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# TECHNICIAN TRAINING FOR THE CONSERVATION OF MOSAICS

## PART 2 THE CONSERVATION OF DETACHED MOSAICS

### Introduction to detached mosaics

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Detaching mosaics is a conservation method, especially popular in the past, to present a mosaic in a museum, or to make a mosaic more stable and durable if it is presented on site, or to avoid total loss in the event that the site is going to be destroyed by modern constructions.



Opificio delle Pietre Dure Archivio Storico dell'Opificio delle Pietre Dure

# Risks of damage due to the detachment of mosaics

Deformations and distention of the original mosaic size

Loss of tesserae along the cutting lines

Loss of the original layers of mortar

Loss of the mosaic's authenticity

# Different methods to detach a mosaic

Detaching the tessellatum with a roller

Detaching the tessellatum in sections

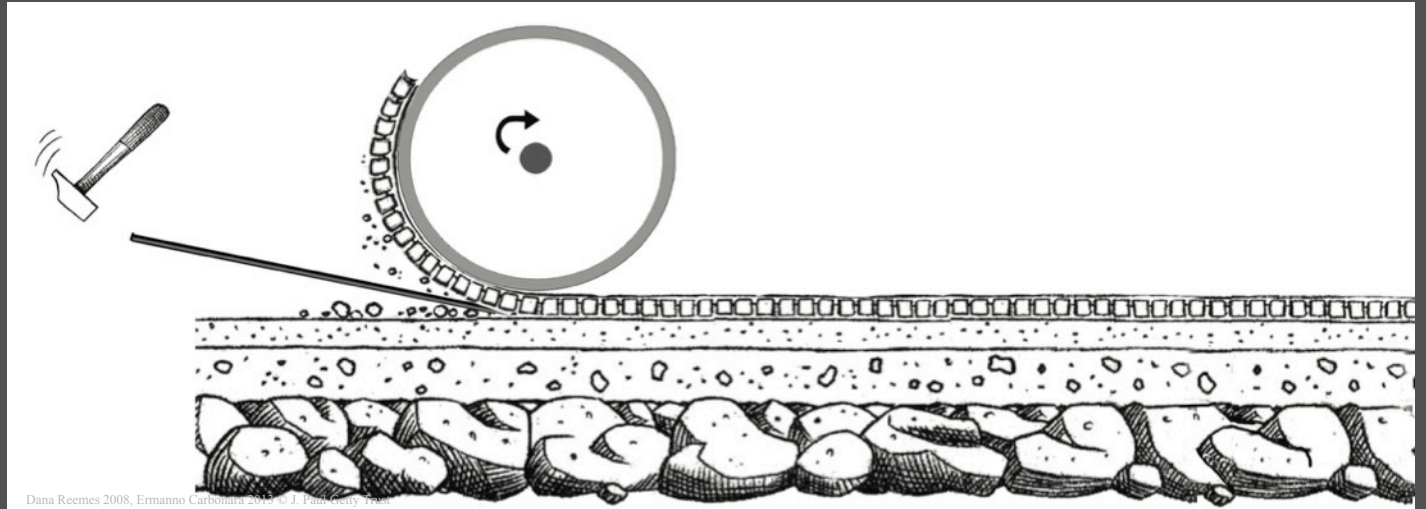
Detaching the tessellatum and preparatory layers in sections



## Detaching the tessellatum with a roller



The mosaic is separated from its preparatory layers and laid on a roller.



### ADVANTAGES

- Reduction of cuts to the mosaic or detachment in one single section

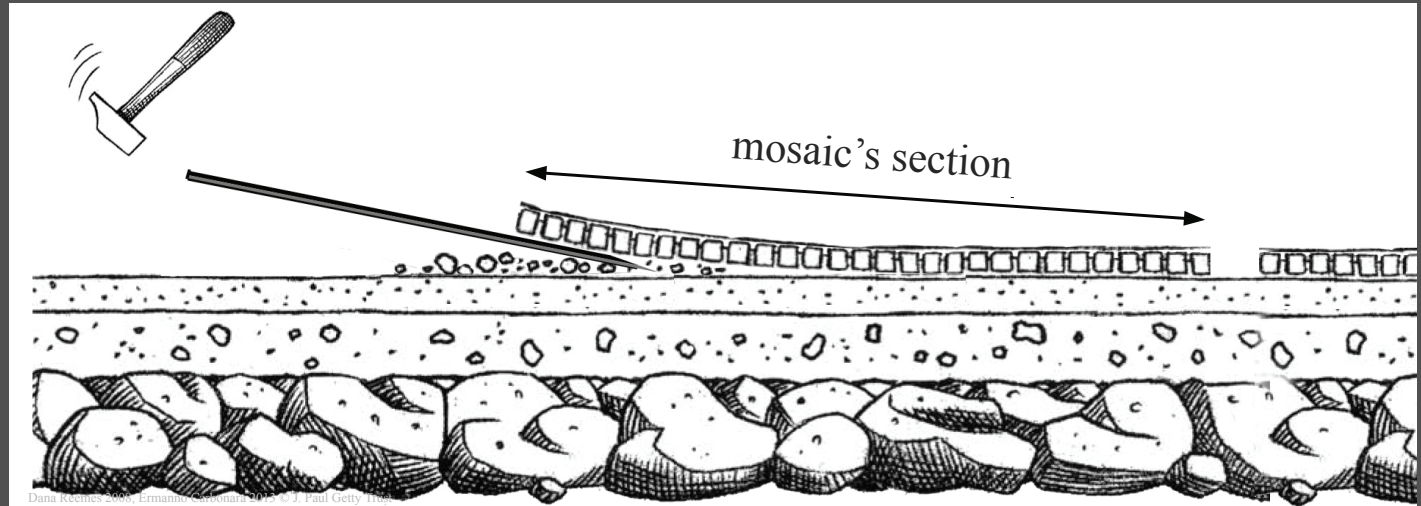
### DISADVANTAGES

- Separation of the tesserae from the original layers of mortar
- Risk of distention of the original mosaic size
- Heaviness of the mosaic sections

## Detaching the tessellatum in sections



The mosaic is detached in sections without its preparatory layers.



