# **1 - OBSERVATION OF ACTIVITIES OF WORKSITE MANAGERS AND TEAM LEADERS IN A RENOVATION COMPANY**

Company: …………………………………….…………………………………………………

Activity: …………………………………….………………………………………………..….

Contact person: …………………………………….……………………………………….. Function: …………………………………………………………………………..

Tel.: …………………………………….…………… Email: …………………………………………………………..

Construction site located at Avda. Constitución 45. 33208 Gijón (Asturias)

Description of the works carried out: Renovation of a residential building envelope

Total number of workers at the construction worksite: ……5……, incl. in-house workers ……….., sub-contracting labour force: ………………...

STATE OF THE ART

Renovation work achieved: Application of water proofing on north interior facade.

Renovation work to be achieved in the forthcoming weeks: Scaffolding disassembly.

Other information: ………………………………………………………………………………………………………………………………………………………………………………….

**Guidelines for each axis of observation**

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

Residential building with 7 and 14 floors. Year of construction 1956

Location: Avenida Constitución 45, 33207 Gijón.

Description of the location: Urban area (Corner of Avda. Constitución and Avda. Manuel Llaneza). No access difficulties. Facade of face brick (listed as BIC). Mixed roof (flat walkable and sloping 9%).

Nature of work:

* Actions to be carried out on the roof (without modification of load-bearing or structural elements):
* Inspection of the state of preservation of the roof, with special attention to singular points and junctions.
* Gutter cleaning.
* Replacement, as required, of roofing pieces, guttering, spouts and copings..
* Waterproofing of chimney connections.
* Actions to be carried out on the interior north façade (without modification of enclosure elements):
* Installation of auxiliary equipment.
* Cleaning of the north façade of the patio with pressurized water.
* Crack repair and joint repair.
* General waterproofing of the facade.

**Methods:** Identify and describe the techniques, processes or operating modes used on the renovation site. Note any elements that seem useful or relevant.

* Inspection of the current state of the building.
* Installation of auxiliary means.
* Parallel execution of work on the roof and interior façade.

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

* Materials and tools : masonry tools and materials.
* Auxiliary elements: scaffolding, RCDs containers.
* Technological equipment: thermographic camera and stractometer.

**Workforce (Human Resources)** : Indicate the number and profile of the people involved in the production process observed, and their qualifications and specialisation.

* 1 site manager
* 1 team leader
* 3 workers

**Documents:** Identify the different documents (technical instructions, plans, BIM, sketches) used by the teams. If possible, collect these documents to be able to work from them during future learning sequences.

* Project design
* ITE Report (Technical Inspection of Buildings).

Grid 1 for the Observation of work situations in renovation companies experienced by worksite managers

### BLOCK 1: Preparing a renovation site

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| THE TEACHER OR TRAINER OBSERVES AND NOTES: | | | Environment  Type of building, geographical location, condition, access, etc. | Documents  Identify and collect the different documents used. | Methods  Techniques, processes, and operating modes used. | Equipment  Tools, instruments, machines, equipment, and materials used. | Workforce (Human Resources)  Number of people, qualification and role in the process observed | Others |
| BLOCK 1 | Component 1.1: Literature review of the renovation project components | * Identify and collect documents specifically related to renovation projects |  |  |  |  |  |  |
| * 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 |  |  |  |  |  |  |
| * 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 elements to be observed during the visit |  |  |  |  |  |  |
| * Determine the diagnostic methods to be used and the possible contributors or materials required |
| * Carry out the visit, identify and notify critical points |
| * Analyse the critical points and propose the necessary solutions or adjustments |
| Component 1.4. Preparation of the renovation site plan and its layout (marking out, 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 renovation sites | * Identify/characterise specific elements of renovation sites |  |  |  |  |  |  |
| * Integrate the specific elements of renovation into the planning, procedures, and phasing of interventions |

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

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| THE TEACHER OR TRAINER OBSERVES AND NOTES: | | | Environment  Type of building, geographical location, condition, access, etc. | Documents  Identify and collect the different documents used. | Methods  Techniques, processes, and operating modes used. | Equipment  Tools, instruments, machines, equipment, and materials used. | Workforce (Human Resources)  Number of people, qualification and role in the process observed | Others |
| 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 | North inner facade | Project plan | He suggests application of water repellent with a sprayer instead of a roller in certain areas. | * Roller, brush, sprayer, plastic and adhesive for window protection, wire brush, broom, ... * PPE | 2 workers operating in the north inner facade |  |
| * 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 |  |  |  |  |  |  |
| * 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 protagonists of a renovation project | North inner facade |  | * Contact with the property to anticipate possible overlaps with other activities. * Telephone report to the manager on the activities carried out. |  |  |  |
| * Integrate these specificities in the exchanges/procedures between stakeholders |
| Component 2.4. Mental management of workload, including management of stress and tension at work. | * Identify the particularities and specificities of the tensions linked to renovation projects | North inner facade. |  | Heavy rain forecast that will make outdoor work difficult: prepare alternative indoor activities. |  |  |  |
| * Develop facilitative or anticipatory strategies |

