

CONSTRUCTION AND RESTORATION OF TERRAZZO FLOORS



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National ISS Institute Overseas Fellowship

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Executive Summary

Terrazzo is a manufactured composite of natural marble chips, with durable aggregates set in a cement matrix with added colour. The marble chips can be selected from a wide range of colours in practically any colour of cement matrix to create any type of effect. The terrazzo aggregate and marble chips surface is polished after the matrix has set.

The most extensive use of terrazzo is for floors, whether in situ or in tiles. Skirtings, partitions, staircases and other pre-cast units can also be made of terrazzo.

Terrazzo is mainly used internally. It can be found in supermarkets, railway stations, airports, hospitals, reception areas, bakeries, and public and private foyers and buildings.

Terrazzo is a high quality, durable product which is hygienic, easy to keep clean and can be used in most heavy duty internal areas.

Terrazzo is:

- extremely hard wearing
- easy to keep clean and maintain
- attractive in appearance
- flexible, in that can be designed to be in keeping with other architectural buildings and colour schemes
- hygienic, suitable for some areas of food preparation
- manufactured to a stringent quality and safety standards
- cost effective – it will outlive most other types of hard flooring

In Australia today there is currently no training available in the National Training System training packages (Diploma/Certificate) that refer to terrazzo tiling in detail or terrazzo in situ. As a consequence there is no training course, or institution where one can be trained to place, finish and polish terrazzo to building standards and hence there are very few people who have the knowledge and skill to complete a terrazzo floor to building standards.

In addition, as the ceramic tile was introduced into the marketplace in Australia as an alternative pavement, terrazzo diminished as the preferred interior pavement, and hence terrazzo diminished as an industry. The consequence of this is reflected in existing heritage terrazzo floors being demolished and replaced with ceramic tiles or other pavements. It is estimated by the Fellow that presently no more than 5% of pavements are constructed in terrazzo.

What makes terrazzo unique is the excellent craftsmanship and understanding of the material used, its longevity and its hygiene qualities as a flooring material.

Terrazzo was created by Venetian construction workers as a low cost flooring material. Italian terrazzo workers respect the creativity of the product and have a strong dedication to the quality. Italians have also mastered the art of manufacturing and placing of terrazzo tiles.

This overseas Fellowship program was purposefully designed to explore the identified skills and knowledge deficiencies and obtain the information necessary to return to Australia equipped with the knowledge and skills to promote the use of terrazzo as a flooring product.

The primary aim of this Fellowship was to study and gain an understanding of the construction and restoration of terrazzo floors. Key objectives included:

- Development of a curriculum to include terrazzo and the associated resource material for Certificate III in Wall and Floor Tiling.
- Developing strategies to promote terrazzo as an economical and sustainable flooring product in domestic, industrial and commercial dwellings.

Executive Summary

- Promotion and development of an association for artisans and tradespeople specific to terrazzo work.
- Investigation and research of markets for manufacture of terrazzo in Australia.
- Adoption of strategies to promote terrazzo as a product to all sectors of the Building and Construction Industry.

The Fellowship provided Bagnara with an opportunity to explore and investigate the process of manufacturing terrazzo tiles from the raw materials to the final product. As part of the Fellowship, Bagnara visited the trade exposition in Bologna to research trends and technology in terrazzo tiles. In addition, Bagnara practised terrazzo placing and polishing in the context of construction, gained knowledge of the material selection, designed terrazzo pavements and investigated the durability and longevity of terrazzo pavements. Visits were also undertaken to regions of Italy to gain a comprehensive understanding of terrazzo. Bagnara undertook practical hands-on work in the preparation, placing and finishing of terrazzo on construction sites, visited manufacturers of terrazzo tiles and visited architects and restoration projects to gain an understanding of terrazzo design.

In order to optimise the outcomes of this Fellowship and revitalise the terrazzo industry, Bagnara recognises the importance of ensuring that the knowledge obtained as a result of the Fellowship is shared with others. Following an overview of the international experience, the Fellow has made suggestions regarding a range of initiatives and activities that are central to knowledge transfer and furthering opportunities for the terrazzo industry. The report then concludes with a series of recommendations for Government bodies, professional associations, education and training providers, industry, business and the community.

Key outcomes and recommendations based upon the study tour include the following:

- Nationally accredited training packages to be developed to cover terrazzo work and that the training should be delivered by registered training providers from the Building and Construction Industry.
- The Fellowship can be used to assemble resources for a training course specifically on terrazzo for the Building and Construction Industry, construction workers, TAFE lecturers, architects, tradespeople, apprentices, artists, project managers, builders, heritage conservators, producers of quarry products and retailers who sell terrazzo tiles.
- The newly acquired capabilities (skills, knowledge and understandings) should be used to form an industry association dedicated to terrazzo work including restoration of existing terrazzo floors, new terrazzo tiles and terrazzo in situ.
- These capabilities should act as a stimulus for a series of workshops around Australia to create an industry association in collaboration with the Construction and Property Services Industry Skills Council (CPSISC), the Australian Institute of Building, the Concrete Institute of Australia, the Australian Tile Council, the Construction Industry Training Board and Government and non-government heritage departments.
- A series of seminars with the Concrete Institute of Australia, the Australian Building Institute of Australia, the Construction Industry Board, the Wall and Floor Tilers Association and Government agencies such as Heritage Victoria, Heritage NSW, the Department for Environment and Heritage (South Australia) should be set up to disseminate the knowledge gained from the Fellowship.