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‘Crassier’ Heritage

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Picture: the new town of Belval, as seen from crassier Terre Rouge (G. Meulemans 2021).

The first time I came to Belval from Luxembourg City I alighted at Esch station, assuming that Belval was a neighbourhood within Esch-sur-Alzette. Happy to stretch my legs after a long journey, I set off on the 45-minute walk to the new university district. As I walked along the railway line, I was quite surprised by the Belval road. It seemed to leave the city and sink into a large area of vacant land and scattered buildings, some of which bore signs of post-industrial decrepitude. The road ran for a while along a group of strange hills on the left. Those were the mounds of the Terres Rouges crassier, one of the several slag heaps that run alongside the France-Luxembourg border. ‘Crassier’ is the local word for

slag heap. Coming from the old-fashioned French word *crasse*, meaning dirt, filth, the word conveys well my impression when I first passed these dark hills. At last I saw the spotlights of the old Belval blast furnaces appear in the dusk. The furnaces had been recently coated with a varnish that protects and enhances this testimony to an industrial era whose page has been turned.

Uninitiated people like me often think intuitively that cities are built in concentric circles from a centre, like an onion growing one layer after the other, adapting here and there to topographical accidents. Today it is as if the building of Esch-Belval had missed one layer between the historic centre of Esch and its ‘new locomotive’, as the media like to call the Belval district. Between these two poles is the Terres Rouges crassier, a wasteland that, as if out of time, has not yet succumbed to the centrifugal forces of urban expansion. This unlikely development pattern had been ‘anticipated’ by Agora 1., the local developer run equally by ArcelorMittal and the state. As in a game of chess, the time frame of the development plans its moves in advance: now that the Belval Campus of the University of Luxembourg has been built, who could reasonably argue that the crassier, this vital link between the centre and the campus, can remain undeveloped? The shopkeepers in this newly built district are quick to point out that, when they moved to Belval, they were expecting that the construction would not stop at that point. One of them told the newspaper *Le Quotidien*, in its edition of 6 October 2016: ‘People talk a lot about students, but they are not the number one market. They come by bus, they leave by bus ... I would prefer to celebrate having new constructions here!’ 2.

The discussions surrounding the future of the 120 hectares of the Terres Rouges crassier, located on the France-Luxembourg border, perfectly summarize the cross-border challenges at work in the area. Wealthy Luxembourg attracts thousands of workers residing in France who every day pile into trains and cars to get to work. This situation has given rise to the classic tensions regarding the destination of border workers’ taxes (the French residential municipalities only collect local taxes), but also, and above all, to an unprecedented surge in property prices. Thus, already hit by industrial decline, the north of Lorraine is suffering from the effects of the Luxembourg real-estate market, and a large part of the population is having trouble finding housing. In the face of a worrying situation, several initiatives – in particular, the Alzette Belval EGTC (European Grouping for Territorial Cooperation) and the recent

IBA prefiguration mission (Internationale Bauausstellung) in the territory – have sought to establish the conditions for a more harmonious co-development. More or less institutional, sometimes led by administrations, sometimes by citizens or intellectuals, these initiatives dream of turning this small borderland into a real ‘Eurodistrict’ in the making, a ‘laboratory for Europe’ where a cross-border future could be experimented with and conceptualized.



Picture: Several border stones stand in the middle of the crassier. Quarrymen did not touch them and dug all around them, which now makes them stand on little pedestals (G.Meulemans 2021).

Nevertheless, instead of the equitable and mutually supportive cross-border development called for by many actors, it is still the scenario of ‘gentrification without borders’³ that seems to be winning the day. The context of the housing crisis favours actions that are easy to implement, and uninventive eco-districts have proliferated. Thus, the requalification of the slag heap into a housing complex seems to be a matter of course, as was the case for the neighbouring wasteland of the Lentille Terres Rouges. In the master plan of the developer Agora, the slag heap is framed as a vacant piece of land ready to be used for urban expansion in an approach typical of the ideology of territorial planning, which sees the territory

only as 'land', a blank page for the realization of new urban designs. 4. The ideology of the territory as a blank page is linked, on the one hand, to the historical construction of land in Western societies as private property that can be shared between humans and between different projects for human life. It stems from a distancing from the material world, brought about by a naturalist ontology that sees the land as an external entity to be managed and developed. On the other hand, for an architect or an urban planner, identifying a territory as a blank page is, more insidiously, a formidable invitation to creativity. Thus, the company that bought the Lentille Terres Rouges site likes to describe it as an 'experimental wasteland' 5., a place that welcomes urban experimentation, especially the options touted as the most 'innovative', such as the company's very own speciality, namely eco-districts.

