# **1 – RENOVUP - OBSERVATION OF THE ACTIVITIES OF SITE MANAGERS AND TEAM LEADERS IN A RENOVATION COMPANY**

# **PAYS DE LA LOIRE - FRANCE**

Case study 1

Company: BENAITEAU

Company activity: Restoration of heritage and historical monuments

Main characteristics (age, number of employees, governance, ..... ): Company created in 1920. It is managed by 3 co-managers - limited liability company status. It has 50 employees.

Contact person : Laurent BAUDIN Function : Manager - Catering activity manager

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Site located at : Château de la Touche - 44310 La Limouzinière (France)

Day of the site visit: Wednesday 8 June 2022

Contact: Johan MOREAU - **Site Manager**

Environment of the renovation site: Describe the type of building (or part of a building) to be renovated: individual house, apartment building, commercial premises, offices, monument, etc.; its condition and immediate environment (located in a small street, isolated on a plot of land, near a high-voltage line, etc.). All these elements influence the life of the future renovation site (supply of materials and equipment, precautions to be taken, waste disposal methods, etc.) They will provide the teaching sequences with elements of reflection relevant to the learners.

Restoration of a 12th century building originally used as the home of a local lord.

Access : short communal road following the communal road at 1 km from the village. Site located in the middle of a rural area accessible without difficulty to any type of vehicle that can deposit the necessary material. Presence of a telescopic crane on trailer.

The building is made of ashlar of the time, part of which is partially destroyed with stones scattered around.

Presence of big bags for waste disposal.

The building belongs to the community of La Limouzinière (small village). The work was obtained by the company after a call for tender. All work is subject to the agreement of the historical monuments and is monitored by an architect of the buildings of France.

Nature of the work: reconstruction of the collapsed part of the tower which was initially used as a dovecote in the upper part and as a grain tank in the lower part + repair of part of the open courtyard.

Documents : Identify the different documents (technical instructions, plans, BIM, sketches) used by the teams. If possible, collect these documents so that you can work from them in future learning sessions.

The specifications of the public tender issued by the client.

Response to the call for tender and administrative documents (managed by the manager and the works manager).

Plans drawn up by the architects and validated by the historical monuments then transmitted to the works manager and then the team leader.

The plans were drawn up progressively as the stones in the vicinity were found after clearing the brush.

Photos taken on site.

Methods: Identify and describe the techniques, processes or operating procedures used on the renovation site. Note any elements that you find useful or relevant.

1ère stage: Safety of the site due to a partially collapsed part. Demarcation of the site by archaeologists.

2ème stage: Clearing and earthwork to locate the scattered stones. This is essential to finalise the plans and to use the original raw material as a priority.

3ème stage: Sorting of stones. Regular site meetings to validate the use of the stones or not.

4ème step: Erection of selected stones with lime mortar + additional supplied stones. The usual techniques for checking the verticality of the walls are not used (lead). Everything is done visually.

Ancillary activity: Restore the building to its original appearance by filling in the openings made over time and recreating the initial openings (disjointing the stones, re-cutting the stones and then harpooning).

Description of the difficulties encountered: architectural respect of the tower and of the curves, considering a wider base.

Definition of solutions, with whom, how: Proposal of templates by the team leader and validation at the site meeting by the architect.

Equipment: Identify and describe the tools, measuring instruments, machines or equipment, etc. used during the intervention. If necessary, note the materials used.

1ère stage: securing the site: installation of herringbone fences to enclose the site, regulatory signs (no public access to the site, helmets must be worn, etc.).

2ème stage: Clearing: thermal equipment and landscaping type materials. Earthworks using a mini excavator.

3ème step: Manual sorting and selection of stones.

4ème stage: Assembly of the stones. Setting up scaffolding around the tower by an approved subcontractor. The scaffolding was set up on one of the walls of the building by the company itself. The whole was approved by the subcontractor. Use of a telescopic crane on a trailer to supply the stones (temporarily stored before being placed on the scaffolding platforms), as well as the mortar containers.

Use of a thermal concrete mixer to make mortar (water supply nearby). Conventional hand tools.

Staffing: Indicate the number and profile of people involved in the production process observed, as well as their qualifications and specialisation.

5 people were present on the site:

1 team leader (who acts as site manager and stonecutter)

1 skilled mason stoneworker

1 apprentice in stone cutting

2 temporary workers

Distribution of roles between team leader, site manager, contractor (in terms of drawing up estimates, managing the necessary materials and tools, defining the daily schedule, etc.), and description of the interactions between the various players:

On this site: the team leader is also the site manager. Everything that concerns the call for tenders, the estimate, the management of the work material, the management of the equipment, and the overall planning is the responsibility of the works manager (who visits the site once a week).

