# GOOD PRACTICES

## Report 2021

FCC Construcción division

Joint prevention service

FCC Construcción

February 2022

In compliance with the Prevention Objectives established in the Construction Area, the purpose was to promote the implementation of "Good Practices" in our work centres, as a premise for the continuous improvement of both preventive procedures and preventive management.

The following is a list containing a number of these practices which we consider to be the most significant for 2021, and the intention is for their application to be extended to the rest of the organisation.

# CONTENTS

1. Good Preventive

# CULTURE PRACTICES

Good practice NO.1:

# "RECORD OF THE USE OF SITE FIRST-AID KITS""

COMPANY: FCC CONSTRUCCIÓN NORTH ZONE – GALICIA, CASTILE-LEÓN

PROJECT: JV CHUAC REFORM PHASE 0

***Description***

Posting of a record sheet next to the first aid kits.

***Good practice adopted***

A sheet to record incidents involving the use of first aid kits is placed next to the kits in order to detect the main causes of minor injuries among workers.



Good practice NO. 2:

# "IMPLEMENTATION OF THE PROCEDURE FOR LOWERING/RAISING MATERIALS ON VEHICLE ROOF RACKS"

COMPANY: FCC INDUSTRIAL

PROJECT: MADRID NETWORK DELEGATION

***Description***

Implementation of an instruction in order to define how to proceed when loading and unloading material from the roof rack of vehicles for heights above 2 metres.

Any work above 2 metres above the ground is considered work at height and must be done safely to prevent falls from a different level.

***Good practice adopted***

This procedure has been carried out on all the Delegation's vans:

- Keep the number of items on the roof rack to a minimum and control the weight of materials.
- Carry a ladder inside the van.
- Minimum of 2 ladders for handling objects on the roof rack.
- Carry rear metal ladder attached to the vehicle or carry a fibre ladder.
- The fibre ladder(s) are supported on the sides of the van while maintaining the safety recommendations.
- They can also be stepladders.
- From the ladder(s) supported, one on the side of the van (or scissor ladder) and one at the rear, with the help of two operators, all the material on the roof rack can be lowered without the need to climb onto the roof rack.
- If for reasons of volume, weight, etc. it is not safe to raise / lower, tie / untie the materials, a third operator with a third ladder is required.
- In vans with lower roofs, everything can be lowered with only the side ladder and a worker in the back of the van on the access step to the rear.

- Install in the tallest vans a system of "folding ladder racks", which can be operated at ground level, eliminating the risk of falling to a different level and minimising the risk of overstrain.Instalar en las furgonetas más altas un sistema de “porta escaleras Abatibles”, que se maneje a nivel del suelo, eliminando el Riesgo de Caída a Distinto Nivel, y minimizando el Riesgo de Sobreesfuerzos.

Good practice NO. 3:

## "HEIGHT TRAINING TOWER"

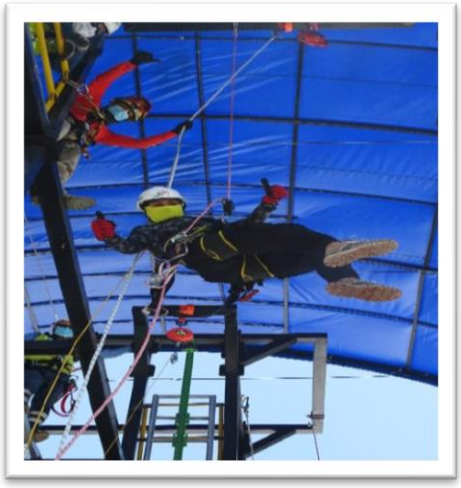
COMPANY: FCC CONSTRUCCIÓN COLOMBIA

PROJECT: TOYO TUNNEL PROJECT

***Description***

The Guillermo Gaviria Echeverri (CGE) Tunnel project received certification from the Ministry of Labour for its training tower for high-altitude activities, which will enable up to 2,200 of its employees to be trained over the course of the project.