### BLOCK 3: Management of technical and organisational aspects of the renovation site

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| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| THE TEACHER OR TRAINER OBSERVES AND NOTES: | | | Environment  Type of building, geographical location, condition, access, etc. | Documents  Identify and collect the different documents used. | Methods  Techniques, processes, and operating modes used. | Equipment  Tools, instruments, machines, equipment, and materials used. | Workforce (Human Resources)  Number of people, qualification and role in the process observed | Others |
| 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 |  | * Budget of material execution. * Extra order for water repellent product. | Arrangement of a date with the supplier for urgent delivery of the water repellent product. |  |  |  |
| * Integrate these specificities in the management of the site |
| Component 3.2. Management and control of on-site protection of workers and buildings, including erection/dismantling of scaffolding, work at height, difficult access and use of hazardous materials on renovation sites. | * Identify specific and critical situations | * Storage area. * Common areas: elevator and portal | * Project plan * Safety data sheet of the products for facade renovation. | * Verification of the right storage of the water repellent and mortar. * Check the use of masks to avoid inhalation of product vapors. |  | 1 team leader  2 workers | * Protection of the elevator and access portal to the building. * Signaling and delimitation of the work area. |
| * Identify the current standards or regulations |
| * Develop and propose resolution strategies |
| * Informing team leaders |
| Component 3.3. Waste management on renovation sites: planning and management of waste bins, sorting and recycling.  operations (circular economy), and the use of appropriate monitoring tools. | * Identify specific situations | Main access route to the city | Rental of RCDs containers | Signaling and reserving space for the container. | Marking tape, cones, traffic signs for construction sites. |  |  |
| * Identify the 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 |  |  |  |  |  |  |
| * Identify the 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 | North inner facade. | Project Plan (quality plan) | * Control of the execution of the water repellent coating: a thicker spray is agreed due to the porosity of the brick. * Control of the dosage and mixing of filling mortars. | * Sprayer, roller. * PPE * Masonry tools. | 1 team leader |  |
| * Identify quality criteria and develop specific control procedures |

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

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| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| THE TEACHER OR TRAINER OBSERVES AND NOTES: | | | Environment  Type of building, geographical location, condition, access, etc. | Documents  Identify and collect the different documents used. | Methods  Techniques, processes, and operating modes used. | Equipment  Tools, instruments, machines, equipment, and materials used. | Workforce (Human Resources)  Number of people, qualification and role in the process observed | Others |
| 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 |  |  |  |  |  |  |
| * Develop the necessary control procedures |
| Component 4.2. Evaluation of the working process and results, including evaluation, valorisation, and improvement of the team. | * Evaluate the final deliverables and processes implemented |  |  |  |  |  |  |
| * Valuing work with team leaders and teams |

# **1 - OBSERVATION OF ACTIVITIES OF WORKSITE MANAGERS AND TEAM LEADERS IN A RENOVATION COMPANY**

Company: …………………………………….…………………………………………………

Activity: …………………………………….………………………………………………..….

Contact person: …………………………………….……………………………………….. Function: …………………………………………………………………………..

Tel.: …………………………………….…………… Email: …………………………………………………………..

Construction site located at Avda. Constitución 45. 33208 Gijón (Asturias)

Description of the works carried out: Rehabilitación de la envolvente de un edificio de viviendas

Total number of workers at the construction worksite: …2……, incl. in-house workers ……….., sub-contracting labour force: ………………...

STATE OF THE ART

Renovation work achieved: Instalación de medios de protección en la cubierta.

Renovation work to be achieved in the forthcoming weeks: Inicio de la ejecución de los trabajos.

Other information: ………………………………………………………………………………………………………………………………………………………………………………….

**Guidelines for each axis of observation**

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

Residential building with 7 and 14 floors. Year of construction 1956

Location: Avenida Constitución 45, 33207 Gijón.

Description of the location: Urban area (Corner of Avda. Constitución and Avda. Manuel Llaneza). No access difficulties. Facade of face brick (listed as BIC). Mixed roof (flat walkable and sloping 9%).

Nature of work:

* Actions to be carried out on the roof (without modification of load-bearing or structural elements):
* Inspection of the state of preservation of the roof, with special attention to singular points and junctions.
* Gutter cleaning.
* Replacement, as required, of roofing pieces, guttering, spouts and copings..
* Waterproofing of chimney connections.
* Actions to be carried out on the interior north façade (without modification of enclosure elements):
* Installation of auxiliary equipment.
* Cleaning of the north façade of the patio with pressurized water.
* Crack repair and joint repair.
* General waterproofing of the facade.

**Methods:** Identify and describe the techniques, processes or operating modes used on the renovation site. Note any elements that seem useful or relevant.

* Inspection of the current state of the building.
* Installation of auxiliary means.
* Parallel execution of work on the roof and interior façade.

