



## Efficient use of natural stone in the Leningrad region and South-East Finland USE OF LEFTOVER MATERIALS

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Nike Luodes, Hannu Luodes, Elena Panova

## Artisan scale activities / Hand works

Using of unshaped and small blocks, until the use of very small broken pieces needs artisan crafting because of the difficulties in using large process equipments meant for commercial valueable blocks. Use of waste material has then to be done with higher handicraft, proposing the material for architectural valuable elements, or still, processing the material into new products, as aggregates.

Some activities on the market have been using waste rock to produce mosaics and even interior decoration elements as sinks, where waste material, as granites, had been cut and glued to create a better shaped block, that has been then worked in a form of a sink with automatic cutting machines.

Hereafter are shown some examples where waste material could be used.

## Home indoor decoration - Kuopio

Some products have been done  
from primary production but  
secondary blocks could also be  
considered for the productions

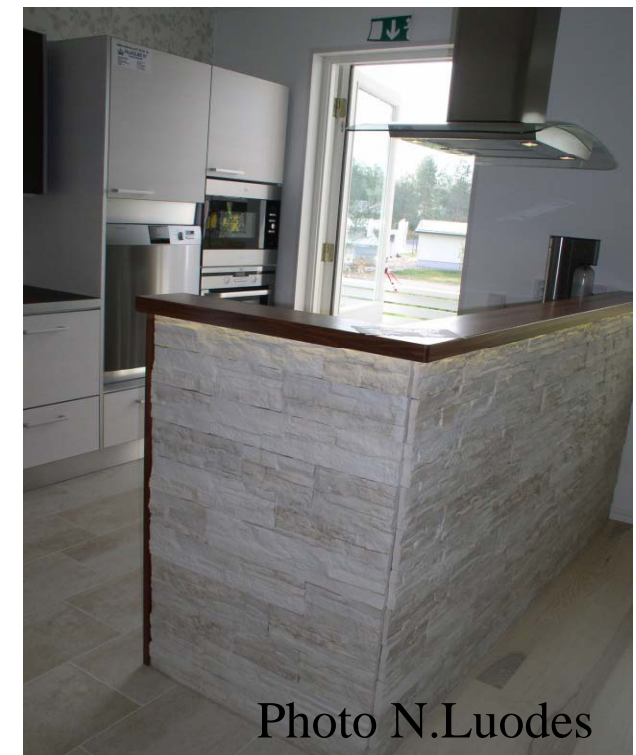


Tiles: very small unshaped blocks can be hand worked, cut in desired  
shape to have an artistic final effect for garden/private use/indoor and  
outdoor.

For example a company used them for paving tiles

<http://www.greenstoneproductsonline.com/index.html>

Mosaics of different dimensions, artistic but also regulars and sold  
glued on nets, could be done.



## PEBBLES PRE-CAST ELEMENTS

Small pebbles can be obtained rolling quarry waste rocks to round the surfaces, then can be cut and glued on a net, as pre-cast pieces.



Mosaics and small size elements can be made out of hand size rocks.

## Home outdoor decoration

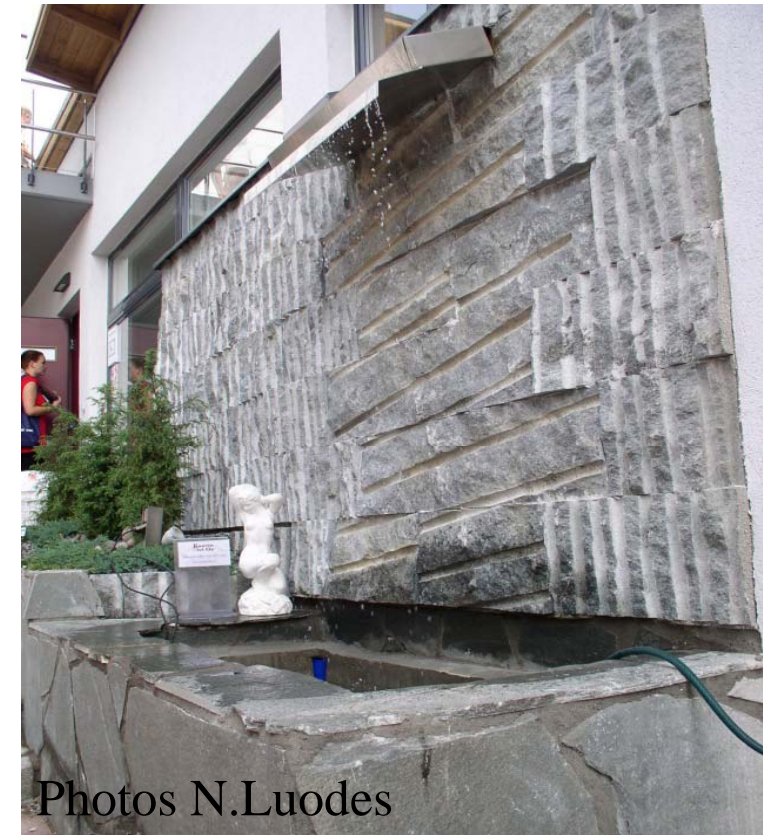
Pebbles or aggregates can be used also as outside decorative elements – RED and GREEN aggregates from rapakivi