***Good practice adopted***



It consists of a 10-metre high structure with several modules that simulate the tasks that are carried out on the various work fronts and involves training for skills such as operational tasks: facades, slopes, scaffolding and on poles. This enables improved skills in inclined plane, suspended bridge work, working in confined spaces, positioning and restraint in access systems and rescue from heights.

The tower is located in a rural area of the municipality of Caña Gordas and seven members of the Health and Safety at Work team were certified as trainers who will be the project's trainers.

The purpose of the project is to train and retrain the personnel working on site in safe work competence in order to make progress on new fronts and generate a safety culture among all employees.It consists of a 10-metre high structure with several modules that simulate the tasks that are carried out on the various work fronts and involves training for skills such as operational tasks: facades, slopes, scaffolding and on poles. This enables improved skills in inclined plane,

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Good practice NO. 4:

## "REMUNERATION WHEN REPORTING UNSAFE CONDITIONS"

COMPANY: FCC CONSTRUCCIÓN COLOMBIA

PROJECT: TOYO TUNNEL PROJECT

***Description***

A campaign is launched for workers called "Your report matters" in order to promote and encourage the identification of unsafe acts and conditions that may occur during the execution of the activities of the work processes. In this way, new developments can be addressed in a timely manner and preventive and/or corrective actions can be implemented by applying the principle of occupational risk prevention and management.

***Good practice adopted***

The prioritisation of acts/conditions shall be done by hazard classification: high, medium and low. Flyers for participation will be posted on the safety boards at the various work fronts. The OSH team and management will validate the reports in order to prioritise the most necessary interventions and define the worker and/or team that will be a candidate for recognition. Participants must meet certain requirements such as participate in OSH talks and trainings, no reprimands and/or sanctions from the OSH area. Prize money and/or food (lunch and/or dinners) will be awarded on a monthly basis.

## 2. Good Execution

# PRACTICES

Good practice NO. 5:

## "PROTECTIVE SHEDS DURING INJECTIONS"

COMPANY: FCC CONSTRUCCIÓN NORTH ZONE - BASQUE COUNTRY, LA RIOJA, NAVARRA

PROJECT: 170542_3200 - JV YESA DAM

***Description***

Grouting is being carried out on the left plinth of the new Yesa dam.

During drilling, although the machine is radio-controlled, it is possible that material may be sprayed onto the operator.

***Good practice adopted***

A shed is set up to protect the machine operator during drilling and injections, consisting of a metal structure surrounded on its perimeter by plastic panels that allow the machine operator to see and at the same time protect him from the possible projections produced during this activity.

Good practice NO. 6:

# "SKYLIGHT PROTECTION"

COMPANY: FCC INDUSTRIAL SOUTH ZONE - CANARY ISLANDS

PROJECT: PHOTOVOLTAIC INSTALLATION HYPERMARKET ADEJE

***Description***

Solving the risk in the installation of photovoltaic panels on a roof with a large number of skylights and where it is impossible to install the huge number of lifelines that are necessary.

***Good practice adopted***

After considering various possible solutions (nets, railings, changes to the skylights, etc.), it was decided to install a protective mesh on the outside of each skylight made up of 12 mm corrugated bars separated every 37 cm on a square base made of profiles to prevent the bars from digging into the waterproofing and damaging it.

The structure has been tested to check its strength. The test consisted of dropping a 95 kg dead weight on the mesh from 50 cm above the top of the mesh, resulting in a slight deformation of the mesh.

After verifying their effectiveness, sufficient structures were built to cover all the skylights and it was decided to paint them with a paint to protect them against corrosion.

Good practice NO. 7:

# "SEWERAGE MANHOLE ACCESS SYSTEM"

COMPANY: FCC CONSTRUCCIÓN - PORTUGAL

PROJECT: RIBEIRADIO ERMIDA HYDROELECTRIC POWER PLANT - REPAIR OF THE SCOPE OF THE FINAL ACCEPTANCE

***Description***

Necessary intervention inside sewer shafts (confined space), with risk of exposure to chemicals and biological agents.