Land of milk and debris

The reason why the Terres Rouges crassier has not yet been converted is that it has not yet become the useless no man's land that planners wish to see. Indeed, Terres Rouges is still a supplier of materials. Made up of blast furnace slag deposited here throughout the period of activity of the factories, it remained an open-cast mine after the decline of the steel industry. In the first half of the twentieth century, with the development of the automobile and soon of motorways, the road construction sector very quickly found itself in a situation of chronic shortage of materials and saw in the 'crasses' of the industry – the waste from which nothing could be obtained within the production chains – a possible source of supply for road sub-layers. Thus, as early as 1921, the Terres Rouges crassier was one of the quarries for 'artificial mineral products' that the Cloos company still uses for this purpose today.



Picture: like pumice, slag stones are formed when strata meet, in the melding of fire, air, and stone (G.Meulemans 2021).

Slag comes from the production of cast iron in a blast furnace, where it corresponds to the sterile gangue of iron ore with the addition of coke ashes. Slag is called ‘laitier’ in French, which literally translates as ‘milkman’. Laitier is originally a term used by foundrymen, workers in contact with the material. It takes its name from the white appearance of the slag that floats in the molten iron bath, reminiscent of boiling milk. 6.. In the nineteenth century, scholars – people who did not work in contact with the material – used the term ‘crasse’, from which the crassier takes its etymology. Slag is a strange stone. Its rough, honeycombed appearance makes it similar to volcanic pumice. The analogies with a volcano are numerous for anyone who visits a slag heap: with its grey, mineral appearance, the slag heap itself is reminiscent of a lava field, while the flow of molten slag is reminiscent of a magma eruption. According to the Cloos engineer who guided us — the authors of this book — around the slag heap, the Terres Rouges slag is not homogeneous. It is organized in layers with different properties, according to the different types of steel produced in the plant. The best slag is the oldest, that of the coke furnaces. Slag from electric furnaces – still used to melt scrap for recycling – sells less well because it is denser and

less honeycombed. The slag will also be more or less vitrified depending on the type of ore, the time of year or day when the slag melting at about 1500 °C was thrown onto the crassier. The engineer showed us the stratigraphy that appears in the quarry faces. In the process of extracting this slag, the machine operator makes a first sorting following these soil profiles. The slag is then crushed, screened and weighed on a long conveyor belt that sorts each batch according to its own grain size and properties. Each type has its own use, as backfill, as aggregate in public works and road construction, or as raw material in the manufacture of cement.



Picture: slag has been quarried here since the 1920s (G.Meulemans 2021).

As a result, all the crassiers in the area become ‘stocks’ in the building materials market and can be resold from one company to another. Cloos recently bought the ‘historical slag stock’ – i.e. the crassier – of the Florange steelworks in Moselle. This post-industrial extractivist activity, which continues long after the factories have closed, is now gaining traction in discussions about the ‘circular economy’ and ‘zero waste’, which allows ArcelorMittal, in its corporate communication, to boast of a ‘gesture for the environment’ by avoiding, through the use of these materials, the extraction of natural stone from quarries. As we toured the slag heap, the Cloos engineer explained to me that the market for recycled

slag had expanded dramatically with the construction boom that Luxembourg had experienced in recent years. Even before absorbing the space of the crassier, the construction market has sealed its fate by absorbing its very substance. It is said that the industry will dry up by 2030, when the deposits in the greater region are exhausted. That will be the end of the era of crassiers, and materials will have to be sought elsewhere to feed the insatiable appetite of the capitalistic construction market. With the crassier almost fully razed, a new 'project', a new utility is called on to contribute: that of land available for development.

So phare so good

The Terres Rouges crassier and the surrounding area are sometimes described as a 'no man's land'. 7. The reason for this trench warfare label is probably that the France-Luxembourg border runs through the middle of the crassier, and the Ferraris map of the area, drawn at the end of the 18th century, indicates that it has been the subject of border disputes in the past. It is perhaps from a visual point of view that this no man's land is most striking. A walker passing through the lower part of the slag heap – since it was largely levelled by the Cloos company – could not help but be struck by this lunar landscape, dominated by the 'phare' (literally, the lighthouse, as they call it locally) represented by the varnished blast furnaces of Belval, which have been preserved as part of the industrial heritage.

The issue of preserving the old industrial infrastructure as heritage is particularly salient in this area, where municipalities on both sides of the border are looking for a common future. To do this, they naturally turn to their past. Thus, a heritage strategy – and even territorial marketing – is being implemented around what is identified as shared cultural representations: the memory of the iron and steel activities that made the region prosperous. The symbolism is strong for this place where European futures are being experimented: it is worth remembering that it was steel that created Europe with the European Coal and Steel Community (ECSC) established in 1951 and that southern Luxembourg and northern Lorraine, with Esch and Florange, were major centres of the European steel industry. 8. For almost a century, the metallurgical industry was the identity marker of this territory and of those who lived there, thereby providing a coherent cross-border identity between northern Lorraine and southern Luxembourg. It is therefore the factory – this cathedral of the industrial century, with its chimneys, its

blast furnaces, its steel and glass halls – which has been given heritage status to serve as a memorial and identity bond.

