Global Heritage Stone
Circular No 3
June 2011
www.globalheritagestone.org

Information and discussion on the proposal to create a ‘Global Heritage Stone Resource’
a new designation recognising natural stone resources that have achieved widespread utilisation in human culture

This project now operates as a Working Party under Commission C-10 Building Stones and Ornamental Rocks of the International Association of Engineering Geology and the Environment (IAEG) and as a Task Group of the International Union of Geological Sciences (IUGS)

OPENING MESSAGE

Welcome again from the world of ‘Global Heritage Stone Resources’.

Since our First Circular in May 2009, our list of interested people worldwide has increased to 117 people from 33 countries. These are listed at the end of this Circular.

Moreover, a series of draft rules have been developed, circulated and undergone consequential revision the most recent of which are included in this Circular. It is envisaged that these rules will become operative in 2012.

Over the past 9 months since the issue of Circular 2, details of the GHSR proposal have been presented at the IAEG conference in Auckland (New Zealand) and the EGU conference in Vienna, Austria.

In addition, a paper has been submitted to the journal “Geoheritage” entitled “Portland Stone: A ‘Global Heritage Stone Resource’ from the United Kingdom”.

Most importantly, the GHSR project has been accepted formally by the International Union of Geological Sciences (IUGS) as a “Task Group”.

A positive dialogue has also been initiated with UNESCO World Heritage and its advisory bodies: the International Union for the Conservation of Nature (IUCN), the International Council on Monuments and Sites (ICOMOS) and the International Centre for the Study of Restoration and Preservation of Cultural Property (ICCROM).

The website, www.globalheritagestone.org, continues to provide up-to-date information for the public on the project as well as copies of this and past Circulars.

Please do not hesitate contact me if you have any comments and suggestions.

Barry Cooper (Convenor)
A NEW IUGS TASK GROUP: GLOBAL HERITAGE STONE RESOURCE

The Executive Committee of the International Union of Geological Sciences (IUGS) at its recent meeting held in Paris, France, 22-25 February 2011, approved the creation of a new “Task Group” that will embrace current and future work on the GHSR project.

This is an especially important development as it provides additional international recognition of the value and importance of the GHSR project.

IUGS is one of the largest and most active non-governmental scientific organizations in the world. It is a member of the International Council of Science and specifically promotes/encourages the study of geological problems, especially those of worldwide significance, and supports and facilitates international and interdisciplinary cooperation in the earth sciences.

IUGS gives special consideration to:
- international standards,
- geoscience education,
- geoscience information,
- environmental management and hazards.

All these aspects, and especially international standards, impinge on the GHSR project.

IUGS Commissions, Task Groups and Initiatives are concerned with a wide range of geologic research of direct interest to governments, industry, and academic groups within the earth sciences.

The GHSR project will also continue to work closely with and remain closely linked to Commission C-10 Building Stone and Ornamental Rocks of the International Association of Engineering Geology and the Environment (IAEG). Notably IAEG is also affiliated directly with IUGS.

The designation of the Global Heritage Stone project as an IUGS “Task Group” reflects the working classification of like activities by IUGS. There are currently two other important IUGS Task Groups.

IUGS require their “Task Groups” to have
- “Terms of Reference”
- A Board of Management with office bearers
- A plan of work
- An operating website

These requirements have led to the revision of the proposed “Statutes” and “Commission” (in Circular 2) to become “Terms of Reference” and “Task Group” in the Draft Rules offered in this Circular.
As an IUGS Task Group the GHSR project can also apply for seed funding like other IUGS Task Groups and Commissions. Such applications will be evaluated fairly on the fulfilment of the requirements indicated above and not on the merit of the topic, since all topics endorsed by IUGS are considered important and equal.

IUGS has expressed that we have active involvement in the 34th International Geological Congress that convenes in Brisbane, Australia in August 2012.

An annual report on the GHSR project to IUGS Executive Committee is another requirement of IUGS Task Group recognition.

DIALOGUE WITH UNESCO WORLD HERITAGE, IUCN, ICOMOS AND ICCROM

In recent months, a dialogue has also been initiated with the World Heritage Centre at UNESCO, Paris (http://whc.unesco.org) advising them about the “Global Heritage Stone Resource” designation.

A positive response has been received and details of the GHSR proposal has also been referred to the World Heritage Programme of the International Union for the Conservation of Nature (IUCN) based in Gland, near Geneva in Switzerland (www.iucn.org) as well as the two cultural advisory bodies to the World Heritage Convention viz: International Council on Monuments and Sites (ICOMOS) also based in Gland (www.icomos.org) and International Centre for the Study of Restoration and Preservation of Cultural Property (ICCROM) based in Rome www.iccrom.org. ICCROM has a special interest in stone conservation.