### ADVANTAGES

- Reduces risk of distention of the original mosaic size
- Reduces weight of mosaic sections

### DISADVANTAGES

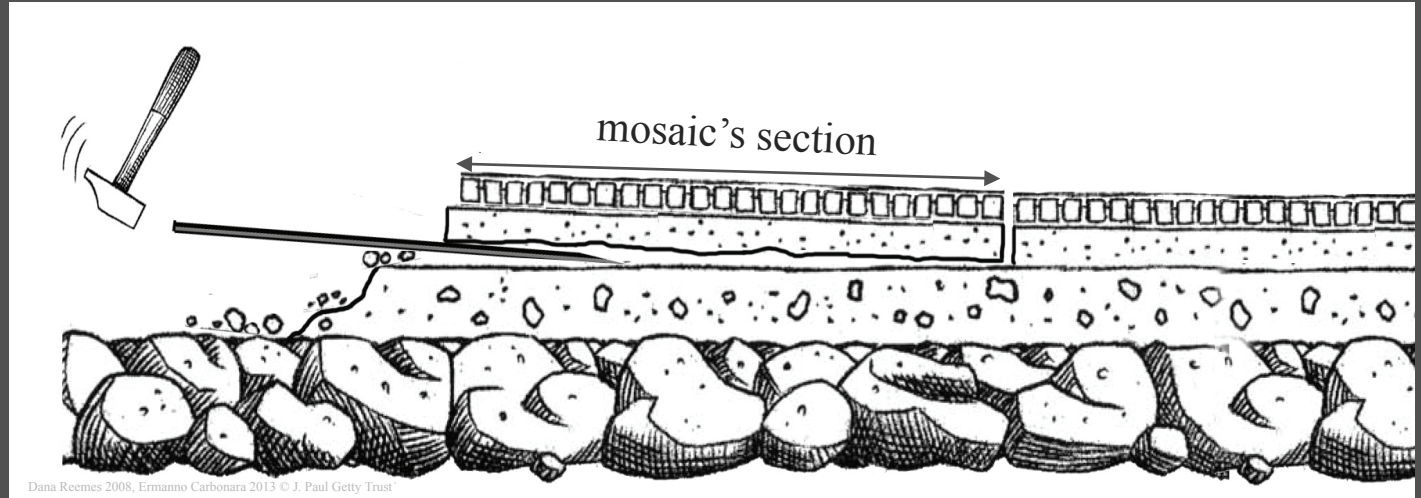
- Separation of the tesserae from the original layers of mortar
- Separation of the mosaic into several sections
- Risk of losing tesserae along the cutting lines



## Detaching the tessellatum and preparatory layers in sections



The mosaic is detached with all or some of the preparatory layers in sections or in pieces.



### ADVANTAGES

- Conservation of several of the mosaic's preparatory layers
- No risk of distention of the original mosaic size

### DISADVANTAGES

- Separation of the mosaic into several sections
- Risk of losing of tesserae along the cutting lines
- Heaviness of the mosaic sections



# Primary operations of detaching

Cleaning and stabilization of the mosaic to be detached





# Primary operations of detaching

Facing of the surface with one or more layers of fabric and adhesive





# Primary operations of detaching

## Detachment of the mosaic



Livia Alberti 2019 © J. Paul Getty Trust



Livia Alberti 2019 © J. Paul Getty Trust



# The different supports for a mosaic after detachment

Storage structures without a new support

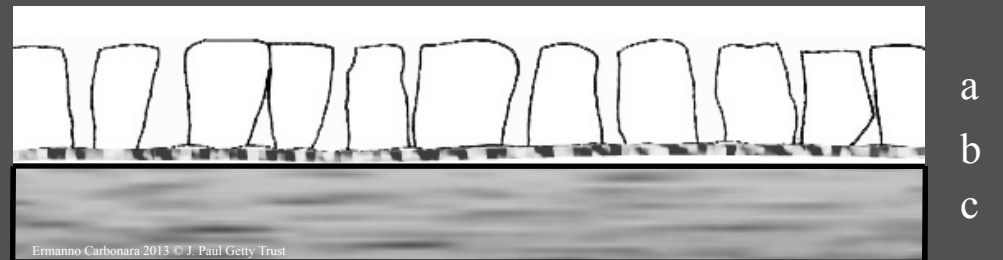
Reinforced plaster of Paris panel, mounted on a frame

Mortar panel of cement reinforced with iron (reinforced concrete)

Various layers of modern mortar applied to the ground, wall or other fixed structures

Composite panels, often stratified, of synthetic materials

# Storage structures without a new support



- a Tesserae inverted and adhered to the fabric
- b Fabric/paper
- c Storage structure