***Good practice adopted***

Development of a safety procedure, appropriate signage, gas measurement before the start of the work, use of an extractor fan, installation of a rescue tripod and of course safe equipment and permanent supervision for the workers.

Good practice NO. 8:

## "RESTRICTED ACCESS IN RISK AREA"

COMPANY: FCC CONSTRUCCIÓN PORTUGAL

PROJECT: LUIS BIVAR

***Description***

As part of the contract for the renovation of the building, the demolition of reinforced concrete slabs, beams and pillars was carried out and due to the location of the demolitions at height and overlapping with other works, there was a very high risk of the remaining materials falling with serious consequences for the safety of the workers.

***Good practice adopted***

To avoid the risk of falling materials, site planning was carried out with all subcontractors present on the site, avoiding overlapping of activities, and safety barriers were implemented to close off risk areas for workers.

Good practice NO. 9:

# "MECHANICAL DEMOLITION OF CONCRETE"

COMPANY: FCC CONSTRUCCIÓN EAST ZONE - CATALONIA

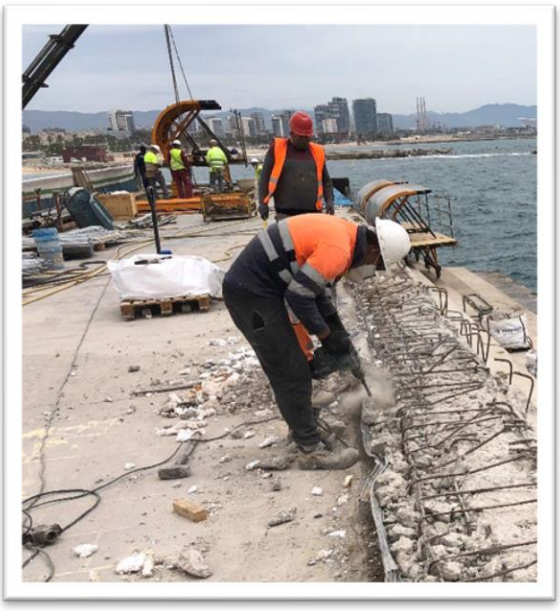
PROJECT: REMODELLING OF THE PORT OLIMPIC DIKE

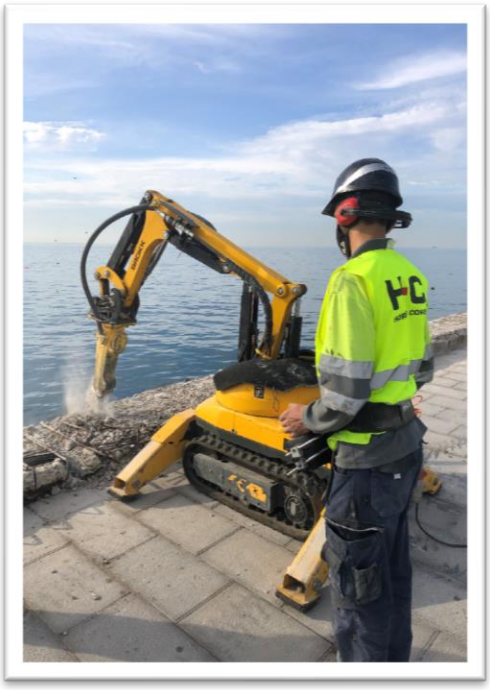
***Description***

Work 3P63 Refurbishment of the breakwater at Port Olimpic in Barcelona includes as a work unit the resurfacing of the upper part of the jetty due to its superficial deterioration as a result of the maritime climate. This is a heavy demolition activity of about 500 metres in length as it affects the entire dyke.

***Good practice adopted***

This work began with manual means, but due to the arduous nature of the work and the risk of falling from a different level (more than two metres), it was replaced by mechanical means and by means of a remote-controlled robot.