Photo N.Luodes



Photo N.Luodes



Photos N.Luodes

Up- Example of fountain done by KaavinKivi where quarry face material is artistically turned into a base of a fountain

Special pieces can be done for home outdoor decorations

# Home outdoor decoration



Photo I. Hanukov



Photo I. Hanukov

Special pieces can be done for home outdoor decorations.

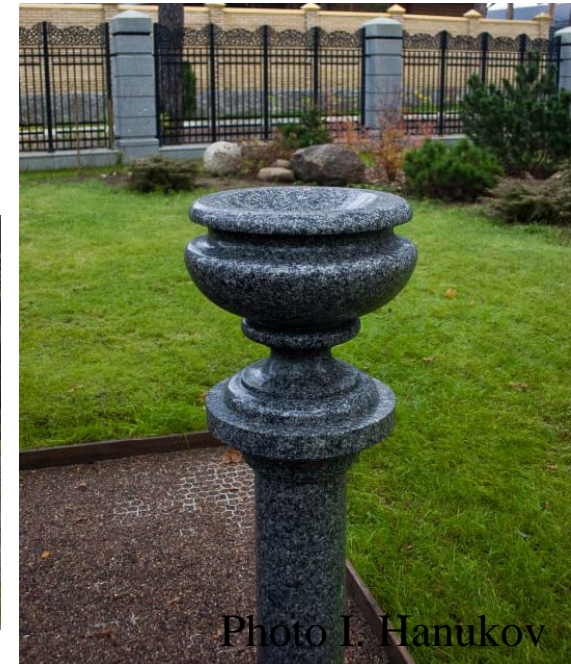


Photo I. Hanukov

Artistic elements comprise also pieces of art (on the right: example in Kotka).



Photo E. Panova

## Outdoor decoration

Waste rocks can be used as paving setts and for bricks for walls.



Photo I.Hanukov



Photo I.Hanukov



Photo I.Hanukov



Photo H.Luodes

Kuopio



Photo I.Hanukov

# Home outdoor decoration

Other examples of Paving elements



Photo N.Luodes

Example done by IKIKIVI  
Quarzite - Kuopio



Photo I.Hanukov



Photo I.Hanukov



Photo H.Luodes

On the right:  
Example done  
with soapstone-  
Koli



# Home outdoor decoration - Kuopio

Some products have been done from primary production but secondary blocks could also be considered for the productions of irregular decorative elements



Photo N.Luodes

Quarry waste blocks could fit for walls in a casual or ordered distribution



Photo H.Luodes

## Residential landscaping Kuopio



Photo H. Luodes



Photo H. Luodes

## Idea!

Considering the weather change as forecasted for northern countries, prospecting higher rain seasons and sudden storms, and after the experiences of recent years, it can be promoted the creation of ponds that could collect the rain offs from residential areas. Natural ponds could be landscaped using waste material.

