**PROJECT IDEA**

***IDÉE DE PROJET***

**The Project Idea Form is a public document, if you wish to keep it private at between the JS and your partnership at this stage, please advise your Facilitator / *Le Document Idée de Projet est un document public, si vous souhaitez qu’il reste privé entre le SC et votre partenariat pour le moment, merci d’en informer votre coordinateur de l’animation.***

Project Name / *Nom du projet* : Channel Heritage Architectural Stone Encyclopaedia (CHASE)

Contact / *Contact :*

Names / *Nom :* Dr Laurence Hopkinson and Dr Kevin Stone

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Specific Objective / *Objectif spécifique :*

3.1 - Realise the potential of the common natural and cultural assets to deliver innovative and sustainable growth

*3.1 - Valoriser les atouts du patrimoine naturel et culturel commun pour soutenir une croissance économique innovante et durable*

Summary description of the project idea (1 page max.) / *Description synthétique du projet (1 page max.):*

World famous historic buildings are central to cultural heritage and tourism in the Channel region. Many of the structures, including the Château de Caen ('Ducal Castle'), Église Saint-Pierre Caen, Canterbury Cathedral, and Norwich castle are physically rooted in our shared Channel heritage. This is because they are constructed whole or in part from Caen Stone, a limestone, imported to England from Normandy from the 11th Century onwards. A program initiated by William the Conqueror to facilitate his cathedral and castle building program. Following on from this, the progress of history (for example the reuse of masonry stone derived from 16th Century monastic destruction) means that historic buildings of many descriptions are fabricated from an eclectic mix of stone types, derived from a range of natural resources in the Channel region.

Restoration and maintenance of historical buildings is an ongoing necessity which demands the preservation of aesthetic appeal and structural integrity. Consequently the need to ensure exacting matches between historic masonry and presently available masonry stone represents an important challenge to scientific, cultural, archaeological, commercial and historical community partners.

Published work by experts such as Á. Török and R. P̌ikryl *(Engin. Geol.115, 139-142 (2010)* on current methods and future trends in testing and source (provenance) studies of natural stone used in historic monuments define a widely acknowledged international need to develop scientific methodologies which surpass subjective approaches to masonry stone identification, to ensure exacting matches of masonry stones to each historic site location and to provide proof of identity of the geological provenance. Such an undertaking holds real promise to guarantee the long term sustainability of iconic cultural sites and advance archaeological and historical educational knowledge.

The aim of the CHASE project is to utilize 21st Century scientific technology to finger-print the nature of pre-brick masonry stone types of the Channel region. Produce a protocol to determine historic stone provenance and the closest matching replacement stone, in terms of present-day availability of quarried masonry stone types. Furthermore, the aged appearance and longevity of the material would be defined by its predisposition to weathering, and as such this would be a critical characteristic that would need to be considered in determining a suitable match. It is thus important that the physical properties that determine the weathering characteristics are quantified through appropriate laboratory testing.

Pilot scale trials undertaken at the University of Brighton on degraded masonry from a grade 1 listed building (Ivy Church, Kent) have already shown that chemical, physical and colourimetry tests can be successfully integrated into a single scientific protocol to identify stone provenance and, pin-point a single stratigraphic layer within the only operational quarry of Kentish ragstone, for replacement stone selection purposes.

The challenge now is to create a quantitative scientific catalogue (encyclopaedia) of Channel region masonry stone types, numerically detailing physical and chemical attributes of each rock type, against which unidentified pre-brick stone masonry can be matched. A multi-disciplinary team is required to exploit the findings for commercial, educational, cultural, archaeological and societal advancement purposes.

Examples of concrete actions /*Exemples d’actions concrètes :*

Produce an exacting encyclopaedia that documents physical, chemical, and colorimetric attributes of pre-brick building stones of the Channel region.

Design and implement a quantitative protocol against which degraded / fallen masonry can be matched as a guide for restoration and provenance studies.

Undertake public awareness educational, historical and archaeological dissemination studies and events.

Changes that the project will contribute to /*Changements auxquels le projet contribuera :*

By producing a 21st century protocol for historic stone and their replacement criteria the project will help safeguard the historical legacy of the Channel region and set a new world leading standard in preservation of historic sites.

The project will set a new standard in the application of technology as a tool for sustainable quarry resource management.

Provision of a new high resolution tool will advance historical, archaeological, and public understanding of the built environment.

Cross border added value / *Valeur ajoutée transfrontalière :*

The cross border added value resides in the strength of the consortium, expressed through pooled analytical facilities, historical, geological, geotechnical and architectural expertise, and, the very cross border nature of the challenge. This is because the historical impact of the Normans on the Channel region is literally and physically cast in stone, in the form of a wealth of world famous castles and cathedrals and historically significant structures, which give the Interreg region its cultural identity.