## Reinforced plaster of Paris panel, mounted on a frame





## Reinforced plaster of Paris panel, mounted on a frame



Livia Alberti 2006 © J. Paul Getty Trust



Livia Alberti 2006 © J. Paul Getty Trust

- Reinforced plaster of Paris
- Frame



# Reinforced plaster of Paris panel, mounted on a frame

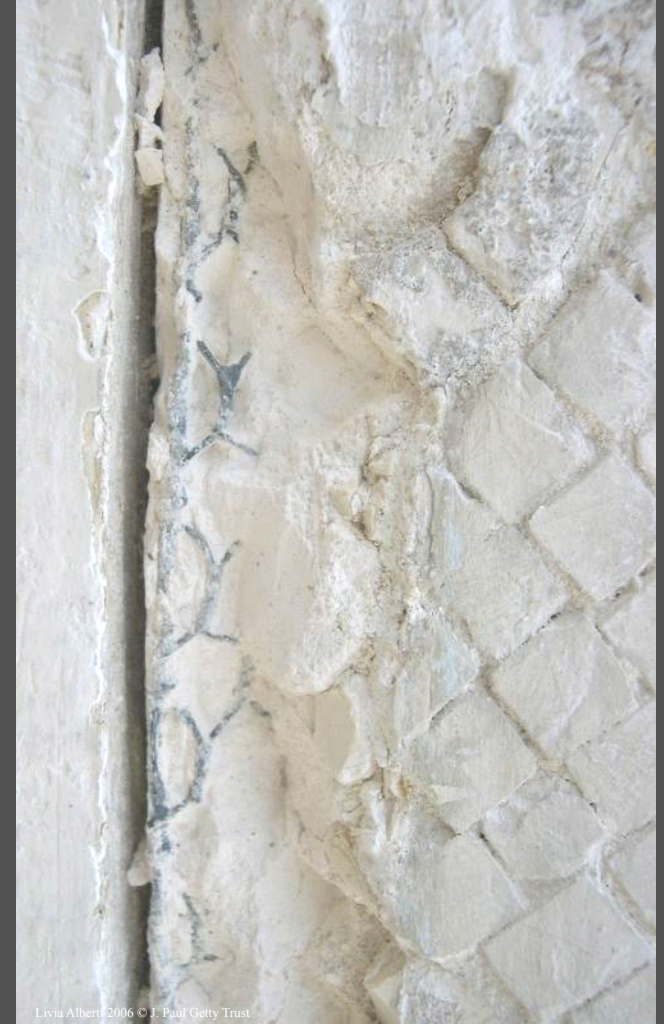
Reinforcements used for plaster of Paris panels



Woven hemp



Unwoven hemp



Steel wire grid



# Reinforced plaster of Paris panel, mounted on a frame

Frames used for plaster of Paris panels



Wooden frame



Wooden frame with reinforcement bars and metal straps





## Mortar panel of cement reinforced with iron (reinforced concrete)



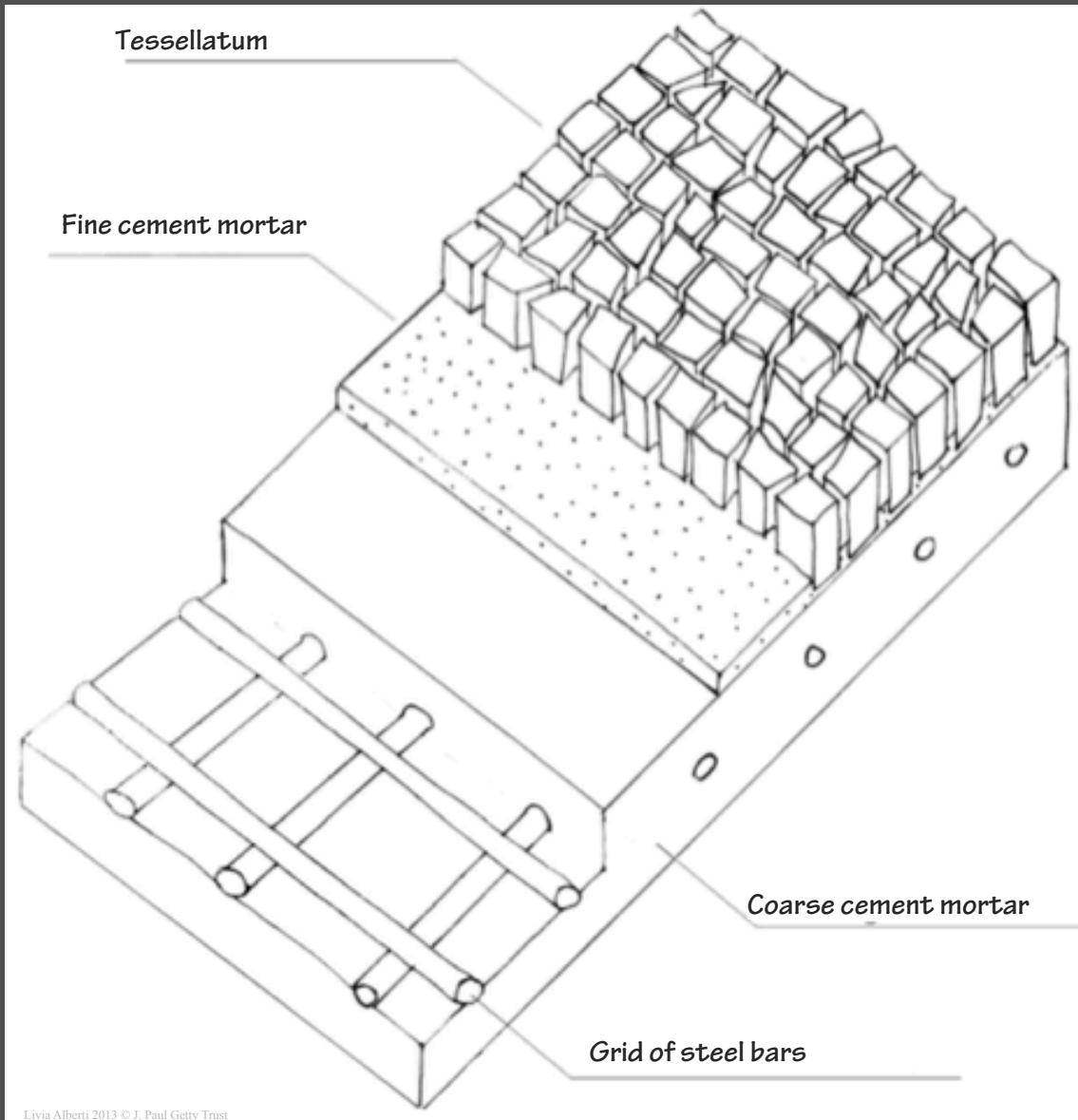
Ermanno Carbonara 2011 © J. Paul Getty Trust



