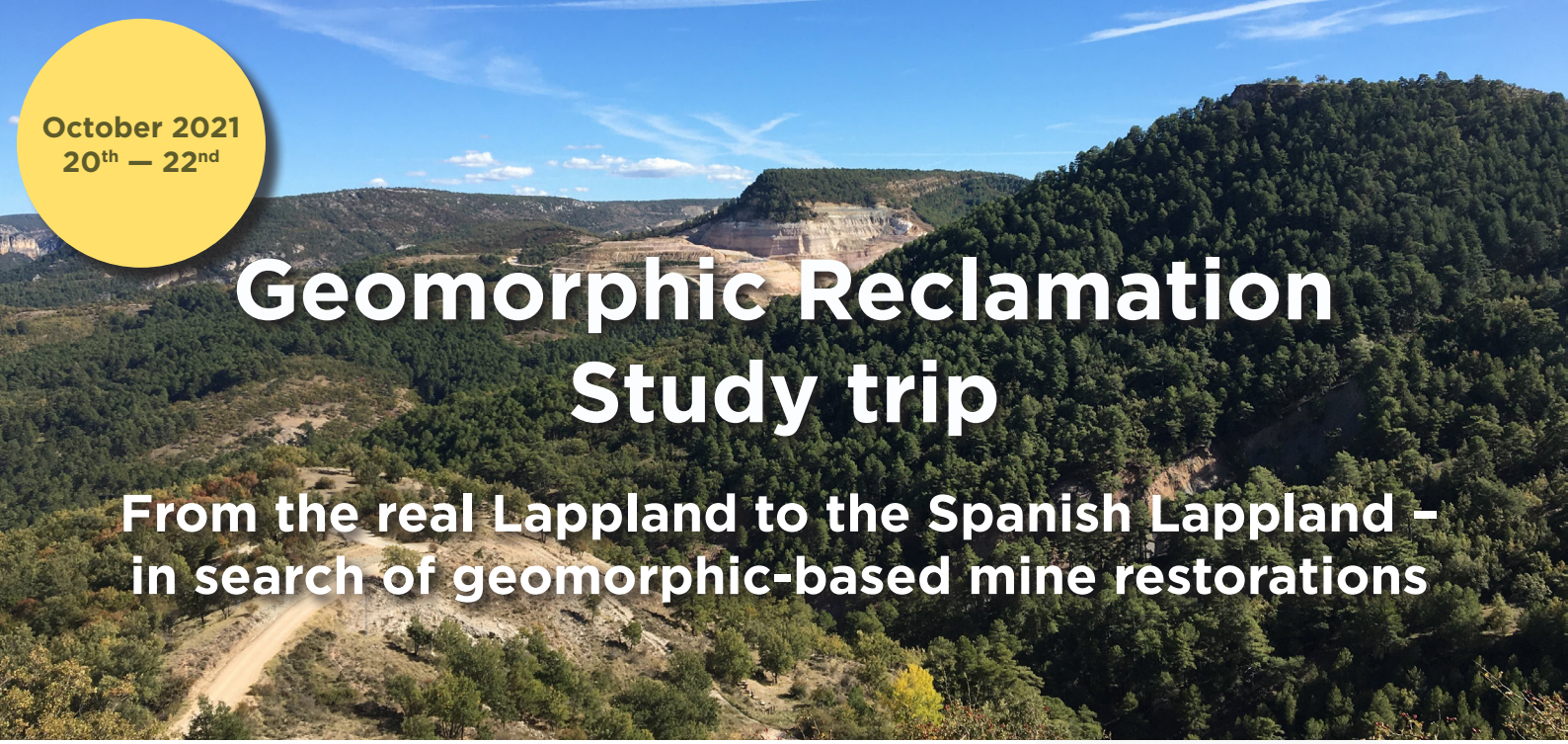


October 2021
20th — 22nd

Geomorphic Reclamation Study trip

From the real Lappland to the Spanish Lappland – in search of geomorphic-based mine restorations

GEOMORPHIC PRINCIPLES are being integrated into waste rock dump designs to create landforms with significant benefits compared to conventional waste rock dump design. In this 3-day study trip to Spain we visit built and under construction geomorphic reclamation sites to investigate and discuss the possibilities of transferring this knowledge to a Swedish context. While the climate is different, the geomorphic principles to be adopted are universal. During the trip you will be guided through an in-depth look into the successes and failures of geomorphic reclamation in Spain including developing a greater understanding of geomorphic design method.


Former mining site


Geomorphic design


After 1 year

What is Geomorphic Design?

'Geomorphic reclamation asks:
"What would be a stable, natural landform?"
and then designs and builds that'.

Geomorphic reclamation mimics the local geomorphology of a landscape to create a landform that would have occurred naturally in the landscape after millennia of weathering and erosion.

Geomorphic reclamation has successfully been introduced in the United States, South Africa, South America, Canada, Australia and Europe and is considered 'Best available technology' (BAT) for land restoration in Europe.

Why Geomorphic Design?

