

Massive Mess: Investigation on Unruly Brownfield Operations 2021

In 2018, a Greenpeace investigation into illegal brownfield operations found that the level of soil contamination near electronic waste (e-waste) dismantling sites exceeded standards. Myriads of unruly brownfield operations have emerged as the government has not addressed the worsening problem of brownfields. In July and August this year, Greenpeace conducted on-site investigations during which aerial photographs and unannounced visits were made. In our survey, we identified at least **35 brownfield** sites where illegal operations such as the disposal of scrap metal, e-waste and imported waste were suspected. All the sites spread across the North District and Yuen Long, covered over a total of **20 hectares**, even larger than the area of Victoria Park. Some of them are suspected of unauthorized development, unlawful occupation of government lands, invading green belts, etc. The situation reflects that Hong Kong lacks a comprehensive brownfield policy and is wasting its precious land resources. Poor land-use planning and housing injustice have thus been aggravated. Inappropriate planning and regulation of brownfields provides room for unlawful operations to sustain, supporting them to proliferate like cancer cells, which pollute the environment and endanger public health.

Brownfield Chaos #1: Massive waste mountains

We found huge amounts of waste like scrap metal, circuit boards and plastic waste piling up in workshops, forming huge “waste mountains” which covered an area of over 1,000 sq. m. and were estimated to be 5 to 8 m high.

Our investigation discovers that the composition of these “waste mountains” is similar to aluminium scrap. Such waste mountains were a rarity in Hong Kong but have emerged in many brownfield sites in recent months. The amount of aluminium scrap imported into Hong Kong since the beginning of 2021 has already been 6.8 times that of the same period last year. The waste in these dumps is mixed with packaging waste with brands uncommon in Hong Kong. We can therefore deduce that foreign waste might be the source. For example, the largest workshop on Kai Pak Ling Road in Ha Tsuen (厦村雞伯嶺路) is about 7.7 hectare in size, of which over 4 hectare, is suspected of occupying government land. The metal waste at the site is mixed with plastic waste, circuit boards and construction waste. The waste in these nine “waste mountains” is estimated to be worth at least \$750 million in total.

Greenpeace collected three soil samples from the site, which two of them contained high levels of zinc and copper which exceeded the Dutch Intervention Levels for heavy metal contamination. These heavy metals, which can be washed away by rainwater into the soil and rivers nearby, posing a threat to public health. As seen at the site, the dust from the waste spread when bulldozers moved or unloaded the waste on the dumps. In addition, a large amount of yellowish dust, which might contain metal powder, was continuously emitted during the operation of the machinery in the site. The excessive heavy metals and dust polluted the ambient environment and might cause harms to humans.

The lack of planning for brownfields by the government has led to chaos and may turn more sites into dumps or sites for waste disposal. This may in turn encourage illegal operations which generate enormous profits at the expense of our precious land resources or even government land. On the contrary, foreign waste is taking up the space in landfills, rural areas or even sites which could have been used for housing.

Brownfield Chaos #2: E-waste contamination “unresolved and worsened”

Besides waste mountains, our investigation reveals that there are 27 brownfield workshops involved in handling toxic electronic parts, of which at least 17 of them involve in illegal storage or dismantling regulated electrical equipment (i.e. air-conditioners, refrigerators, washing machines, televisions, computers, printers, scanners and monitors).

Even though these sites have been operating for many years, and some of them are found to be illegal, the relevant departments haven't conducted enforcement. The workshop in Hung Lung Hang West (靚龍坑西), for example, was already uncovered by Greenpeace in 2018 for illegally dismantling LCD monitors, but the site is still in operation three years later. In addition to the monitors which are being dismantled by the workers in the workshop, electrical scooters were also found, demonstrating an expansion of its operation. While the brownfields have been expanding, new illegal workshops have emerged. For example, the site in Siu Hom Tsuen (小磡村) was still covered by vegetation in 2010, until warehouses were built in 2017, and e-waste has even been piling there since 2020.

The illegal dismantling of e-waste is a lucrative business. Even though the government has implemented regulations on waste electrical and electronic equipment and tightened the *Basel Convention* in recent years in an attempt to further control illegal activities related to e-waste and foreign waste, the operation is still active. A small fine of a few thousand or a few tens of thousands of dollars would not deter the brownfield operators even if they were prosecuted and convicted by the court. They could relocate to other brownfields sites and continue their business even if they were prosecuted by the Environmental Protection Department. Some illegal workshops are operating in remote areas without official addresses or block numbers as if refining drugs clandestinely. Sporadic prosecution alone is merely a stopgap measure. To effectively end the chaos, the government must regulate brownfields in a comprehensive manner, otherwise the problem will only worsen.

Brownfield Chaos #3: Far-reaching consequences

Most brownfield workshops are located in rented sites. Meanwhile, brownfields have expanded as their operations are subject to lax regulation. Even if the brownfields were cleared after conviction, operators could continue their business elsewhere. However, brownfield operations cause far-reaching damages to the environment. For example, the abandoned workshop in Sheung Pak Nai (上白泥), occupying 1.8 hectare of green belt, has been littered with shreds of e-waste since its operator left in 2017. Greenpeace tested three soil samples taken from the site; two contained excessive chromium, copper, nickel and zinc according to the Dutch Intervention Levels for heavy metal contamination. It is worth mentioning that the entire workshop sits on the zoning of green belt, but the government is allowing these contaminated brownfields to fall into disuse without any immediate planning and proper remediation. If the government does not take actions to plan or remediate, not only does it lead to mismatch of land resources, contamination can also harm their future users and even exacerbate environmental pollution.