Ermanno Carbonara 2011 © J. Paul Getty Trust

# Mortar panel of cement reinforced with iron (reinforced concrete)

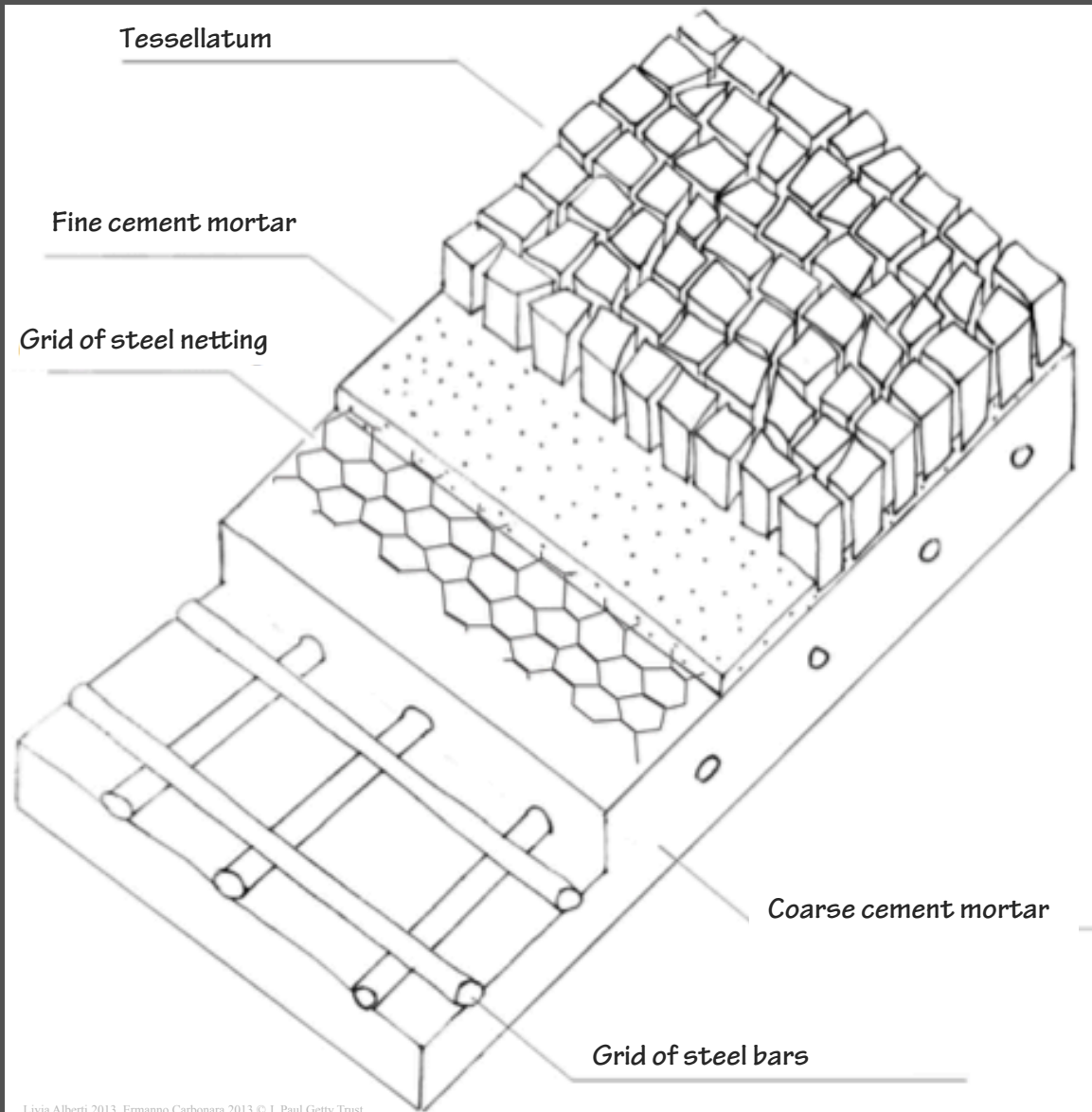
Examples of the structure of a reinforced concrete panel