The team leader manages the weekly needs of the site by passing on information to the works manager. He manages the tasks of his team. He takes part in the site meetings every two weeks.

Case study 2

Company : FERU TRADITIONS

Company activity: Renovation of masonry in private homes - new construction on the margin

Main characteristics (age, number of employees, governance, .....): Company created in 1978. It is run by 2 co-managers - SARL status. It has 20 employees, including 16 skilled masonry workers.

Contact person : Stéphane GOUARIN Function : Co-manager - former works manager

Tel: 02 40 23 94 78 Email :

Site located at: Impasse du Closio - 44420 Piriac sur Mer

Day of the site visit: Thursday 9 June 2022

Contact: Quentin BERTHAUD - **Team Leader**

Environment of the renovation site: Describe the type of building (or part of a building) to be renovated: individual house, apartment building, commercial premises, offices, monument, etc.; its condition and immediate environment (located in a small street, isolated on a plot of land, near a high-voltage line, etc.). All these elements influence the life of the future renovation site (supply of materials and equipment, precautions to be taken, waste disposal methods, etc.) They will provide the teaching sequences with elements of reflection relevant to the learners.

Private house type 1950 on the beach to renovate. Inaccessible to any vehicle on the west side (beach), as well as on the north and south sides (close to the neighbourhood).

Only access on the east side: very narrow cul-de-sac not allowing access to vehicles larger than a standard van. Possibility to park 2 vans in the garden.

Waste removal by van.

Presence of a blockhouse in the garden, partially buried and partly owned by the neighbour.

Nature of the work : Creation of an enclosed garage at the entrance of the property and complete renovation of the house with the creation of new openings on each end of the house and on the first floor.

Documents : Identify the different documents (technical instructions, plans, BIM, sketches) used by the teams. If possible, collect these documents so that you can work from them in future learning sessions.

Brief specifications defined by a Parisian architectural firm (in conjunction with the client) in collaboration with a local project manager.

Existing plans and project plans produced by the project management team (Parisian architect + local firm)

The plans were updated during the project following the discovery of a structural failure in the upper floor of the ground floor.

Photos taken on site.

Methods: Identify and describe the techniques, processes or operating procedures used on the renovation site. Note any elements that you find useful or relevant.

1ère stage: Unsecured site (accessible from the beach and from the dead end), no regulatory sign, scaffolding accessible from the beach without a sign. The owner stole his barbecue.

2ème stage: Construction of a new garage at the entrance to the property.

3ème stage: Complete demolition of the existing rooms of the house and installation of the new spaces.

4ème stage: Creation and re-creation of openings at each end of the house, as well as on the upper floor.

Description of the difficulties encountered: Discovery of a structural failure of the high floor of the ground floor. Frame in poor condition.

Definition of solutions, with whom, how: Report made to the project management team. Solution proposed by the co-manager - works manager, which consists of the customised manufacture and installation of metal posts and beams to support the existing framework. Amendment made by the co-manager and validated by the client.

Direct consequence: the general schedule was postponed by one year (due firstly to the delay in the supply of raw materials, then to the ban on work in the seaside resort from July to August).

Equipment: Identify and describe the tools, measuring instruments, machines, or equipment, etc. used during the intervention. If necessary, note the materials used.

1ère stage: Installation of scaffolding at the edge of the beach + scaffolding at the new construction.

2ème step: Laying out the garage construction using a theodolite and chalk lines. Laying the foundations with a mini-excavator and the screed using planks, a concrete mixer and traditional mason's tools. Assembling the breezeblocks and checking the verticality of the assembly with a plumb line.

3ème stage: Demolition work: conventional equipment with little volume: PPE (pig's nose mask, gloves, goggles, overalls, helmet, safety shoes), crowbar, hammers and sledgehammers, chisels, sabre saws, angle grinder. Clearing of waste as and when required by the vans. New locations were marked out with wooden sticks according to the plan using a theodolite.

3ème stage bis: Measurements, then manufacture in the workshop and installation of the metal posts and beams to support the existing framework (using perforators - chisels, and using mortar).

4ème stage: Use of standard mason's equipment and materials to create and repair openings and replace lintels (disc grinders, small sledgehammer, drill, rafters, joists and battens).

Staffing: Indicate the number and profile of people involved in the production process observed, as well as their qualifications and specialisation.

2 people were present on the site.

1 team leader (who also acts as a skilled worker)

1 skilled worker

Distribution of roles between team leader, site manager, contractor (in terms of drawing up estimates, managing the necessary materials and tools, defining the daily schedule, etc.), and description of the interactions between the various players:

On this site: the team leader is the link between the activity and the works manager, who is the co-manager. It is the latter who manages the market, quotes, the management of the work material, the management of the equipment and the overall schedule. He is in direct contact with the architect, the local project management firm, and the client.