Looking at the Belval ‘lighthouse’ from the crassier, I wondered why the crassier itself had not been chosen as heritage to give substance to this working-class memory. Why had this path not been chosen, and what would have been gained if it had? In other post-industrial regions, crassiers have been preserved as part of the industrial and technical heritage. In the Nord-Pas-de-Calais – where, admittedly, they constitute the only topographical landmark in an otherwise perfectly flat area, like unusual mountains whose smooth, regular profile betrays their artificial origin – associations such as La Chaîne des terrils have succeeded in having them recognized as a full part of the cultural landscape of the industrial world.

Red mountain

Historian Michel Depeyre, who has researched the trace of crassiers in industrial-era cultural productions, notes that speeches by company managers, articles by engineers and educational books on industry hardly ever mention them, preferring to focus on machines and technology. 9. However, crassiers seem to have had their place in the visual and symbolic culture of the workers. Anne Michaud, who conducted a study of how the inhabitants of Saint-Etienne saw the crassiers that dominate their city, showed rich and contrasting representations. The upper classes saw the crassiers as proof of the prosperity of the local industry. It was enough to see the size of the crassier, and to see it still growing, to be convinced of the importance of an activity that nourished the region and its inhabitants. Conversely, workers often saw the crassier as a monument erected upon the rhythm of the workers’ efforts, like a great sandglass that indexed all the matter transformed by industrial work. It is therefore also a ‘red mountain’, nourished by the sweat and blood of the working class and the strikers who fought for better living and working conditions. These different representations reflect the structure of society at the time as well as the struggles and great divisions that ran through it. Thus, the crassier is ‘a piece of the guts of Saint-Etienne suspended in its sky’ 10.



Picture: a view of the central part of the crassier from its northern end. It was once a mound, but now looks like a caldera (G.Meulemans 2021).

Erasing the crassier not only opens up a space for the construction market. It also obliterates a piece of evidence that evokes the suffering of the twentieth century. While in the past, the slag heap may have symbolized economic prosperity for some, today it is more likely to symbolize the excesses of the age of industry and mass consumption, when whole valleys were filled with the (often toxic) waste of industry. To look at the ‘lighthouse’ from the crassier is to be reminded that, from an environmental perspective, the ‘Trente Glorieuses’ – the ‘Thirty Glorious Years’, as the post-war period of economic growth and capitalist expansion is commonly referred to in French – should be more accurately called the ‘Thirty Dirty Years’ 11., as we contemplate the mountain of waste produced by industry at the time. Thus, artist and writer Matthieu Duperrex uses the crassier as a metaphor for the toxic destabilized world that we must now inhabit. 12. Thinking from the crassier means taking it as a school to imagine together ways of inheriting the industrial age, its waste, its pollution, an involuntary heritage that will long remain the mark of this era. It is symptomatic that, in order to remember this working-class memory, the blast furnace was chosen to be preserved instead of the slag heap. An ode to technology and progress rather than a witness to the waste of modernity.

Strange commuters

As we move away from the bottom of the crassier, the part that is still in operation, we quickly climb onto high mounds which, for some unknown reason, have been left aside by the quarry workers. One need only walk around the edges – where the vegetation, the birds and the foxes have regained their rights – to see that the crassier is by no means a blank page and that it is already inhabited.

In fact, the deeper you go into the crassier, far from the quarry zone, the more the vegetation seems to close in on you. In the west of the area, the pioneer birch forest throws its trunks to the sky, quickly followed by other bushes, flowers and butterflies. Wildlife surveys carried out in the area show the importance of these environments for many species, including several species of bats, Green Woodpecker, Redstart and Whitethroat. Closer to the quarry zone, semi-open pioneer meadows on raw slag soils are a great habitat for lizards and protected butterfly species. 13.



Picture: fox tracks in the Terre Rouge central area (G.Meulemans 2021).

In addition to highlighting this diversity, these studies show the functional interest of the crassier for these species. Indeed, they emphasize that the crassier is less like a well-bounded ecological reserve than a crossroad, a connecting node for the populations of many species. Surveys show that its pioneer meadows and wooded areas are important ‘transfer routes’ or ‘green corridors’. The journal *Regulus* noted in 2011 that ‘a true cross-border network, hosting threatened species, has been established: the crassiers of Ehlerange, Russange and Mondercange, and the wastelands of the former open-cast iron mines of Micheville and the Luxembourg Minette region’ (Ulmerich and Biver 2011). 14. The Terres Rouges crassier is a key site in this cross-border biotope network, as its ‘insect-rich pioneer meadows

and the wooded areas around the Peiteschhaff [are] an important transfer route between the “Lentille” and “Hiehl” areas to the south and the “Clairchêne” green corridor to the north’. 15.