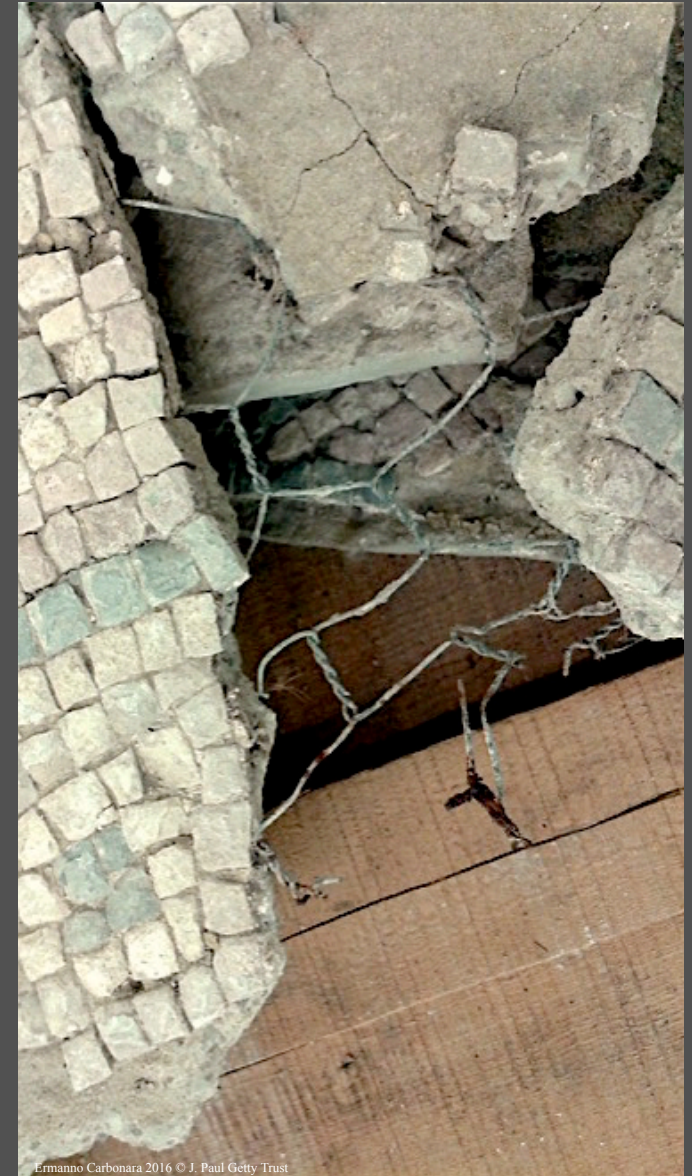
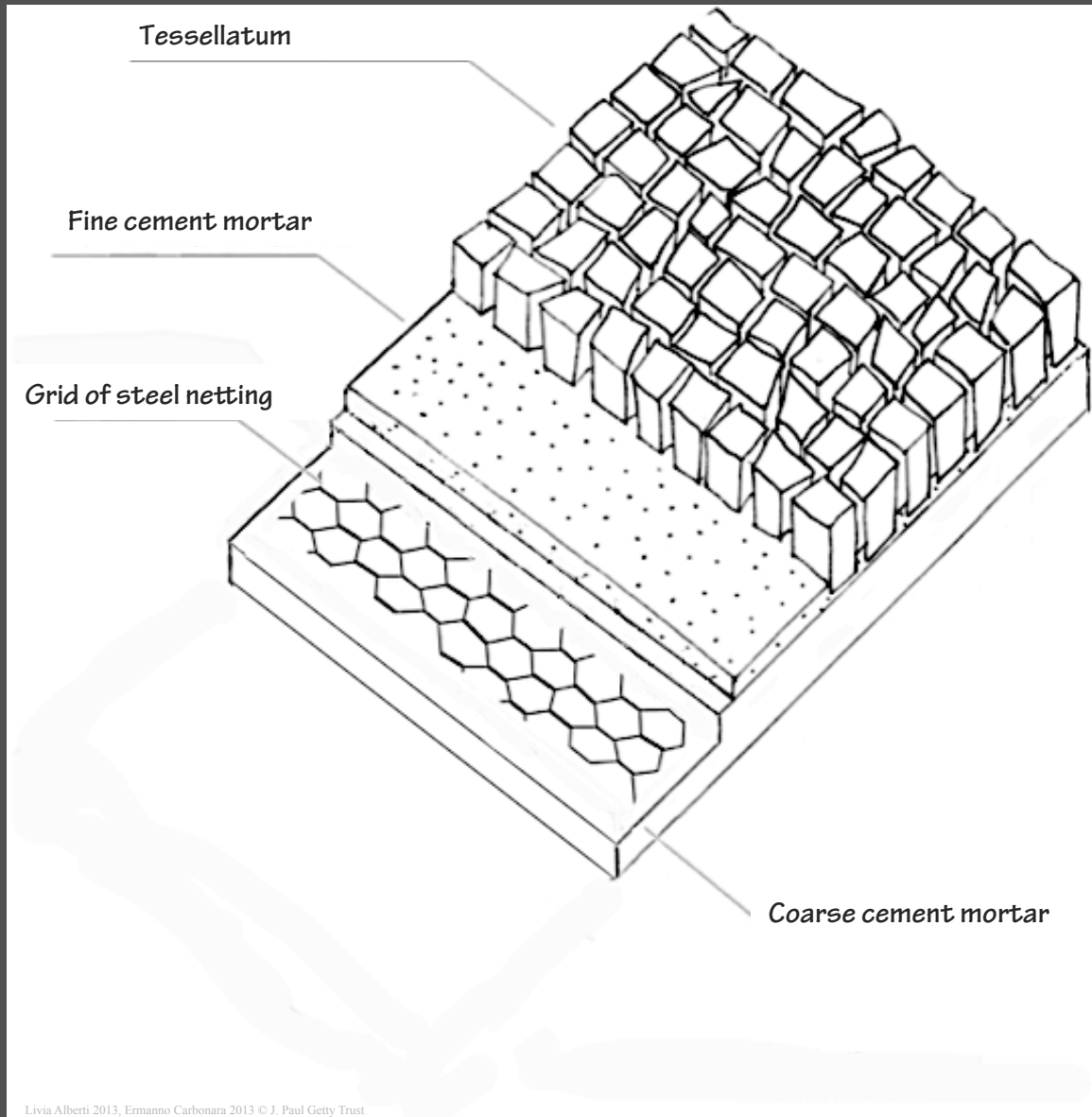
# Mortar panel of cement reinforced with iron (reinforced concrete)