Capitalisation on previous initiatives/ *Capitalisation sur de précédentes initiatives:*

The CHASE project utilizes as a spring-board the Norman Connections project (Interreg IVa 2 Seas program). This project brought together partners between groups of shared Norman heritage sites in Norwich and Ghent, whose aim was to build upon strong historical, physical and cultural links between England and France, and to promote and develop Norman heritage site interpretation through better understanding of masonry provenance. In terms of restoration, the encyclopaedic listing of physical and chemical parameters specific to each masonry stone type will facilitate production of a 21st century world-leading scientific tool to advance knowledge to ensure historic site preservation and public engagement.

Sustainability/*Durabilité :*

CHASE project sustainability is defined in six dimensions:

**Education:** tourism dictates that authentic site aesthetic appeal and structural integrity must be guaranteed.

**Knowledge:** exacting provenance studies provides a new tool for archaeological and historical research and its exploitation.

**Infrastructure:** The project is advancement in applied science and fosters innovation in the preservation of the built environment.

**Environmental management**: Improved resource management thereby guiding sustainable resource consumption.

**Institutional :** Guardians of sites and those charged with maintenance and restoration will share in innovation and disseminate findings to underpin best practice in site preservation.

**Longevity:** It is envisaged that CHASE will underpin future high profile restoration projects, in turn inform heritage projects across the world.

A quarterly meeting steering group will be assembled from consortium members to ensure that the protocol is being used, updated and promoted, including outreach to visitor centres to see how improved appearance of a building can influence visitor numbers.

Partners (with their geographical areas) already involved in the project idea / *Partenaires (en précisant leur zone géographique) déjà impliquées à ce stade d’idée de projet:*

M BOUTOUIL, Dr, DdR, Directeur Délégué / Deputy Director/ Directeur de la Recherche / Research Director - **ESITC Caen** - Tél 33-2-31-46-23-04

Musée de Normandie (M Leveque)

**Local authorities** : Caen City, Falaise City

**Archeologic services** : either from Caen Univ or Calvados County council

**Stone Building Companies** : Cintheaux quarry, Lefevre company

Potential partners sought (skills wanted) /*Partenaires potentiels recherchés (compétences recherchées) :*

England / *Angleterre :*

Historic England / English Heritage

Norfolk Museums and Archaeology Service (www.museums.norfolk.gov.uk)

Andrew Mayfield - Historic Environment Record Officer and Community Archaeology Liaison

Environment, Planning and Enforcement - Heritage Conservation Group, Kent County Council

Gallaghers Hermitage Quarry manager

British representative from the United Nations Educational, Scientific and Cultural Organization (UNESCO)[[](https://en.wikipedia.org/wiki/UNESCO" \l "cite_note-2)

France / *France :*

Université de Caen : Caroline Ozouf (chargée de mission Europe) [caroline.ozouf@unicaen.fr](https://staffmail.brighton.ac.uk/owa/redir.aspx?C=VqwjKiQg10OiSLp3yYGNg0fymY1aAtQIzS4XzZBvJyMthjwtqiDcbj_aec-L9gTyeSQyd-MpTU4.&URL=mailto%3acaroline.ozouf%40unicaen.fr)

Région Normandie (direction du patrimoine) : Yannick Lecherbonnier (director) [Yannick.LECHERBONNIER@normandie.fr](https://staffmail.brighton.ac.uk/owa/redir.aspx?C=VqwjKiQg10OiSLp3yYGNg0fymY1aAtQIzS4XzZBvJyMthjwtqiDcbj_aec-L9gTyeSQyd-MpTU4.&URL=mailto%3aYannick.LECHERBONNIER%40normandie.fr)

Emmanuel Luis [Emmanuel.LUIS@normandie.fr](https://staffmail.brighton.ac.uk/owa/redir.aspx?C=VqwjKiQg10OiSLp3yYGNg0fymY1aAtQIzS4XzZBvJyMthjwtqiDcbj_aec-L9gTyeSQyd-MpTU4.&URL=mailto%3aEmmanuel.LUIS%40normandie.fr)

French representative from the United Nations Educational, Scientific and Cultural Organization (UNESCO)[[](https://en.wikipedia.org/wiki/UNESCO" \l "cite_note-2)

 Start date and end date of the project / *Dates de début et de fin du projet:*

September 2017 – September 2019

Estimated project cost / *Coût estimé du projet:*

4 million Euros

Other comments / *Autres commentaires :*

None

Has a programme facilitator from the InterregVA FCE Joint Technical Secretariat provided advice to the project applicant? / *Un coordinateur de l’animation du Secrétariat Technique Conjoint FMA a-t--’il conseillé le porteur du projet ?*

Name / *Nom:*

Aiste Petraityte

Facilitator / Coordinatrice de l’Animation

Joint Secretariat / Secrétariat Conjoint

Interreg VA France (Channel) England Programme/ Programme INTERREG VA France (Manche) Angleterre

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