Final Project Report (to be submitted by 15th September 2022)

Instructions:

- Document length: maximum 10 pages, excluding this cover page and the last page on project tags.
- We welcome the submission of Annexes (i.e. bachelor or master thesis, references, species lists, maps, drawings, pictures) to further HeidelbergCement's understanding and future use of your findings, however they will not be reviewed by the Jury, and we kindly ask for these to be sent separately to the National Coordinators.
- Please use the attached template for species data collected during the project and submit with the project report.
- Word/PDF Final Report files must be less than 10 MB.
- If you choose to submit your final report in your local language, you are required to also upload your final report in English if you wish to take part in the international competition.
- To be validated, your file must be uploaded to the Quarry Life Award website by **15th September** 2022 (midnight, Central European Time). To do so, please log in, click on 'My account'/ 'My Final report'.
- In case of questions, please liaise with your national coordinator.
- You should not publish additional private information in your final report (e.g.: address, day of birth, email-address, phone number), just complete the categories we ask for below under "Contestant profile".

The final reports should comprise the following elements:

For research stream projects:

- Abstract (0,5 page)
- Introduction :
    - For projects that are building upon a previous project, write a summary of actions that were already completed in the previous project.
    - Project objectives
- Methods: a detailed description of the methods used during the project is required.
- Results: the results of the project should be outlined and distinguished from the discussion.
- Discussion:
    - Results should be analysed and discussed with reference to region/country taking into account other publications.
    - Outline the added value of the project for science and for the quarry / company.
    - Recommendations and guidance for future project implementation and development on site is requested. Where possible, please mention the ideal timing and estimated costs of implementation.
- Final conclusions: a short summary of results and discussion.

For community stream projects:

- Abstract (0,5 page)
- Introduction
    - For projects that are building upon a previous project, write a summary of actions that were already completed in the previous project.
    - Project objectives
    - A short description of the site and the team members and the targeted audience of the project.
- Actions and activities: a detailed description of planned or implemented actions and outreach activities done to elaborate the project, list of stakeholders involved.
- Discussion:
    - Project teams should discuss the pros and cons and illustrate experiences.
    - Outline the added value of the project for biodiversity, the society and the quarry / company.
    - Deliverables: practical implementation and development recommendations of the project are required. Where possible, please mention the ideal timing and estimated costs of implementation.
- Final conclusions: a short summary of the project findings and discussion.

1. Contestant profile

Contestant name:	**Laurence Delwiche**
Contestant occupation:	Official
University / Organisation	
Number of people in your team:	**1 (+ occasional helps)**

2. Project overview

Title:	What biodiversity is in the Lustin quarry ?
Contest: (Research/Community)	Community stream
Quarry name:	Sagrex Lustin

Summary (max. 0.5 page)

A film about biodiversity in the Lustin quarry in the spring and summer of 2022 and its unique features.

There are a wide range of biotopes present, and each one has its own characteristic biodiversity. Encounters with common species and also with some rarer ones.

Despite a very wet start to the season, with very muddy paths, followed by an extremely dry season (the water features designed to accommodate diverse amphibians and reptiles have dried up), there were sightings of a number of species or signs that they had been there.

Final report (max. 9 pages)

Introduction

The Lustin quarry is located on the right bank of the river Meuse, near the city of Namur, in Wallonia, Belgium. It is here that a magnificent syncline, known as the Walgrappe syncline, can be seen.

The quarry produces approximately 400,000 tonnes of sandstone every year (sand, chippings, gravel and ballast).

Project objectives

To produce a film for the general public. The film will be shown during a variety of festivals and competitions, on television channels, at nature evenings etc.

Biodiversity filming, even though nature has suffered a lot from climate conditions this year (too much rain in spring, then excessively dry weather, high temperatures and heat waves during long periods in the summer).

The following are involved in filming:

- Mr Johan Yans, Director of the Department of Geology at the University of Namur.

Some 360 million years ago, the rocks now underfoot in this region lay at the bottom of a shallow sea. These horizontal rocks were then folded by the effects of intense tectonic activity. That explains the usefulness of the quarries that are part of the economic life of this region. Remember that many of the raw materials we need come from underground.

- Pascal Hauteclair, responsible for the assignment at Natagora,

The role of Natagora in helping quarry operators to develop biodiversity, including the site at Lustin. Developments comprising a number of projects.

The aim of the film is to present the species that are seen or shown to be here (based on the signs that are identified). There are always animals and plants here, but some of them are very difficult to see. Sometimes a shed skin is all there is to see...

Anecdote: the wall lizard put in a remarkable appearance by climbing onto the observer's shoulder ... and becoming the observer!

Assistance with production:

Denis Roulin: drone pilot

Lionel Roulin, the lizard's friend: searching for amphibians and reptiles.

Alain Valentour: assistance with sound enhancement.

Actions and activities

A large number of visits were made to a variety of locations and "benches" in the quarry that are home to different biotopes: dry meadow, scree, woodland, edge etc. the film presents the efforts made by the operating company to support the development of biodiversity wherever possible. It shows the species encountered in the various biotopes. It is important to note that some of these biotopes represent a connecting link between biotopes of the same type in the surrounding environment.

Analysis

The shots were examined. If they can be used to tell a story about the species being filmed, that will make the film more dynamic. The audience loves anecdotes, litlle stories about plants and animals.

The greater white-toothed shrew

The hummingbird hawk-moth

The blue-winged grasshopper

The backdrop for the film comprised two seasons: spring and summer.

Several visits were used to obtain more animated shots of the quarry using a drone.

About one hundred species were observed and filmed. Some of these are rarer than others. Scenes from "everyday" life show the viewer that life in a quarry is the same as everywhere else: you are born, you live your life and you die.

The final film will be released at the same time as this document.

One major problem with shooting this film was that only quite a short period was available to make it (a few months). It usually takes several years to produce a “nature” film. The cost is negligible because no equipment was purchased.

Final conclusion

The film is less than ten minutes long. It will be accessible to a very wide audience. It will show that wildlife is present and continues to develop in the quarry even as mineral extraction takes place.

To be kept and filled in at the end of your report

Project tags (select all appropriate):

This will be use to classify your project in the project archive (that is also available online)

Project focus:

- ☐Beyond quarry borders
- ☐Biodiversity management
- ☐Cooperation programmes
- ☐Connecting with local communities
- ☒Education and Raising awareness
- ☒Invasive species
- ☐Landscape management
- ☐Pollination
- ☐Rehabilitation & habitat research
- ☐Scientific research
- ☐Soil management
- ☒Species research
- ☐Student class project
- ☐Urban ecology
- ☐Water management

Flora:

- ☒Trees & shrubs
- ☒Ferns
- ☒Flowering plants
- ☒Fungi
- ☒Mosses and liverworts

Fauna:

- ☒Amphibians
- ☒Birds
- ☒Insects
- ☐Fish
- ☒Mammals
- ☒Reptiles
- ☐Other invertebrates
- ☐Other insects
- ☐Other species

Habitat:

- ☐Artificial / cultivated land
- ☐Cave
- ☐Coastal
- ☒Grassland
- ☐Human settlement
- ☒Open areas of rocky grounds
- ☐Recreational areas
- ☒Sandy and rocky habitat
- ☒Screes
- ☒Shrub & groves
- ☒Soil
- ☐Wander biotopes
- ☒Water bodies (flowing, standing)
- ☐Wetland
- ☒Woodland

Stakeholders:

- ☐Authorities
- ☐Local community
- ☒NGOs
- ☐Schools
- ☐Universities