Examples of the structure of a reinforced concrete panel



# Mortar panel of cement reinforced with iron (reinforced concrete)

Examples of the structure of a reinforced concrete panel





tesserae

steel bar

concrete mortar

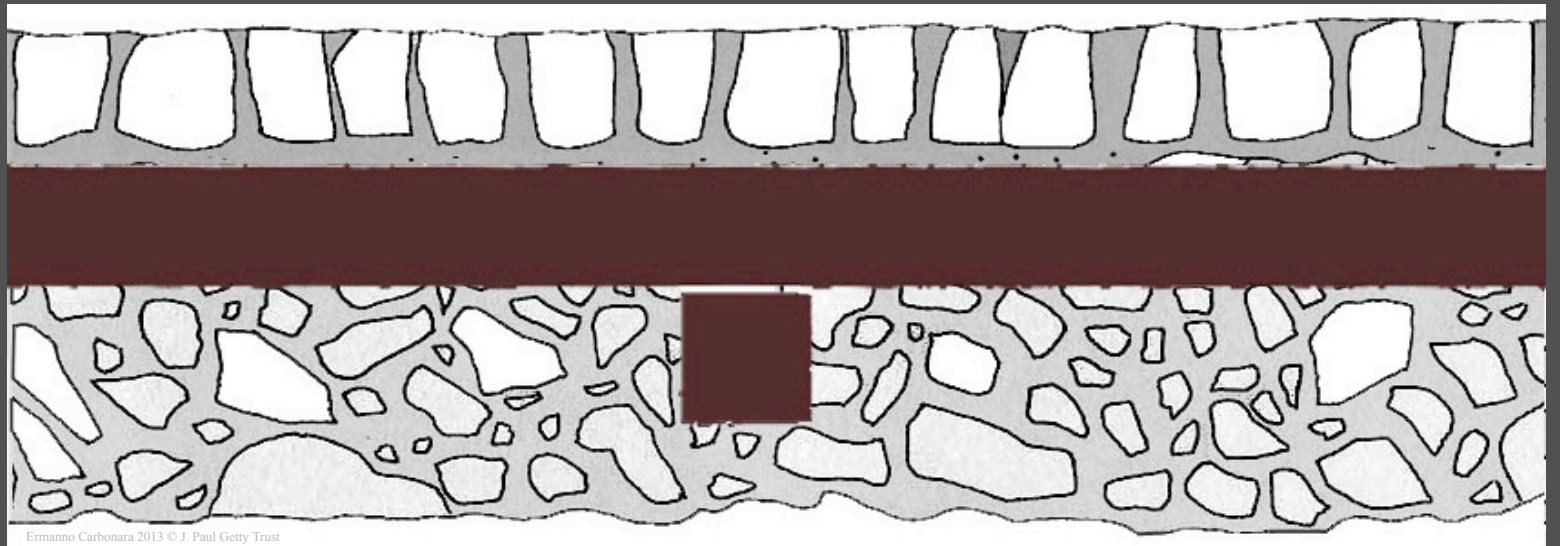


Ermanno Carbonara © 2006 Ermanno Carbonara

tesserae

steel bar

concrete mortar



Ermanno Carbonara 2013 © J. Paul Getty Trust



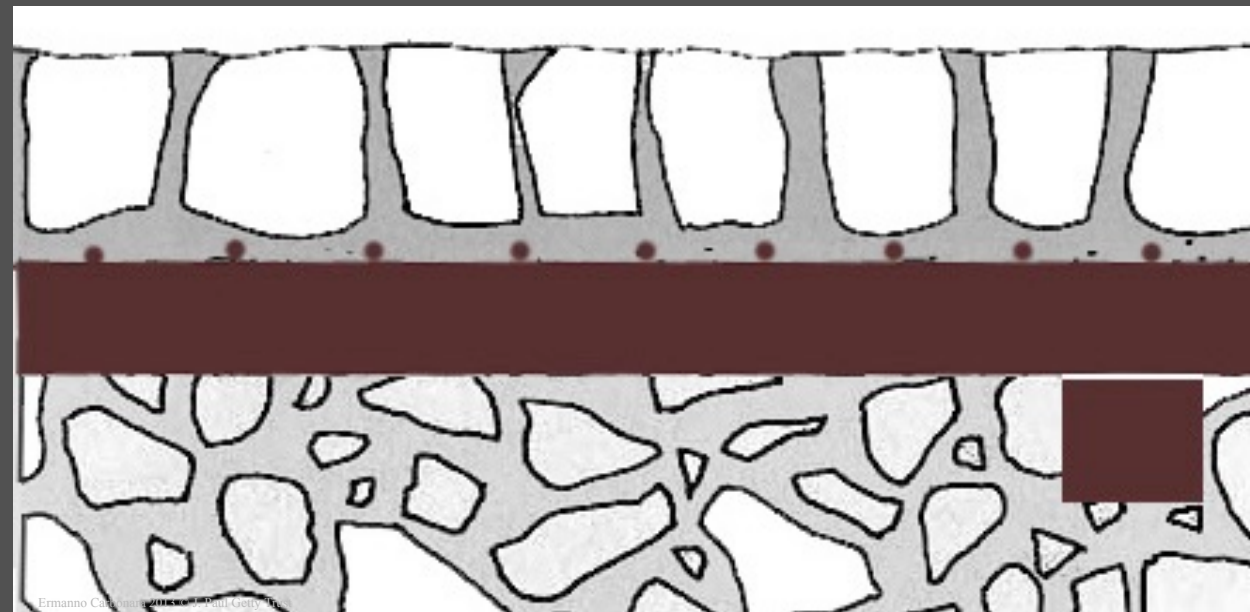


tesserae

steel wire grid

steel bar

concrete mortar







tesserae

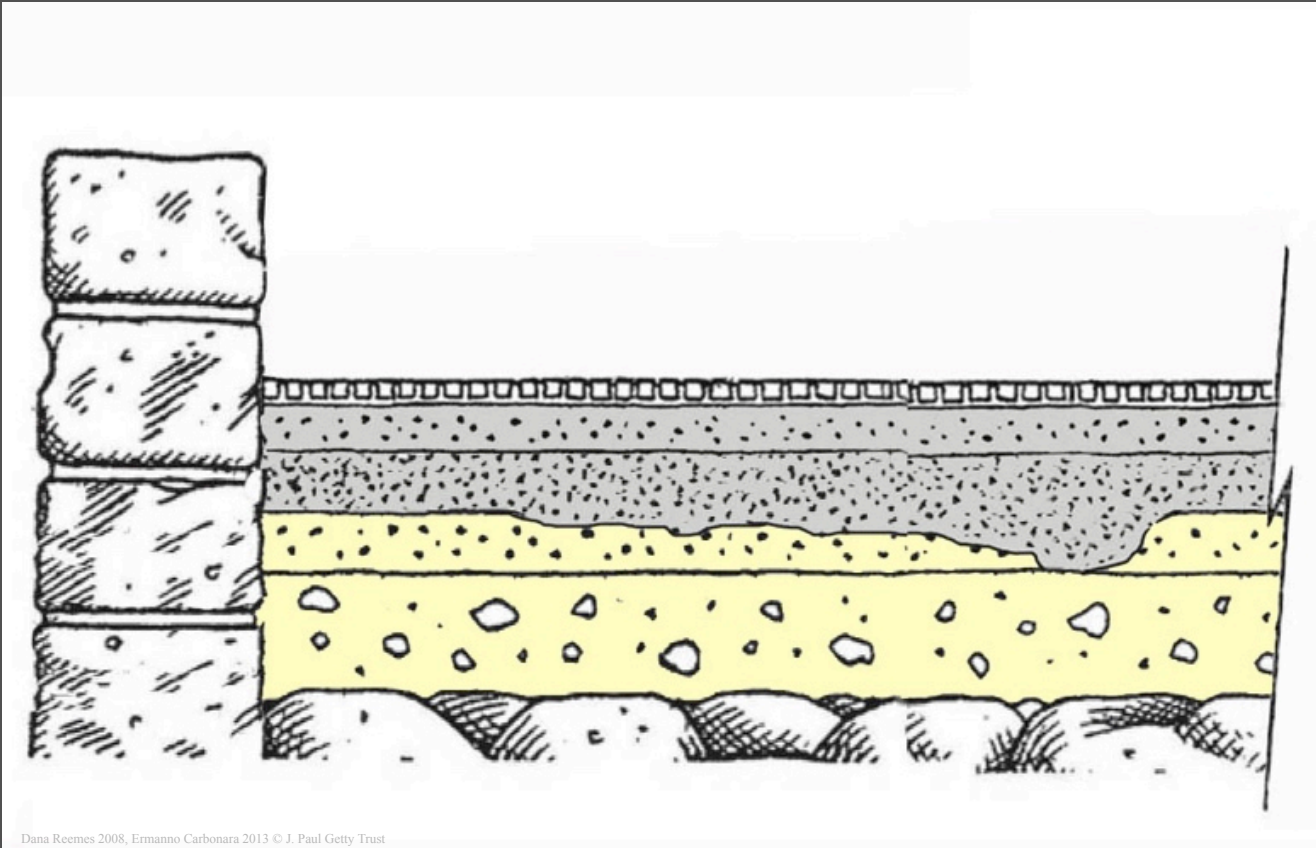
steel wire grid

concrete mortar



Ermanno Carbonara 2013 © J. Paul Getty Trust

# Various layers of modern mortar applied to the ground



Dana Reemes 2008, Ermanno Carbonara 2013 © J. Paul Getty Trust



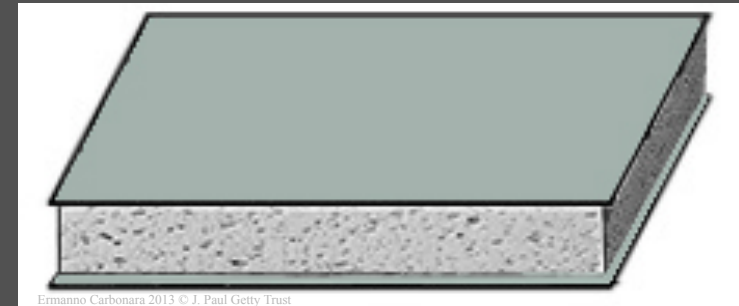
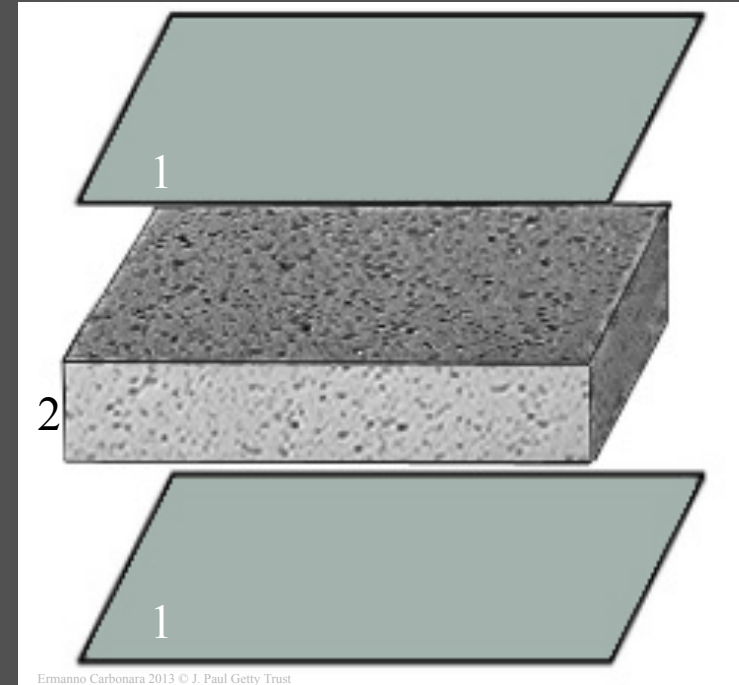
