Making place for a circular economy of excavated soil: narratives and resistance in the Paris Region

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Excavated earth, a heavy issue

Data from Predec, 2015
Excavated earth, a heavy issue

Data from Greater Paris Metro Developer, 2017
Earth, circular economy and the making of the city

Mathieu Fernandez, VertigO, 2019
Soil, circular economy and the making of the city

Earth Construction as a promising path towards a more circular urban development.

- What are the narratives and imagineries underlying circular practices dealing with excavated soil?
- How these practices are included in the urban fabric?
- To what extent do they contribute in a more foundational urban system?
1. The ongoing economy of excavated soil

« In amount » waste reuse: parks, golf course, embankments
1. The ongoing economy of excavated soil

Spatial concentration, conflictuality and solidarity

Carte réalisée sous Magrit par l’auteur, 2018
Sources : INSEE, 2016 ; PREDEC, 2015, sites internet d’ECT et Cosson
Données cartographiques : data.gouv.fr
1. The ongoing economy of excavated soil

Coalitions and local interests

Land owner (public or private)

ECT (excavated soil reuse company)

Local authority (municipality)

Material exchange

- Monetary exchange
- Immaterial exchange

Land

Rent

Trust

Free infrastructure

Long term relationship
2. Excavated soil and foundational economy

The ongoing economy of excavated soil, a foundational economic activity
- Spatially grounded and local jobs
- Linked to the maintenance and development of the urban built environment
- Environmental services like contamination and waste management

A semi-circular economy:

“How do you justify the utility of the projects (landscaping, embankments, etc.) you realise since they are not directly asked by the municipality but first suggested by yourself?

E1: How do we guarantee a genuine utility for the city? We implement “landscaped promenades” and people from the town hall needs this kind of space.

E2: Yes, but there is also an economic interest. We could do a flat golf but, in that case, we would not be able to finance the entire infrastructure needed by the golf landowner like the clubhouse, etc. We need more excavated soil. Then, the more excavated soil we bring, the more the land is protected as a green belt (...)”

(ECT, May 2019)
2. Excavated soil and foundational economy

Hypothesis

The development of a more genuine circular economy of excavated soil is an opportunity to build a more foundational system

- An economy based on internal resources: the built environment as a resource for a grounded economy.
- Sustain jobs in the foundational economy (construction and waste management sector)
3. Earth Cycle in Sevran

- Implementing a raw earth building materials production plant
- Structuring a raw earth construction industry in the Paris Region
3. Earth Cycle in Sevran

A new local narrative: an endogenous economic development

“Indeed, I would like Sevran to reconnect with its history. And, its history is industrial. That’s why I support Earth Cycle so strongly. (...) We need craftsmen, small craft in the urban fabric. We can’t do the same mistakes as yesterday and create big industrial brownfields in concentrating all the economic activities in one big industrial zone.”

(Stéphane Blanchet, mayor of Sevran, May 2019)
3. Earth Cycle in Sevran

Making space in the urban fabric: urban gaps

1/ A time-based urban gap: a temporary and mobile plant

Construction site

<table>
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<th>Sorting</th>
<th>Drying</th>
<th>Storing</th>
<th>Manufacturing</th>
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ECT

A land waiting for a future development
Challenges linked to a mobile plant

2/ A space-based urban gap: a narrow land

Construction site

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ECT

A narrow land in an economic activity zone
Eviction of the most disturbing activities of the production process
Conclusion

Lessons learned from the Earth Cycle case study

- Challenges of a flexible/mobile/temporary urban planning and design

- Urban planning regulation: «industry» vs mixed zones

A metropolitan/regional challenge

- Physical platforms to manage excavated soil and other C&D waste?