## 3. Good Practices Concerning

# EQUIPMENT AND TOOLS

Good practice NO. 10:

# "METAL PARTS AND LIFELINE"

COMPANY: FCC CONSTRUCCIÓN NORTH ZONE – CASTILE-LEÓN

PROJECT: CASTROVIDO DAM

***Description***

Design and installation in the construction phase of the metal elements for the placement of the perimeter handrail and assembly of the textile lifeline on the metal structure of the tailing dam.

***Good practice adopted***


In order to guarantee the safety of the workers both in the assembly of the structure and for subsequent assembly tasks of pre-slabs, reinforcement and concreting, a series of elements are defined that must be welded to the structure during its manufacture.

These elements consist of two perimeter rows of metal tube welded to the edge of the beams, with sufficient height so that it is not necessary to remove them until the concreting is complete. This tube is supplemented with a PVC ring which can be easily removed to repair the hole once the concreting is complete, thus guaranteeing perimeter protection during all the work on the deck.

Three metal squares per span are welded to the central beam for the assembly of the textile lifeline to be used by the workers laying the pre-slabs.

Good practice NO. 11:

## "TEMPORARY LED STRIP LIGHTING"

COMPANY: FCC CONSTRUCCIÓN PORTUGAL

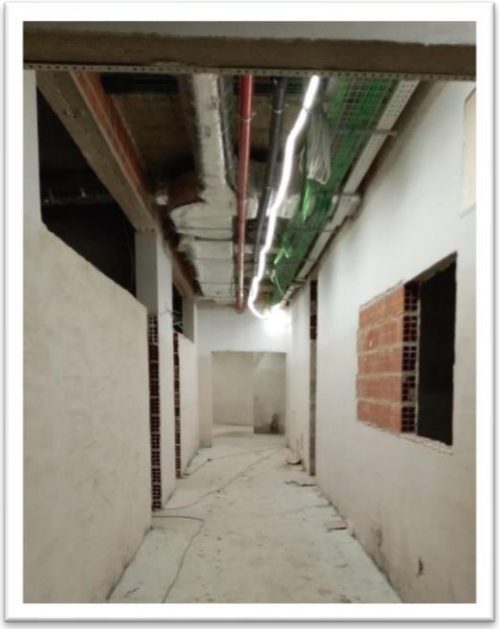
PROJECT: CONSTRUCTION OF THE EB 2.3 SCHOOL IN SANTA LUZIA

***Description***

The need for temporary and flexible lighting in interior circulation spaces, which does not interfere with assembly.

***Good practice adopted***

Installation of LED strips with low energy consumption that respond to the requirements of the work and can change their initial position as the work progresses.



Good practice NO. 12:

## "SIGNPOSTING OF THE PASSAGEWAY"

COMPANY: FCC INDUSTRIAL TOLEDO NETWORKS

PROJECT: TALAVERA FACILITY

***Description***

To improve the pedestrian crossing area.

***Good practice adopted***

Two-coloured tape (yellow and black) is used to mark the areas where workers pass through.

Good practice NO. 13:

# "EMERGENCY PACKAGES"

COMPANY: FCC CONSTRUCCIÓN UNITED KINGDOM

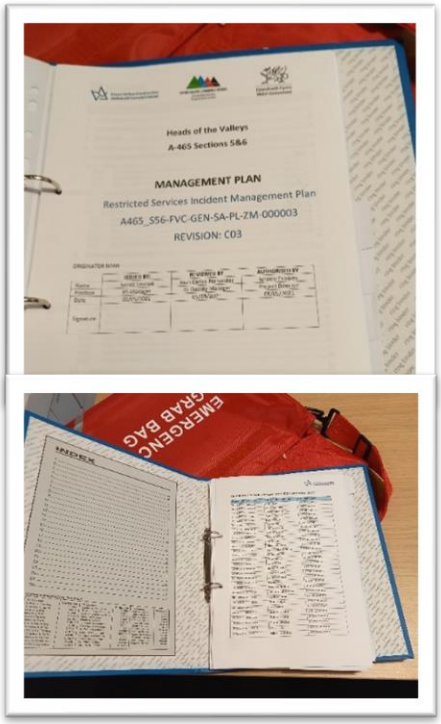
PROJECT: A465 PROJECT

***Description***

Introduction of packages containing the projects current Emergency Plan, telephone numbers of key contacts, actions to be taken in case of an emergency situation and incident investigation forms (witness statements and similar applicable information).