Modern mortar layers



Old mortar layers

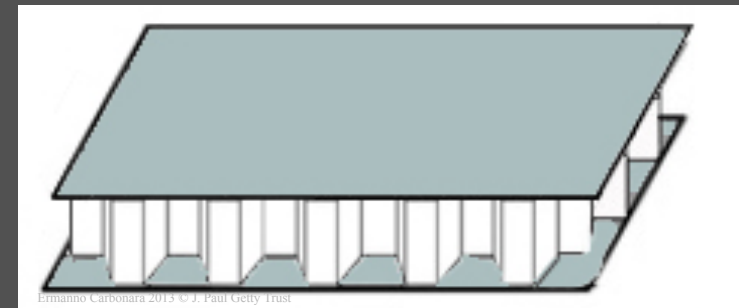
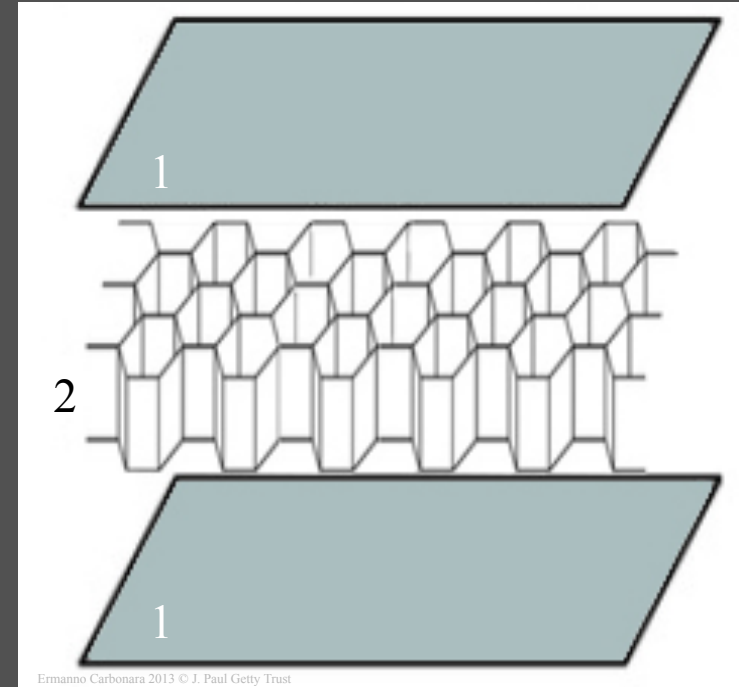


# Composite panels, often stratified, of synthetic materials



Panel made up of polyurethane foam between two layers of resin reinforced with fiberglass

# Composite panels, often stratified, of synthetic materials



Panel made up of aluminum honeycomb between two layers of resin reinforced with fiberglass



## After detachment, mosaics are:

stored in a repository

reinstalled on site in  
their original location

exhibited in a museum



Patrick Blanc © 2010 Musée Départemental Arles Antique, Atelier de Conservation-Restauration

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Ermanno Carbonara 2014 © J. Paul Getty Trust



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Ermanno Carbonara 2010 © J. Paul Getty Trust

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MOSAIKON is a partnership of four institutions: the Getty Conservation Institute, the Getty Foundation, ICCROM, and ICCM.

The aims of the project are to strengthen the network of professionals concerned with the conservation, restoration, maintenance, and management of mosaic heritage in the southern and eastern Mediterranean region; provide training to a variety of individuals involved in mosaics conservation and, more generally, with the management of archaeological sites and museums with mosaics; work with national and international bodies to provide a more favorable legislative, regulatory, and economic environment for the conservation of mosaics in the Mediterranean; and promote the dissemination and exchange of information.