

ECCE BUILDING CERTIFICATE IN SUSTAINABLE CONSTRUCTION



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PARTNERS:



ECCE BUILDING CERTIFICATE IN SUSTAINABLE CONSTRUCTION



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LECTURE 1: SUSTAINABLE WALLS BUILDING SOLUTIONS

GENERAL FEATURES

DRY STONE WALLS (Ivana Ponsada)

RAMMED EARTH WALLS (Fermín Font)

STEEL FRAME WALLS (Teresa Gallego)

LECTURE 1: SUSTAINABLE WALLS BUILDING SOLUTIONS

GENERAL FEATURES

DRY STONE WALLS

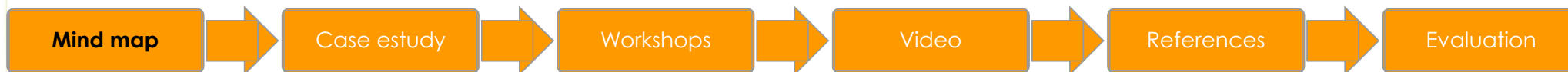
RAMMED EARTH WALLS

STEEL FRAME WALLS

LECTURE 1: SUSTAINABLE WALLS BUILDING SOLUTIONS

DRY STONE WALLS

- 1- Mind map
- 2- Case study
- 3- Building sustainable solutions
- 4- Video
- 5- References
- 6- Evaluation



1
INDUSTRIAL
REVOLUTION

2
INDUSTRIAL
REVOLUTION

3
INDUSTRIAL
REVOLUTION

4
INDUSTRIAL
REVOLUTION

EVOLUTION OF WALLS AS STRUCTURAL BUILDING SOLUTIONS

1
STONES



2
RAMMED EARTH



3
BRICKS



4
CONCRETE



5
STEELTH



Mind map

CASE STUDY

Workshops

Video

References

Evaluation



TOUR OF LE COLPORTEUSE

The heritage in Europe is full of buildings made in stone, as an example the tour defense in Le Colporteur.

Just the entrance show you the magnificent of this material.

Let see the current use of this techniques

Mind map

CASE STUDY

Workshops

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Evaluation

This is the facade of wall made of stones



The joints of this walls are empty.
Advantages of the Wall



Stone dry wall are thermal insulation. Ideal for



Row material change colors depending the mineral components

IDEA

This is a technique used in traditional construction system in Spain. It is necessary to learn about this solution, because houses in rural areas are still the same.

FUNDING

The economy is really important in this cases. Rural areas have a restringed market. Then to restore building with local materials will assure a raisanable budget.

PLACEMENT

The stone walls are used normally in rural areas. Even though the new tendencies are changing the technical solutions to some more other.

MATERIALS

Materials that can be recycled 100%

EQUIPMENTS

Tools to cut metal, to cut wood, to screw the bolts

ITEM 1: WALLSS

7/14

Mind map

CASE STUDY

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Container wall, as a cantilever can retain soil.



These walls are are defence of the properties, if the stones are placed vertical can protect better.

**IDEA**

If the stones are placed lineal as a defence, they work as a safety wall.

We can always improve the security if the upper part of the wall are placed as a cutter

Mind map

CASE STUDY

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IDEA

The stones are been used as solutions for hydraulic purposes.

- 1- As vaults to cross rivers
- 2- Coverings water deposit
- 3- The walls to water well



1



2



3

Mind map

CASE STUDY

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BUILDING PROCESS



a stock of materials should wait until workers start.