Next to the workers crammed into their vehicles every morning, there is therefore a whole series of non-human commuters. Thus, thinking through the ecologies of the crassier allows us to return to the cross-border dimension of the region, which highlights the values of cooperation and the abolition of borders between human groups. But the crassier also allows us to take into account the other-than-human dimensions of these dynamics, to move from territorial planning to land conservation.

More-than-human creativity

We have just seen that the cross-border issues of the crassier area can be revisited in the light of the movements of plants and animals. But we can also revisit the notion of ‘experimental wasteland’ (claimed by developers as a blank page in which to express their creativity) in the light of the ecological creativity presented by these dynamic places.



Picture: a view from the southern end of the crassier Terre Rouge, land of birch and locust (G.Meulemans 2021).

In recent decades, scientific ecology has gradually taken an interest in these strange environments of brownfields and abandoned quarries. Poor in humus, arid, with particular chemical conditions, often contaminated, SUITMA (the acronym for ‘soils of urban, industrial, traffic, mining and military areas’) form environments where the ecology of the species that settle there is always original and surprising. Paradoxically, quarries, mines and crassiers, while radically destroying local ecosystems when they are created, generate upheavals and disturbances conducive to the creation of new ecosystems. Ecologist Guillaume Lemoine worked on the ecological peculiarity of slag heaps in northern France, highlighting the effects of the breakdown of the substrate and the topography (in relation to local lands) that they cause. 16. Poor in organic matter, their soils contrast sharply with the rich soils of our temperate climates and slow down plant dynamics, thereby forming improbable steppes before being colonized by birches and other pioneer species that are happy with the ungrateful soils. Due to the minerals that compose them (and sometimes the chemical reactions that are perpetuated within them), they form microclimates, with soil temperatures sometimes up to 5 °C higher than the local averages. This allows them to host a specific flora, uncommon in these latitudes, including exotic species. The seeds of these ‘travelling plants’ – botanist Audrey Muratet, a specialist in these plants, prefers this term to that of ‘invasive plant’ 17. – are brought by birds, the wind, sometimes from far away. Their presence is also the result of trade, long-distance supply chains, and even the passage of foreign troops during the last world conflicts. Thus, Lemoine explains that on the slag heaps of northern France, we find plants from the Alps that arrived with the use of alpine coniferous wood used to support the mine galleries. The crassier is a site where plants and other living things invent original links with the soil, a climate, a terroir. They challenge the idea that creativity can only be found in the human mind. Here, on the contrary, it is from collective and symbiotic investigation that creativity is born.

Crassier Heritage

Let us return to our comparison of the treatment of the Belval lighthouse and that of the Terres Rouges crassier. Anne Michaud lists two main sets of views on the crassier. There are those which freeze the crassier in time, where it remains hostage to an industrial memory of which it is seen as the indelible mark. There are also the proponents of immediacy, who only see what the crassier has to offer in the

present day. This latter dynamic conception is present among quarry operators (who see the crassier as a stock of materials) but also among botanists (who insist on the botanical inventiveness of the crassier's pioneer flora).

Depeyre suggests that crassiers could be made heritage not as simple witnesses to a working memory or a striking element of the landscape, but as 'a product of an industrial civilization which has generated nuisances, pollution and waste which will be transmitted in the long term'. 18. In Western Europe, the toxic fumes of the industrial age have almost entirely disappeared, but the toxic legacy of this period lasts in the soils and will linger for a long time. In addition, while production centres have largely moved to the global South, global industrial activity and the amount of waste produced have continued to grow. Crassiers continue to proliferate across the globe but have moved away from places of consumption. Historical European crassiers therefore appear as a privileged site in which to think collectively about the 'negative commons' – these cumbersome, dangerous entities inherited from the industrial age, which will linger in soils and landscapes for centuries – and about what it means to live in a damaged world. For Matthieu Duperrex, inhabiting the crassier is 'to recognize oneself as the subject of the ambient catastrophe', whereas 'the crassier describes our contemporary habitat in the Anthropocene'.

At the same time, moving from built industrial heritage to crassier heritage also means paying attention to the pedological and biological creativity of wastelands. It means taking into account a heritage in motion, which includes the succession of pioneer plants and which also makes it a laboratory for Anthropocene ecologies. These new relations invented by flora and fauna invite architects, planners, ecologists and citizens reclaiming these fields of knowledge to forge new links in the radically new ecologies in which the Anthropocene has plunged us. As Sandra Jasper puts it: 'In their status as wastelands, these unusual zones are experimental fields for studying the adaptability of nonhuman life and speculating about future ecologies in future cities.' 19. More than a laboratory for Europe, it is a laboratory of life in the Anthropocene that the crassier promises.

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