

**Green New Deal Housing  
Draft Analysis of Brownfield Cleanup Alternatives (ABCA)**

**I. Introduction & Background**

<b>Site Name and Location</b>	Irving Infill, 218 S 59th Ave W, Duluth, MN 55807
<b>Previous Use of Site</b>	The Irving Infill site has not been developed previously even though the surrounding neighborhood contains a mix of residential and commercial uses and has since at least the late 1800s.
<b>Past Site Assessment Findings</b>	Phase I and Phase II environmental site assessments were completed at the Site in May 2019. There is evidence of dumping on the site over many years, including debris material such as concrete, glass, ceramics, metal, linoleum, and brick. Soil samples indicated that concentrations of polynuclear aromatic hydrocarbons (PAHs), specifically benzo(a)pyrene equivalent, and arsenic were greater than the Minnesota Pollution Control Agency’s (MPCA) soil reference value (SRV) for residential land use in several locations.
<b>Project Goal/Reuse Plan Summary</b>	<p>Green New Deal Housing’s plan for reuse is to build two net zero energy (NZE) single family homes on these sites. The Irving Infill site is flat and located in a residential neighborhood, making it ideal for housing development. It also has excellent solar exposure, which is essential for renewable energy, supporting NZE construction.</p> <p>NZE housing is housing in which the solar panels on the roof of the structure provide all energy that is used to operate the home over the course of a year. We will seek gap funding to sell the residences to homeowners who are income-qualified for affordable or workforce housing. We will use air source heat pumps for efficient heating and cooling, deep wall construction, air sealing, and triple pane windows, among other efficiency measures which will allow us to meet an NZE standard.</p> <p>We expect to build two houses that will be sold to low- to moderate-income homeowners. They will be either affordable or workforce housing per the HUD definitions, depending upon</p>

	<p>available gap funds. This will address some of the challenges experienced in this neighborhood and Duluth as a whole, including inadequate supply of housing, increasing the tax base, revitalization of a low-income neighborhood, and growing community resilience with renewable energy. Additionally, these homes will be used as hands-on training sites for the YouthBuild construction training program, supporting opportunity youths' development of construction skills.</p>
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## II. Applicable Regulations and Cleanup Standards.

- a. Cleanup Oversight Responsibility: Minnesota Pollution Control Agency has Cleanup Oversight Responsibility. In addition, work will be supervised by a Licensed Site Professional.
- b. Cleanup Standards for Major Contaminants: we will follow the State of Minnesota's standards for residential reuse as the cleanup standards. Minnesota Pollution Control Agency (MPCA) established soil reference values (SRV) for Benzo(a)pyrene (BaP equivalents) and Arsenic, which are exceeded at the Irving Infill Site.
- c. Laws and Regulations Applicable to the Cleanup: EPA does not have federal cleanup standards for brownfields; instead, cleanup authority is delegated to states. Remediation programs are authorized under Minnesota Statute § 115B Minnesota Environmental Response and Liability Act (MERLA). Additionally, we will follow all federal, state, and local laws regarding permitting and procurement of contractors to conduct the cleanup.

## III. Evaluation of Cleanup Alternatives

Alternative	Impact from Potential Extreme Weather	Cost Estimate	Discussion of Effectiveness, Implementability	Recommended Alternative?
#1 No Action	Minimal	\$0	This is simple to implement since no action would be taken, but also prevents reuse of site. It is also not effective to prevent potential exposure to contaminants by neighborhood residents.	No
#2 Installation of Impervious Surface	Minimal	\$50,000-\$90,000	This would allow use such as a parking lot. This is moderately difficult to implement and would establish a barrier to the contaminants at a lower cost	No

			than Alternative #3. However, a parking lot is not needed in the area since there is ample parking for residents. It would also require a land use variance, which would be challenging to justify due to the lack of need for a parking lot. This option is not a viable reuse alternative.	
#3 Excavation with offsite disposal of contaminated soil	Minimal	\$272,301	This is moderately difficult to implement. Dust control in dry conditions, or heavy soil in very wet conditions, could present challenges in excavation. Additionally, we anticipate disturbances to the neighborhood, such as noise and large trucks. However, these will be temporary.	Yes

**General Climate Considerations**

Per the Climate Mapping for Resilience and Adaptation tool, the Duluth area is projected to see increased temperatures throughout the century, and otherwise is not likely to change significantly climatologically. It is an inland community that will not be impacted by sea level rise or salt water intrusion. There was no groundwater on the Irving Infill site in any of the soil borings. Increased temperatures could lead to increased wildfire risk, however the number of wet and dry days is not projected to change significantly from early in the century to late in the century, either for high emissions or lower emissions models (<https://livingatlas.arcgis.com/assessment-tool/explore/details>). We do not foresee that any of the cleanup alternatives would be significantly impacted by extreme weather events.

**Recommended Cleanup Alternative**

Green New Deal Housing recommends Alternative #3, excavation with offsite disposal of contaminated soil. Alternative #1 cannot be recommended since it does not address the site risks and does not allow for reuse of the site. Alternative #2 cannot be recommended due to the lack of need for an impervious surface on these lots in this residential neighborhood. This option does create a barrier to the contaminants, but does not allow for a reuse of the site that is meaningful to the neighborhood. Alternative #3 is the most expensive option, but it effectively cleans up the contaminants and allows for a meaningful reuse of the site that aligns with City goals and neighborhood needs.