Current operational guidelines for the World Heritage Centre offer criteria for assessing geological heritage of “outstanding universal value”. These can be found at http://whc.unesco.org/archive/opguide08-en.pdf. Paragraph 77 (viii) of these guidelines is especially relevant. The additional framework for identifying potential sites of geological heritage value has been defined by IUCN. The relevant thematic study is available at http://cmsdata.iucn.org/downloads/geology.pdf.

The efforts of UNESCO World Heritage and IUCN have been especially useful in recognising and protecting natural geological and geomorphological heritage that have been little changed by human intervention. Here there is no duplication with the separate GHSR effort and there may be complementary interaction insofar that a natural site may also contain an important stone resource that forms part of a designated GHSR, including quarrying operations, that would never be designated World Heritage in their own right but need some kind of safeguarding.

Furthermore it has been recognised that GHSR designation may specifically complement the efforts of UNESCO World Heritage, ICOMOS and ICCROM in helping to safeguard stone resources that are needed for preservation of historic stone constructions at certain World Heritage sites. A cultural site may also contain an important stone resource that could be designated as a GHSR, including historic quarrying operations, that needs safeguarding.

For the future, UNESCO World Heritage, IUCN, ICOMOS and ICCROM will remain on the permanent GHSR mailing list for ongoing distribution of GHSR information.
**GHSR NOMINATIONS**

Placement of the name of a dimension stone on a simple list is now suggested as one initial stage in the GHSR nomination process. Network members are encouraged to provide potential candidates for an interim list. Over the past 4 years your Convenor has discussed the possibility of numerous dimension stone products around the world as GHSRs. These will be placed on the first interim list to be provided in the next Circular.

Preparation of a draft GHSR citation with discussion is also required, which can be considered in GHSR nomination process when the proposed Board of Management is established. Network members are invited now to contribute research articles on potential nominations in a process that will streamline the GHSR nomination process.

The research papers discussed in the next two items demonstrate the beginning of such work for two building stones: “Piedra Pajarilla” in Spain and “Portland Stone” in the United Kingdom.

The Convenor also holds preliminary nomination details for “Welsh Slate” in the United Kingdom, which will be the subject of a further research paper.

It is important, as part of the GHSR establishment process, that all people on the Circulation List consider possible GHSR nominations in their countries and consider advising the Convenor of these possibilities.

**BUILDING STONE AS A PART OF A WORLD HERITAGE SITE: “PIEDRA PAJARILLA” GRANITE AND THE CITY OF SALAMANCA, SPAIN**

This paper by Dolores Pereira & Barry Cooper, the abstract of which is reproduced below, was presented at European Geological Union General Assembly in Vienna in April 2011.

It highlights an example, of which there will be many, where a potential GHSR has strong links with and can support a designated World Heritage site. It also demonstrates where a GHSR nomination can facilitate protection of a resource for future use on World Heritage properties.

*Building stone is an important issue in most human societies. While some civilisations cared for the “beauty” of the stone, most focussed on physical properties, especially durability, as well as the ease of transportation to construction sites. These last issues were the rules for exploiting some rocks, in preference to others, for centuries.*

*Ancient Roman society became expert in constructing durable engineering projects (e.g. roads, bridges, aqueducts). Most of their projects were realised using local granites and most remain in excellent condition today. However, at the beginning of last century road networks started to expand; transportation evolved, and trucks and ships were able to move large blocks of stone across the world. And so a second important feature of stone, its beauty, became significant. In Europe, rocks from places such as Brazil, India, Pakistan, Iran and Turkey, which were once considered exotic, are now commonly utilised, and modern cities can be compared with a commercial stone catalogue.*
The historic cores of many European cities need to preserve their integrity, using the original building stone of the city both for new construction and for restoration. A supply of the original material should be preserved in order to avoid use of alternative building stones when restoring old monuments. In their absence, experiments with alternative stones, mortar and resins have been attempted, with unfortunate results both in appearance and in durability of the monument. This practice, which should also be avoided for recent buildings, should be forbidden in the restoration of historical buildings and monuments.

With this perspective, we consider Salamanca, in Spain, as an example, where the historic city core has been granted UNESCO World Heritage status in 1988, and all associated buildings, monuments and pedestrian streets are constructed from original materials. One of these materials, Martinamor Granite, was quarried for centuries from the immediate area and was especially used by architects during the 18th and 19th centuries for reconstruction following the Lisbon earthquake. Although the associated quarries are no longer active, the quarry sites remain relatively undisturbed and accessible. A renewal of quarrying is feasible if additional stone supplies were needed for heritage restoration so there is a need to preserve these historic quarries in anticipation of such work.