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## Grid 1 for the observation of work situations in renovation companies experienced by site managers

### BLOCK 1: Preparing a renovation site

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| BLOCK 1 | Component 1.1: Literature review of the renovation project components | * Identify and collect documents specifically related to renovation projects
 | Case study 1: Specifications for public tender + responseUpdating of plans according to excavations |
| * Analyse data and identify critical points
 |
| * Report back and propose improvements, changes or solutions if necessary.
 |
| Component 1.2 Diagnostic methods for existing buildings and premises prior to intervention | * Identify the different diagnostic procedures/methods/techniques possible in renovation projects
 | Case study 2:Diagnosis, state of the art |
| * Determine / select appropriate diagnostic method(s)
 |
| Component 1.3. Visit to the site of the future renovation: Preparation, observation methods and analysis of the observed elements.  | * Identify, list and locate the elements to be observed during the visit.
 | Case study 1:Identification of the materials needed for the construction site, their accessibility and storageOrganisation of logisticsIdentification of points to be securedCase study 2:Identification of the materials needed for the construction site, their accessibility and storageOrganisation of logisticsIdentification of points to be secured |
| * Determine the diagnostic methods to be used and any necessary personnel or equipment.
 |
| * Carry out the visit, identify and report critical points
 |
| * Analyse critical points and propose solutions or adjustments
 |
| Component 1.4. Preparation of the renovation site plan and its layout (marking, fencing and preparation of the site area)  | * Identify/characterise specific elements of renovation sites
 |
| * Integrate the specific elements of renovation into the design and layout of intervention sites.
 |
| Component 1.5. Planning and phasing of the team's work on the renovation sites  | * Identify/characterise specific elements of renovation sites
 | Case study 1: Sorting of stones to refine the plansRenovation of the tower |
| * Integrate the specific elements of renovation into the planning, procedures and phasing of interventions.
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### BLOCK 2: Managing communication and relations on a renovation site

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| BLOCK 2 | Component 2.1. Management of teams on renovation sites: Monitoring of assignments and tasks and anticipation of complex and potentially conflictual situations with internal staff and subcontractors. | * Identify and characterise critical situations or problems specific to renovation sites
 | Case study 2:Interaction between the site team, the co-manager, the project management firm, the Parisian architect and the clientComplex situation due to structural failure of the frameNegotiation of the solidification solution with steel beams and columns |
| * Anticipate, develop and propose solutions
 |
| * Informing team leaders
 |
| Component 2.2. Development and implementation of procedures for the proper execution of operations (e.g. adaptation to site constraints, verification and monitoring of material supplies, verification of delivery times, consideration of energy efficiency, final efficiency, etc.).  | * Identify and characterise the different types of constraints or problems specific to renovation projects.
 | Case study 2:Restricted and cramped accessManagement of the supply of metallic work materialConsequence on the planning |
| * Anticipate, develop and propose solutions and inform team leaders.
 |
| Component 2.3. Follow-up of relations with the client, the company manager, the architect, the design office & the CSS (health and safety coordinator). | * Characterise the specificities of the different stakeholders in a renovation project.
 | Case study 1 and case study 2:Organisation of fortnightly site meetings with historical monuments in situation 1 and with Parisian clients in situation 2 |
| * Integrate these specificities in the exchanges/procedures between stakeholders.
 |
| Component 2.4. Mental management of workload, including the estrai of stress and strain at work. | * Identify the particularities and specificities of the tensions related to renovation projects
 | Case study 2:Planning alignment problem due to structural failure of the framework |
| * Developing facilitation or anticipation strategies
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### BLOCK 3: Management of technical and organisational aspects of the renovation site

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| BLOCK 3 | Component 3.1 Administrative, financial and legal management of a renovation project. | * Identify and collect administrative, financial and legal documents specifically related to renovation projects.
 | Case study 2:Drafting of an amendment after validation of the additional work by the client |
| * Integrate these specificities in the ifícil site
 |
| Component 3.2. Management and control of the protection of workers and buildings on site, including the erection/dismantling of scaffolding, working at height, access ifíciles and the use of hazardous materials on renovation sites. | * Identify specific and critical situations
 | Case study 1:Securing the site according to the rules of the artCase study 2: Lack of site security and consequences |
| * Identify current standards or regulations
 |
| * Develop and propose resolution strategies
 |
| * Informing team leaders
 |
| Component 3.3. Waste management on renovation sites: planning and estrai of waste bins, sorting and recycling. (Circular Economy), and the use of appropriate monitoring tools. | * Identify specific situations
 | Case study 2:Difficulty in managing waste due to restricted access to the site . Management carried out on an ad hoc basis via vans  |
| * Identify current standards or regulations
 |
| * Develop and propose resolution strategies
 |
| * Informing team leaders
 |
| Component 3.4: Integration of energy saving standards in renovation projects and use of appropriate monitoring tools. | * Identify specific situations
 | Not observed |
| * Identify current standards or regulations
 |
| * Develop and propose resolution strategies
 |
| * Informing team leaders
 |
| Component 3.5. Continuous quality control of renovation sites: quality of intermediate phases and quality of finished works. | * Identify the critical points to be taken into account
 | Case study 1 and case study 2:Control by the works supervisor during regular but informal visitsControl at each site meeting |
| * Identify quality criteria and develop specific control procedures
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### BLOCK 4: Acceptance of renovation works and quality control