Geomorphic waste rock dump design is being implemented and proven worldwide. It includes the following benefits:

- Long term stable landform
- Stability against surface erosion
- Function & visual integration with the surrounding landscape
- Community acceptance
- Post-mining land-use
- Successful regulator permit approval
- No long-term maintenance cost
- The complex landform supports diverse biological communities

Guides

Professor José Francisco Martín Duque, Complutense University of Madrid, Geomorphic design expert
Professor José Manuel Nicolau Ibarra, Universidad de Zaragoza, expert in mine restoration and monitoring
Matt Baida and Frida Frogsjö – Geomorphic designers at VAST


José*

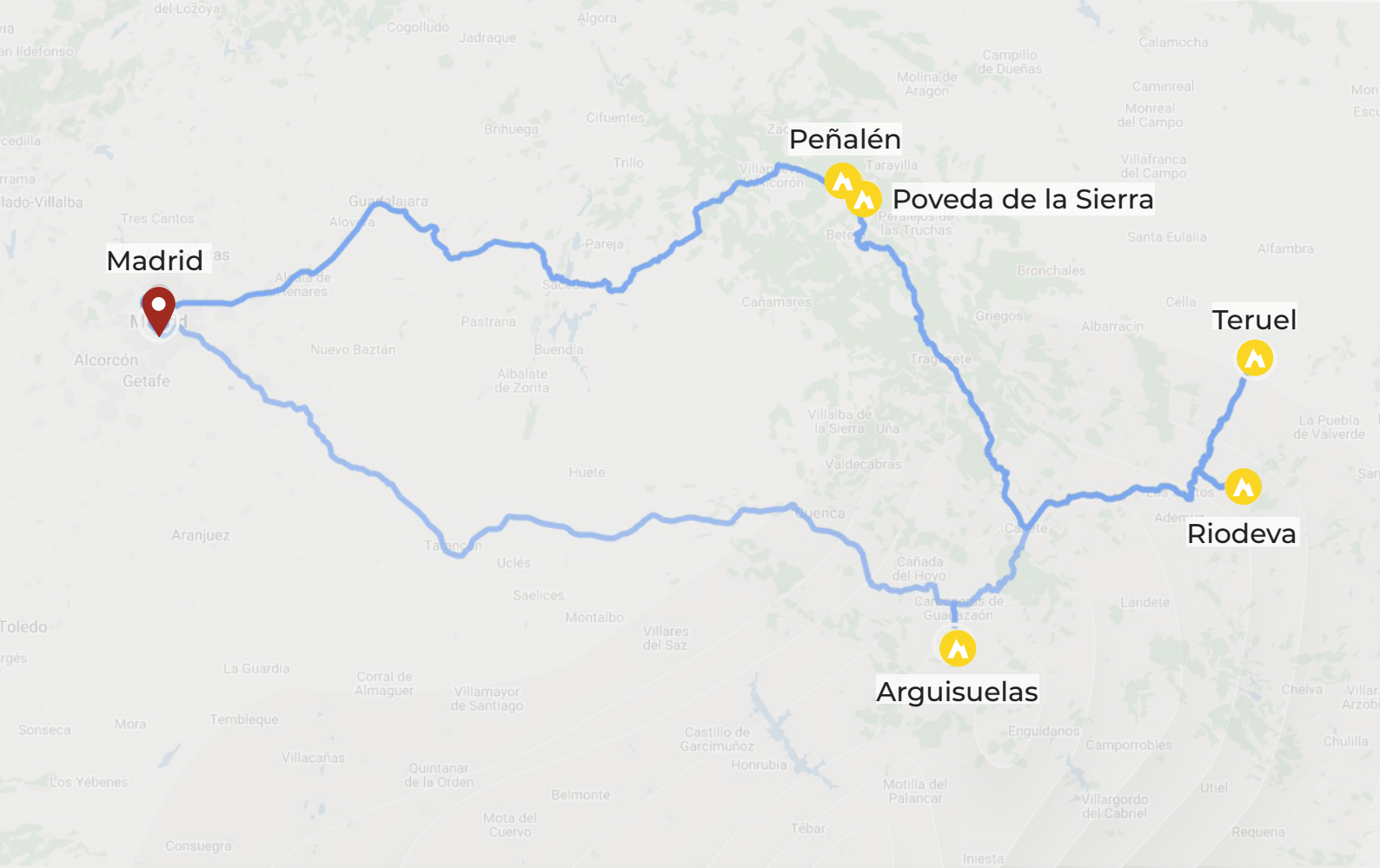

Nico*


Matt


Frida

**The time, travel and planning costs for Professor José Francisco Martín Duque and Professor José Manuel Nicolau Ibarra are courtesy of the TECMINE and RIBERMINE LIFE projects.*

The following persons have contributed to the organization of this activity:
Matt Baida and Frida Frogsjö (Vast), Beatriz Olmo, María Tejedor, Juan Uriol (LIFE TECMINE), M. Adoración Solorzano, Cristina Martín, Javier de la Villa, Jose F. Martín and José M. Nicolau (LIFE RIBERMINE), Lázaro Sánchez, Rafael Peris (CAOBAR) Javier Álvarez, Luis M. Trigueros (SAMCA)



Wednesday 20/10

Madrid
Departure from Madrid

Peñalén and Poveda de la Sierra
Nuria Geomorphic Rehabilitation
https://www.youtube.com/watch?v=rYDQoGGd4l0

El Machorro Geomorphic Rehabilitation
https://www.youtube.com/watch?v=Set5shHFYS8

LIFE RIBERMINE
https://liferibermine.com/en/homepage_en/

Details
Departure from Madrid, the Faculty of Geology UCM
Lunch in Peñalen
Over night stay in Molina de Aragón (Molino del Batán)

Thursday 21/10

Riodeva-Ademuz
Project LIFE TECMINE, SIBELCO
http://www.agroambient.gva.es/es/web/life-tecmine

Departure from in Molina de Aragón
Lunch in Riodeva
Over night stay in Teruel

Friday 22/10

Arguisuelas
Geomorphic restoration, EUROARCE, SICA S.L., SAMCA GROUP

Departure from Teruel
Lunch in Carboneras de Guadazaon
Arrival in Madrid late afternoon

Madrid
Arrival in Madrid

Access map and driving directions via this link: https://www.google.com/maps/d/u/0/edit?mid=13HmqplPHNvUgU8xYcs1y-HqxLCwsxSfM&usp=sharing

SPAIN 2021

Images from 2019 study trip.