The local name given to Martinamor Granite near Salamanca is “Piedra Pajarilla” meaning “little bird stone”. There is value in recording this name in a formal designation as it probably derives from its unique mineralogical character. The granite commonly presents what is termed a luxullianitic texture that results from clustering of radially arranged acicular tourmaline crystals. These accumulations are present in different ways: either spread randomly through the rock or showing distinctive clusters that remind one of the shapes of flying birds, hence the name.

The Martinamor Granite is also considered here in the context of the newly proposed ‘Global Heritage Stone Resource’ designation (Cooper, 2010). Such a designation for Martinamor Granite can facilitate both the ongoing use of this historic building stone and the preservation of quarries for use in future restoration work on Salamanca’s historical buildings. It also allows the unique features of the stone, as exemplified by its local name and distinctive mineral textures, to be recorded within an international designation of geological and heritage significance.


PORTLAND STONE: A ‘GLOBAL HERITAGE STONE RESOURCE’ FROM THE UNITED KINGDOM

A manuscript with this title has been prepared by Terry Hughes (Slate and Stone Consultants UK), Graham Lott (British Geological Survey), Michael Poultney (Albion Stone plc, UK) and Barry Cooper (University of South Australia) and submitted to the journal “Geoheritage”.

“Geoheritage” is a relatively new periodical that has been published by Springer Verlag since May 2009. Volume 3 no 2 is being published in June 2011. The journal is designed to covers all aspects of geological heritage and their protection. It also deals with conservation of sites and materials, as well as their interpretation. Obviously this includes a Global Heritage Stone Resource. Also involved is the identification, characterization, quantification and management of geoheritage.

The abstract of the submitted Hughes et al paper is as follows:

Portland Stone, a well known ooidal limestone of Jurassic age from the United Kingdom is here advocated as a suitable “Global Heritage Stone Resource”. Portland Stone ideally fits the proposed designation as it has been utilised since Roman times in England, and since the Middle Ages in the construction of major historic buildings including St Paul’s Cathedral, British Museum and Bank of England in London. Its international use during the 20th century includes the United Nations building in New York City and the war graves of British and British Commonwealth soldiers. Portland Stone continues to be quarried today in an environmentally sensitive manner by Albion Stone plc whilst coastal outcrops of the material form a part of the “Dorset and East Devon Coast” World Heritage area (aka The Jurassic Heritage Coast).
NEW CORRESPONDENTS, LARGER COUNTRY REPRESENTATION

Since Circular 2 has been issued, an increasing international network has been established.

In addition to excellent links that have already been established with the English stone Forum, links has now been forged with the Welsh Stone Forum and to experts in Scotland and Northern Ireland.

With the assistance of Dr Sabina Kramar in Slovenia, we now also have a group of eight correspondents in Slovenia.

Within the US, we now have liaison with the Indiana Limestone Institute. Indiana Limestone has been used for some of the most famous American landmarks including the Pentagon and the Empire State Building.

CORRESPONDING MEMBERS

The “Terms of Reference” now refer to Corresponding Members who are interested in the work of the Task Group and receive correspondence.

It is suggested that most individuals in the current network of contacts will automatically become Corresponding Members once the “Terms of Reference” come into effect.

More interested people (aka Corresponding Members) are needed especially where there is little or no international representation, for example Africa and Asia, so please continue to consider nominating some of your international colleagues.

CREATION OF FORMAL GHSR ADMINISTRATION

Under the draft “Terms of Reference”, a Board of Management will be established to administer GHSR. It will include a President, Secretary General and 12 other members.

It is important that the Board comprise representatives from most world natural stone producing regions so it has been stated that the Board shall, where possible, contain at least one representative from Europe, North America, South America, North & East Asia, South & West Asia, Africa and Oceania.

Overall the past few months, your Convenor has spoken to a few individuals on our Network of Contacts about serving on the proposed Board of Management.

With this Circular it is appropriate that all contacts consider this possibility. If you are able to be involved in the GHSR project more closely, then your Convenor would be interested in hearing from you.

