work schedule for the project on site within the main timeframe stated in the tender document's time schedule.

For individual trade contracts, the project management will hold up the individual trade contractors' proposal for their detailed schedules and put them together into a complete schedule for the whole project.

When deviations appear on the critical path, the contractors must participate in the revision of the time schedule.

**8.1. General Information****8.2. Time Schedule**

The contractor's activity and work time schedule must be sent to the project management by **10** workdays after the contract has been signed. 15 7

**8.3 Inclement weather**

Extensions to milestones are given in cases where unusual inclement weather warrant it, under the following conditions:

- Inclement weather must have resulted in the work lying still – or being reduced in tempo, equivalent to minimum --workday.
- The activity must be on the critical path of the time schedule for the penalty-bearing milestone in question.
- The total numbers of inclement weather days for the activity in question must, within a month, exceed the expected number of inclement weather days.

**8.3 Inclement weather**

The expected number of effective working days, including Saturdays, Sundays and holidays not falling on a Sunday are as in the table below:

Month/Activity	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Excavating, Ground work, Drainage	5	5	5	4	3	2	1	4	5	5	5	5	49
Concrete work, External covering	6	6	6	3	2	2	1	2	2	2	4	6	42
Mounting Elements	3	3	3	2	2	2	1	2	2	3	3	3	29
Roof work	5	5	5	3	3	2	1	2	2	3	4	5	40
Roof covering	6	6	6	4	4	3	2	3	4	5	6	6	55
External carpentry and joinery	2	2	2	1	1	1	0	1	1	1	2	2	16

**Note: The Planning Calendar**

The estimation of inclement weather days and extension days in accordance with GC 92's § 24, Section 4, can cause problems. Experience shows that it is difficult, partly in the tender phase and partly during daily operations on the building site, to relate to the concept of inclement weather conditions and to determine the exact consequences of a given weather condition.

The Danish Winter Consultants (Vinterkonsulenterne.dk) advise that the tender documents specify how many days, assuming normal weather conditions, that one can expect to work effectively. If the work on the critical path does not achieve the foreseeable number of effective working days in one month, time extension for the shortfall in time must be granted.

VINTER KONSULENTERNE FOR BYGGE OG ANLÆG 2011-04-02	The number of effective working days including weekends and holidays											
	Jan	Feb	Mar	Apr	Maj	Jun	Jul	Aug	Sep	Okt	Nov	Dec
Building's Raw Structure (Carcassing)	26	23	26	27	28	28	29	29	28	27	26	26
Roofing (Asphalt Roofing)	23	20	23	24	26	25	26	26	25	25	24	24

The Planning Calendar shows the number of possible effective working days, including Saturdays, Sunday, weekdays and holidays, month by month (the numbers in the calendar is the number of days in the month ÷ the number of days expected due to lost days because of inclement weather).

**Example of the calendar's use:****The building's raw structure (carcassing) for April 2011:**

According to the planning calendar for April, the number of effective working days, including Saturdays, Sundays and holiday = 27 days.

In April 2011, the number of Saturdays, Sundays and holidays, respectively, are = 5 + 4 + 3 = 12 days

The number of effective working days in April 2011 is, therefore, = 27 days - 12 days = 15 days

If the contractor does not achieve this number of effective working days, corresponding deadline extension must be granted.

**Documentation of days lost due to inclement weather:**

Administration of inclement weather at the building site is limited to a daily record of whether or not the progress of work on the critical path has been slowed-down or halted because of inclement weather.

This is done most appropriately by the contractor himself in a daily report of the obstacle/ delay characteristics and their duration; attach relevant weather data, if any - also photo documentation.

The daily report with attachments are handled at the next site meeting, as stated in GC 92 § 19 paragraph. 3, respectively GCT 93 § 20