ITEM 1: WALLS 10/14



Mind map

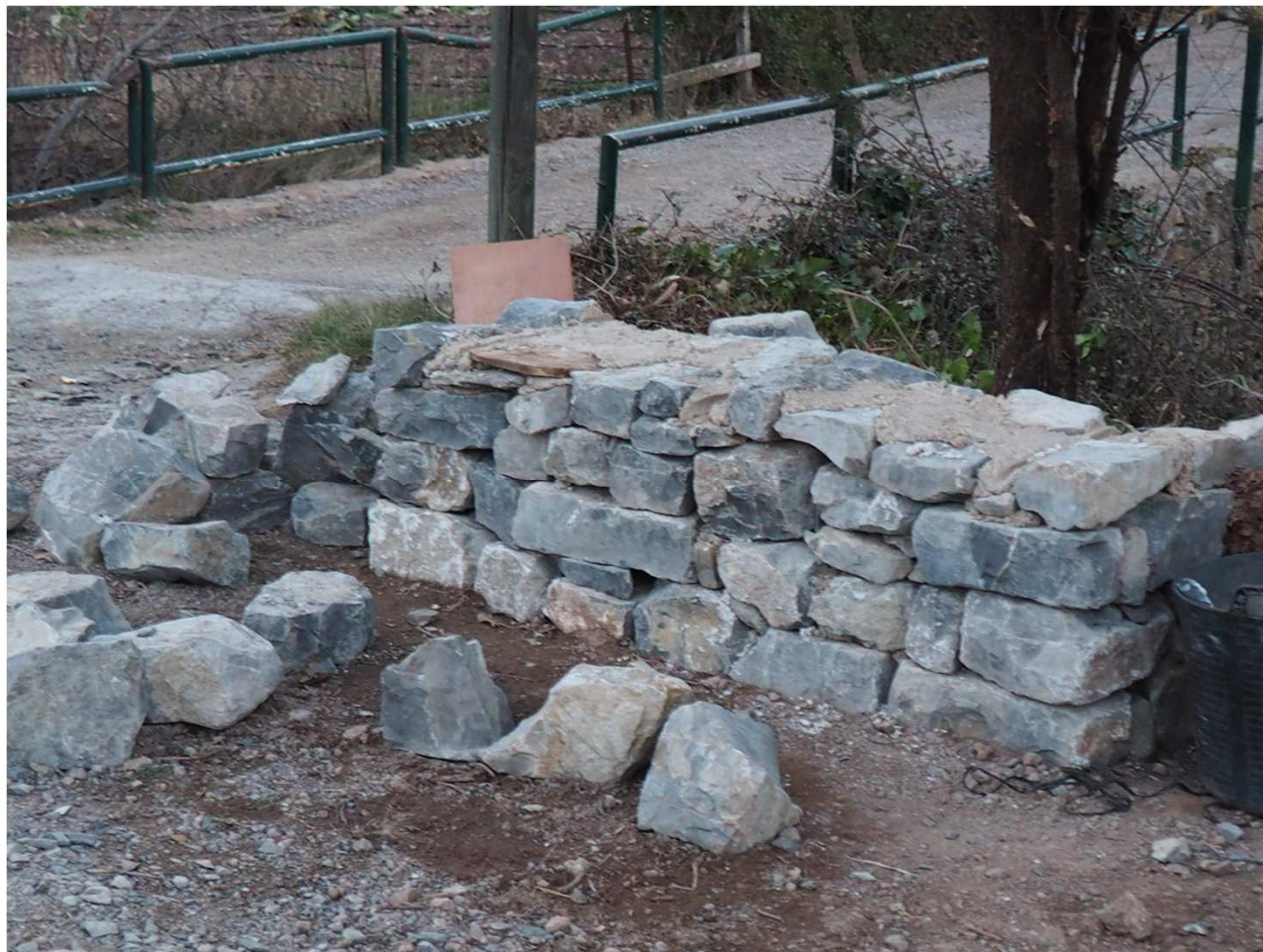
Case study

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Wall foundation in
Mas de Noguera (Castellón, Spain)

BUILDING PROCESS



a stock of materials should wait until
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ITEM 1: WALLS 11/14

Mind map

Case Study

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COMPLEMENTARY INFORMATION



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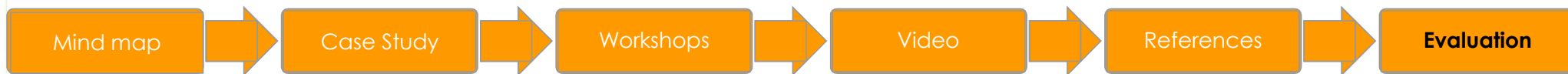


DRY STONE BUILDING



MAS DE NOGUERA, FEBRUARY 2018

Ivana Ponsoda Revert
Architect and Stone Maker



TEST OF OUT-CONTROL
5 QUESTIONS



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THANK YOU

FOLLOW TO LECTURE