The responsibilities of the proposed Board of Management are provided in the proposed “Terms of Reference”. Please see below.
FUTURE PLANS

Time Frame

- In association with the Welsh Stone Forum, prepare a paper discussing the draft citation for Welsh Slate in the UK for publication. (Time Frame - Suggested completion end 2011)

- Create interim cum standing list of potential GHSRs (Time Frame - Formation Date end 2011)

- Finalisation of GHSR Terms of Reference (Time Frame - end of 2011)

- Formation of interim Board of Management as specified in Draft “Terms of Reference” (Time Frame - Formation Date mid 2012)

- Arrange for preparation of draft citations. (Time Frame - Ongoing)

- Expansion of current “Network of Contacts” who will become “Corresponding Members” as specified in Draft “Terms of Reference” (Time Frame - Ongoing)

COMMENTS INCORPORATED IN THE CURRENT REVISION OF THE DRAFT RULES

Organisation of “Global Heritage Stone Resource” administration has been rebadged as a Working Party of International Association of Engineering Geology and the Environment (IAEG) Commission C-10 Building Stone and Ornamental Rocks in order to reinforce ongoing association with this Commission.

The organisation is also being established as a Task Group of the International Union of Geological Sciences (IUGS) in order to fit IUGS protocols.

These Rules have been revised to become “Terms of Reference” as is practice with other IUGS Task Groups.

The term “Global Heritage Stone Region” has been replaced by “Global Heritage Stone Province”.

The period of stone use that is acceptable to become a Global Heritage Stone Resource is now stated as “at least 50 years” instead of “50 years”.

A simple list of potential GHSRs is now being established as a “first step” in the GHSR nomination process.

The current Network of Contacts will form the basis for Corresponding Members.
The role of the Secretary General is expanded to include management of any received funds and maintenance of an Interim List of GHSRs and List of Corresponding Members.

Please note that any further comments to these “Terms of References” should be submitted no later than December 2011 so that a final draft can be prepared and they can be formally implemented during 2012.

REVISED DRAFT RULES (JUNE 2011)

“GLOBAL HERITAGE STONE RESOURCE”


Terms of Reference

Purpose

1. The objective of these “Terms of Reference” is to provide an ongoing working framework that facilitates formal designation of a natural stone product as a “Global Heritage Stone Resource” (GHSR).

2. Provision is also made for associated designations of natural stone materials, and for formal recognition of specified features characterising natural stone resources, where deemed appropriate.

Definitions

3. Natural stone refers to stone (= rock), removed from its original formation, in blocks, slabs or fragments; and subsequently utilised in its natural state.

4. A GHSR is a designated natural stone that has achieved widespread use over a significant historical period with due recognition in human culture.

5. A Global Heritage Stone Province (GHSP) is a designated area, where two or more GHSRs are associated in close geographic proximity and by their common geology.

Administration

6. Designations of a GHSR and a Global Heritage Stone Province shall be the responsibility of this Task Group/Working Party, henceforth termed the Task Group.

7. The Task Group is established as a formal entity both of the International Union of Geological Sciences (IUGS) and Commission (C-10) Building Stones and Ornamental Rocks of the International Association for Engineering Geology and the Environment (IAEG).
Management

8. A Board of Management, henceforth called the Board, shall be established to administer the Task Group, including appointment of a President and Secretary General.

9. The Board shall be appointed for a term of 4 years and be available for reappointment.

10. Mid-term vacancies on the Board shall be filled through agreement by the residual Board.

11. Reappointment of the Board shall coincide with the International Geological Congress.

12. Corresponding Board Members from different countries shall be appointed for the purpose of preparing GHSR citations, overseeing the GHSR Register and promoting the GHSR designation.

13. The duties of the Secretary General shall include:
   a. Maintenance of an interim list and folio of GHSR nominations and their state of deliberation.
   b. Maintenance of a Register of approved GHSR designations.
   c. The recording all GHSR decisions.
   d. Preparation of regular Circulars that provide up-to-date GHSR news.
   e. Maintenance of a GHSR website that provides GHSR information to the wider community.
   f. Maintenance of a list of Corresponding Members.
   g. Proper administration of any funds or monies collected by or provided to the Task Group with appropriate reporting of expenditure.

Composition of the Board of Management

14. The Board shall comprise representatives from most world natural stone producing regions.

15. The Board shall contain no more than 14 voting members, including the President and Secretary General, with not more than 2 members from any one country.

16. The Board shall, where possible, contain at least one representative from Europe, North America, South America, North & East Asia, South & West Asia, Africa and Oceania.

17. The limited number of members on the Board shall not preclude the establishment of national or regional GHSR subcommittees that have the aim of advancing GHSR nominations.
Corresponding Members

18. A Corresponding Member of the Task Group shall be any person who:
   a. Expresses an interest in the work of the Task Group.
   b. Provides their email address to Secretary General.
   c. Receives routine correspondence associated with the work of the Task Group.