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

* Materials and tools : masonry tools and materials.
* Auxiliary elements: scaffolding, RCDs containers.
* Technological equipment: thermographic camera and stractometer.

**Workforce (Human Resources)** : Indicate the number and profile of the people involved in the production process observed, and their qualifications and specialisation.

* 1 site manager
* 1 team leader
* 3 workers

**Documents:** Identify the different documents (technical instructions, plans, BIM, sketches) used by the teams. If possible, collect these documents to be able to work from them during future learning sequences.

* Project design
* ITE Report (Technical Inspection of Buildings).

**Grid 2 for the Observation of work situations in renovation companies experienced by team leaders**

### BLOCK 1: Preparing a renovation site

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| THE TEACHER OR TRAINER OBSERVES AND NOTES: | | | Environment  Type of building, geographical location, condition, access, etc. | Documents  Identify and collect the different documents used. | Methods  Techniques, processes, and operating modes used. | Equipment  Tools, instruments, machines, equipment, and materials used. | Workforce (Human Resources)  Number of people, qualification and role in the process observed | Others |
| BLOCK 1 | Component 1.1. Preparation of a renovation site and diagnostic methods of existing buildings and places before the intervention | * Implement specific technical protocols or diagnostic methods | * Inclined roof (9% slope) with several slopes. * Curved tile roof. | * Roof plans * Diagram of installations on the roof. * ITE Report (Technical Inspection of Buildings). * Project * Certificate of quality of the installation/revision of anchoring elements on the roof. | * Visual inspection of the condition of the roof and eaves. * Inventory of possible structural tie points on the roof. * Inventory of existing tie-down points (with means of attachment). * Inspection of tie-down points: bolts found to be inadequate. * Planning of the way of access of workers to the deck. * Planning of how to lift, place and remove materials from the roof. | * Stractometer for checking the condition of existing fastening points (bolts). * PPE | 1 team leader |  |

### 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 |  |  |  |  |  |  |
| * 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 protagonists of a renovation project |  |  |  |  |  |  |
| * Integrate these specificities in exchanges with different stakeholders |
| Component 2.4. Evaluation of the working process, including evaluation, valorisation, and improvement of the team. | * Evaluate the final deliverables and processes implemented |  |  |  |  |  |  |
| * Valuing work with team leaders and teams |

### BLOCK 3: Mastering the technical and organisational aspects of teamwork

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| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| THE TEACHER OR TRAINER OBSERVES AND NOTES: | | | Environment  Type of building, geographical location, condition, access, etc. | Documents  Identify and collect the different documents used. | Methods  Techniques, processes, and operating modes used. | Equipment  Tools, instruments, machines, equipment, and materials used. | Workforce (Human Resources)  Number of people, qualification and role in the process observed | Others |
| BLOCK 3 | Component 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 |  |  |  |  |  |  |
| * Integrate these specificities in the management of the site |
| Component 3.2. Organisation and control of on-site protection of workers and buildings, including erection/dismantling of scaffolding, work at height, difficult access, and use of hazardous materials on renovation sites. | * Identify specific and critical situations | * Inclined roof (9% slope) with several slopes. * Curved tile roof. |  | Installation of lifelines: the worker is provided with alternatives to make up for the shortage of carabiners by tying appropriate knots. | * PPE * Review of available equipment: * Individual protection systems against falls from height (fall arrest harness, energy absorber, blocker ...): it is noted that workers do not have energy absorbers. * Slings * Carabiners : It is observed that there is a shortage of carabiners at the beginning of the work. * Ropes | 1 team leader  1 worker |  |
| * Identify the current standards or regulations |
| * Develop and/or implement resolution strategies |
| Component 3.3. Organisation of waste treatment on renovation sites: planning and management of waste bins, sorting and recycling operations (circular economy), and the use of appropriate monitoring tools. | * Identify specific situations |  |  |  |  |  |  |
| * Identify the current standards or regulations |
| * Implementing appropriate techniques |
| Component 3.4: Integration of energy saving standards in renovation works and use of appropriate monitoring tools. | * Identify specific situations |  |  |  |  |  |  |
| * Identify the current standards or regulations |
| * Apply resolution strategies |
| Component 3.5. Continuous quality control of the intermediate phases and the quality of the finished work. | * Respecting quality criteria and developing specific control procedures |  |  |  |  |  |  |

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

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| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| THE TEACHER OR TRAINER OBSERVES AND NOTES: | | | Environment  Type of building, geographical location, condition, access, etc. | Documents  Identify and collect the different documents used. | Methods  Techniques, processes, and operating modes used. | Equipment  Tools, instruments, machines, equipment, and materials used. | Workforce (Human Resources)  Number of people, qualification and role in the process observed | Others |
| BLOCK 4 | Component 4.1: Quality control of renovation results and client approval. | * Checking the final deliverables and the processes implemented |  |  |  |  |  |  |