***Good practice adopted***

All key staff members and all incident controllers carry this complete bag in the company vehicle or private vehicle so that, should they receive a call for an emergency situation, they can help. In addition, these packages ensure a complete and thorough investigation.




Good practice NO. 14:

# "WIFI ACCESS CONTROL, ALARM SYSTEM AND ENVIRONMENTAL CONTROL"

COMPANY: FCC CONSTRUCCIÓN TRANSPORT - CONVENSA

PROJECT: JV VALLADOLID EAST BYPASS

***Description***

During the execution works inside the tunnel, the installation of an access control system, Wi-Fi, an alarm system and environmental control is proposed as an access control and real-time information system for the personnel inside the tunnel.

***Good practice adopted***

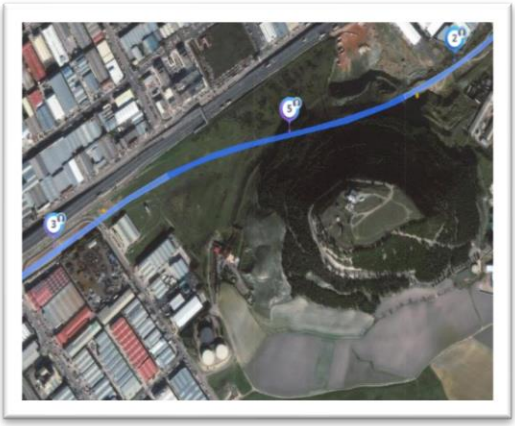
This installation is carried out and can be accessed via a web link as super administrator, administrator or foreman depending on the position and permissions. In addition, each worker must have an associated TAG (real-time tracking feature).

The platform is divided into four main screens:

- **TRACKING** on a satellite map display.
- **SCADA**, diagram of installed elements, status of equipment and sensors for environmental station data.
- **ALERTS**, generation of sound and light alarms in stations to clear the tunnel.
- **ASSETS**, associated equipment registered for the project and their status.

The installation consists of 4 BS-Tun connected by fibre optics that act as central nodes to which the rest of the equipment is connected.

After installation, all the necessary tests were carried out to certify the correct operation of all the systems (sending information to the platform for each of the equipment installed, operation in battery mode and switching the equipment on and off).

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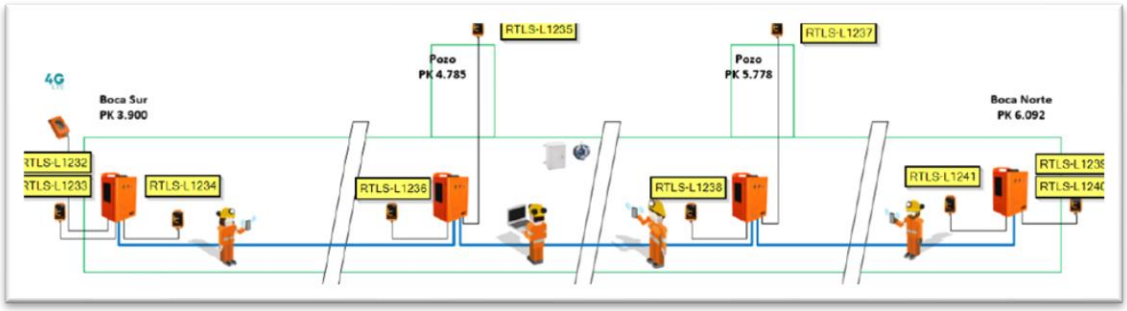
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