19. The Board may co-opt nonvoting Corresponding Members, when and where appropriate.

20. The Board may remove Corresponding Members from the List.

Approval of GHSR Citations

21. The Board shall:
   a. Establish a standing list of potential GHSRs.
   b. Solicit (and if appropriate prepare) draft citations for GHSR status and research papers discussing these citations.
   c. Consult national or regional authorities and Corresponding Members with respect to draft citations.
   d. Revise draft citations as appropriate with further consultations if deemed necessary.
   e. Approve final draft citations for designated GHSR status.

Additional responsibilities of the Board

22. Other responsibilities of the Board shall include:
   b. Promotion and publicity for approved GHSRs.
   c. Modification to previously approved GHSR citations upon application or upon its own initiative.
   d. Delisting of recognised GHSRs from the Register upon application or upon its own initiative, if this is deemed appropriate.

Guidance for GHSR recognition

23. A GHSR may be recognised if the natural stone under consideration has most of the following attributes.
a. Historic use for a period of at least 50 years.

b. Wide-ranging geographic application.

c. Utilisation in significant public or industrial projects.

d. Common recognition as a cultural icon.

e. Ongoing availability of material for quarrying.

f. Potential benefits (cultural, scientific, environmental and/or commercial) arising from GHSR designation.

24. A GHSR may include natural stones that are currently being quarried, natural stone that is primarily of heritage significance or natural stones of archaeological importance.

25. The intent of recognising a GHSR arises from the value of:

a. Promoting increased community, national and international awareness of natural stone and its widespread utilisation in human culture.

b. Gaining additional professional recognition for, and understanding of, natural stone amongst professional workers, primarily in geology, engineering, architecture and stone/building conservation.

c. Highlighting the significant positive attributes of natural stone in terms of sustainability and regional economic development.

d. Safeguarding and protecting heritage stone resources from subsequent sterilisation by alternative human endeavour.

e. Raising the profile of many natural stone materials to greater prominence through researching citations.

f. Encouraging proper management of well known existing natural stone extraction operations in order to ensure future availability and utilisation.

g. Offering a means or mechanism, operating on a worldwide basis, to formalise selected characteristics of natural stone material, for professional purposes and otherwise, in an internationally accepted context.

h. Enhancing international co-operation in the research and utilisation of natural stone resources.

i. Assisting marketing of natural stone as a commercial commodity, sculptural/decorative material and tourism product.

Citation

26. A citation (in draft and approved form) shall be publicly available for all GHSR nominations that are formally considered and approved by the Board.

27. Citations shall contain most of the following data
a. A traditional name, widely used, under which the stone is commonly known. Examples could be “Balmoral Red”, “Petit Granite” or a name already approved via stratigraphic nomenclature.

b. Company names, even those with restricted use. These should be avoided for use as the principal name but need to be referenced for completeness.

c. A place of origin including location of area, quarry or mine where natural stone typical of the GHSR is available in an unprocessed state, plus an assessment of development constraints on the resource.

d. A description of the GHSR’s locational setting (geocoordinates) together with geological age and setting, petrographic name, stratigraphic name (if different to traditional name), typical colour/natural variability, other valuable natural and technical characteristics.

e. An assessment of historic (or archaeological) use, geographic application and other pertinent general information about the GHSR.

f. Specified sculptures, buildings, ornaments, technological objects etc of iconic or heritage nature where the proposed GHSR has been utilised.

g. Optional additional designations being requested, complementary to the GHSR designation. Examples may be ‘Classic Global Granite’, ‘Global Ornamental Stone’, ‘International Decorative Stone Icon’

28. GHSP citations shall, where feasible, include similar data to that recommended for GHSRs or be designated simply as that the region in which a group of GHSRs are located.

29. Citations may specify attributes, the maintenance of which is necessary to retain GHSR status.

Complementation

30. Designation of a GHSR shall, be separate from, yet, where necessary, complement and reinforce any other international standards and references.

31. Designation of a GHSR shall, where possible, encourage and complement the establishment of additional ie national, regional and local, recognition of natural stone.

Revision of “Terms of Reference”

32. Revision of these “Terms of Reference” may be made by the Board subject to endorsement by the IAEG C 10 - Building Stone and Ornamental Rocks and the IUGS Executive Committee.
# NETWORK OF CONTACTS

The following experts and countries are on our current email list

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<th>Argentina</th>
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Warren Goodall
Alison Henry

United Kingdom
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Warren Goodall
Alison Henry

United States
Laurel Connell
Frank Denison
Allen Glazner

United States
Laurel Connell
Frank Denison
Allen Glazner

Uruguay
Marcos Musso

Do you know of other people or organisations who are interested?
Please let us know.

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