[http://tupa.gtk.fi/julkaisu/erikoisjulkaisu/ej\\_091.pdf](http://tupa.gtk.fi/julkaisu/erikoisjulkaisu/ej_091.pdf)

Climate-Proof Living Environment Methodologies, tools and practical recommendations for climate change adaptation in the Kymenlaakso and Uusimaa regions and the Helsinki Metropolitan Area



Photo GTK



GTK



*This project is co-funded by the European Union, the Russian Federation and the Republic of Finland*

## Centers outdoor decoration

Unshaped blocks could be used for creation of stone gardens /  
japanese gardens



Photo I.Hanukov

## Parks

Examples from Kuopio  
and Kotka

Paving, stairs and  
irregular blocks

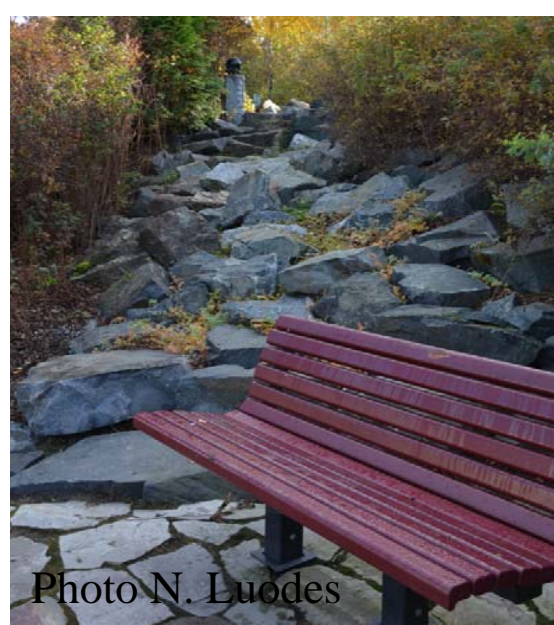


Photo N. Luodes



Photo N. Luodes



Photo N. Luodes



Photo N. Luodes



GTK



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[www.gtk.fi](http://www.gtk.fi)

# Parks



Photo E.Panova

Example from Kotka



Photo E.Panova

## Parks – Outdoors elements



Photo P.Härmä

Benches and bridges  
(Kuopio and Kotka in  
Finland)

Example from Russia



Photo N. Luodes



Photo I.Hanukov



## Idea! The stone attracts climbing, small or big....

Small unshaped blocks had been used  
for making kindergarten playing  
yards, but it can be planned for parks  
fitting all the climber lovers

Creation of Rock climbing walls





## Natural parks – environment reconstruction

Natural parks – Example from Turin (Italy)- ZOOM and Ranua Zoo (Finland).

Environment is reconstructed to create a scenography.



**Idea!**

**Zoo** – representatives of the local woods

**Botanical garden** with stone hills and local plants

# Children parks

An example from  
Turku Finland



Photo N. Luodes



Photo N. Luodes



Photo N. Luodes



Photo N. Luodes

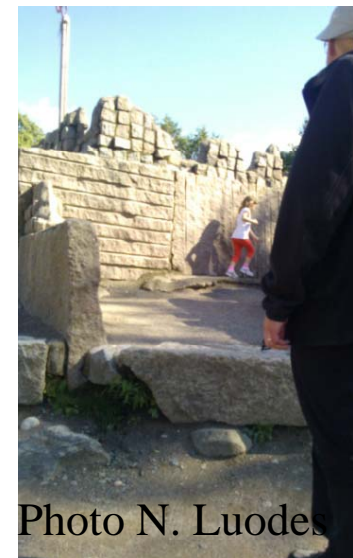


Photo N. Luodes



## Used in Children recreation and educational parks

Real fortress

Castles

Underground kingdom of gnomes  
(caves with stalactites, a labyrinth,  
the underground river, ...)

From an adventure park downtown.....up to the very  
hand work....

Note: kindergarten and primary school use small rocks for  
handworks!



Photo N. Luodes



Photo N. Luodes

Photo H.Pirinen

## Structural use- reinforcement – architectural choice



One use for small pieces of quarry waste could easily be the cage structure- used for consolidation of the benches, as sound reducer, but also as structural elements in large architectonic constructions

### Idea!

Quarry material used as aggregates for construction has been largely adopted in southern European countries but Northic countries , where there are few downhill slopes for winter activities could evaluate the opportunity to use such a material for DOWN-HILL slope constructions



Photo N. Luodes

Lappeenranta



Photo H.Luodes

# ART ON THE ROAD

Examples  
from  
Norway



Photo H.Luodes



Photo N.Luodes

# SUGGESTIONS

## Strengthen the Individuality of the area



- Focus on Geographical identification
- The area examined could have art on the road made with local material accompanied by descriptive boards
- Blocks could be used for kindergarten parks in the area
- Urban art made with local stone material
- Use local material for new constructions and renovations
- Creation of educational park on the stone