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| BLOCK 4 | Component 4.1 Quality control of renovation results and client approval | * Identify and characterise the points of attention to be taken into account
 | Not observed |
| * Develop the necessary control procedures
 |
| Component 4.2. Evaluation of the working process and results, including evaluation, valorisation and improvement of the team. | * Evaluate final deliverables and processes implemented
 | Informal in both case studies |
| * Valuing work with team leaders and teams
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**Grid 2 for the Observation of work situations in renovation companies experienced by team leaders**

### BLOCK 1: Preparing a renovation site

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| BLOCK 1 | Component 1.1. Preparation of a renovation project and diagnostic methods of existing buildings and places isr the intervention | * Implement technical protocols or specific diagnostic methods
 | Case study 1: Organisation of logisticsIdentification of points to be secured, storage pointsCase study 2:Organisation of logisticsIdentification of points to be secured, storage points |

### BLOCK 2: Mastering communication and relations on a renovation site

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| --- | --- | --- | --- |
| BLOCK 2 | Component 2.1. Monitoring teams on renovation sites: Anticipation of potentially conflictual situations with the team and subcontractors. | * Identify and characterise critical situations or problems specific to renovation sites
 | Situation 2:Interaction between the site team, the co-manager, the project management firm, the Parisian architect, and the clientComplex situation due to structural failure of the frameNegotiation of the solidification solution with steel beams and columns |
| * Anticipate, develop and propose solutions to your team
 |
| Component 2.2. Development and implementation of procedures for the proper execution of operations, including co-activity. | * Identify and characterise critical situations or problems specific to renovation sites
 |
| * Anticipate, develop and propose adaptation solutions
 |
| Component 2.3. Follow-up of relations with the client, the hierarchy and external partners. | * Characterise the specificities of the different stakeholders in a renovation project.
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| * Integrate these specificities in the exchanges with the different stakeholders
 |
| Component 2.4. Evaluation of the working process, including evaluation, valorisation and improvement of the team. | * Evaluate final deliverables and processes implemented
 | Informal in both case studies |
| * Valuing work with team leaders and teams
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### BLOCK 3: Mastering the technical and organisational aspects of teamwork

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| BLOCK 3 | Strand 3.1. Administrative, financial and legal aspects of the tasks entrusted to team leaders on renovation sites. | * Identify and collect administrative, financial and legal documents specifically related to renovation projects.
 | Case study 2: Exchange with the works manager on the implementation of the additional service (manufacture and installation of metal beams and columns)  |
| * Integrate these specificities in the estrai site
 |
| Component 3.2. Organisation and control of the protection of workers and buildings on site, including the erection/dismantling of scaffolding, work at height, access and the use of dangerous materials on renovation sites. | * Identify specific and critical situations
 | Case study 1:Securing the site according to the rules of the artCase study 2: Lack of site security and consequences |
| * Identify current standards or regulations
 |
| * Develop and/or implement resolution strategies
 |
| Strand 3.3. Organisation of waste treatment on renovation sites: planning and estrai of waste bins, sorting and recycling operations (circular economy), and use of appropriate monitoring tools. | * Identify specific situations
 | Case study 2:Difficulty in managing waste due to restricted access to the site . Management carried out on an ad hoc basis via vans |
| * Identify current standards or regulations
 |
| * Implementation of appropriate techniques
 |
| Component 3.4: Integration of energy saving standards in renovation works and use of appropriate monitoring tools. | * Identify specific situations
 | Not observed |
| * Identify current standards or regulations
 |
| * Apply resolution strategies
 |
| Component 3.5. Continuous quality control of the intermediate phases and the quality of the finished work. | * Respect quality criteria and develop specific control procedures
 | Case study 1 and case study 2:Control by team leader informal as it is carried out with the works manager during his regular visits Control at each site meeting |

### BLOCK 4: Acceptance of renovation work and quality control

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| --- | --- | --- | --- |
| BLOCK 4 | Component 4.1: Quality control of renovation results and client approval. | * Verification of final deliverables and implemented processes
 | Informal in both case studies |