

## **SECTION 5.0**

# **IRREVERSIBLE & IRRETRIEVABLE COMMITMENT OF RESOURCES**

Construction of the Preferred Alternative envisioned in the Kiliaen's Landing Master Plan would result in the irreversible and irretrievable commitment of a variety of resources. The greatest commitment of natural resources is the conversion of vacant or underutilized land to a developed state.

If the Study Area is developed as outlined, nearly 70 acres of currently undeveloped woodlands, brush and brush and related habitat would be converted to residential and recreational uses, in addition to the approximately five (5) acres of the redeveloped Hilton Center and boat launch area. It is unlikely that the residential portion of the site would revert to an undeveloped site, therefore the removal of trees and vegetation would eliminate some natural habitat for small mammals, birds and reptiles. The active recreational area in the northern half of the site could potentially revert to an undeveloped state however based on the vision of the City for this area, that outcome is unlikely.

Construction of structures, related site improvements and infrastructure would require the consumption of building materials, equipment, energy, and human resources. During and after construction, this new development would require utilities such as sewer, water, electricity, and natural gas. Municipal services such as solid waste disposal, police, and fire would also be required. Once committed, these resources would not be available for other uses.

## SECTION 6.0

# USE AND CONSERVATION OF ENERGY

Any construction related to Kiliaen's Landing will be required to conform to the New York State (NYS) Building Construction Code which will minimize energy usage. In addition, construction will be required to comply with the applicable sections of the NYS Energy Conservation Construction Code. As specific projects move forward, specific methods to reduce and conserve energy consumption will be evaluated in more detail. Green building design, construction, operations, and maintenance plans will be considered and implemented as practicable in each component of the overall plan.

During construction and installation activities, Best Management Practices will be employed such as:

- Limiting the idling of equipment and vehicles to 5 minutes.
- Use of more energy-efficient equipment during construction and maintenance
- Continued regular inspection and maintenance of construction equipment.
- Construction scheduling to allow for efficient installation of project components and reduced down time between tasks or phases.

Internal circulation including roadways, multi-use trail and sidewalks will be designed to provide efficient connections between the various site elements including the boat launch, recreation area, residential area and the Hilton Center mixed use area. Attractive and safely designed non-motorized pathways within the site will encourage residents of Kiliaen's Landing to minimize vehicle use between the various elements of the site. In addition, the planned multi-use pathway that will traverse the Study Area will connect to future multi-use pathways to the south under the Livingston Avenue Bridge and to the north to future trails in the Rensselaer Tech Park and the Rensselaer County Trail System.

The installation of car charging stations will encourage the use of energy efficient electric cars. The number and location will be based on the specific projects proposed including site demand, parking demand as well as any available information regarding numbers of electric vehicles in use in the Capital District. Nearby public transportation including CDTA bus stops, the Albany-Rensselaer Train Station and the proposed Gondola connecting the Albany-Rensselaer Train Station to the City of Albany all work together to reduce the use of fossil fuels.

The use of rooftop solar arrays would reduce the consumption of energy for heating, cooling and electricity. The Inventory and Analysis (Appendix 2) used the PV Watts Calculator to estimate the energy output.

The original estimate was updated using the HeliScope 2016 design software tool to create a photovoltaic array layout for each roof structure to estimate potential solar energy production. This program allows the user to layout a potential array on a structure to calculate energy production (kW). For these calculations it was assumed the solar array will cover almost all of the roof area. The calculated energy output was reduced by 40% to accommodate rooftop utilities and other roof obstructions. Based on the projected energy demand for the preferred alternative, the HeliScope model projects that just over 17% of overall the estimated energy demand (550 kW) could be met (Appendix 9). The HeliScope 2016 model can continue to be utilized as specific buildings and projects are reviewed to refine these estimates.

Several buildings within the Hilton Center complex are listed on the National Register of Historic Places; therefore those structures and their immediate surroundings are likely not a suitable location for solar installations. The Hilton Center, therefore was not included in this analysis. Ground mount installations are generally not recommended in the 100-year flood plain; opportunities within the Study Area would be limited.

The use of landscaping to shade parking areas and sidewalks will reduce the “heat island effect” that results from large paved areas. The use of light colored pervious or permeable pavers can help reduce the heat island effect while also minimizing stormwater run-off. Building orientation to take advantage of natural heating and cooling processes can also be considered.

The NYS Energy Conservation code addresses elements such as heating and cooling systems, hot water systems, electrical systems, construction material, equipment specifications and building sealing and insulation. NYSERDA promotes compliance with the Energy Star and New York Energy Smart programs. These programs encourage the use of energy conserving appliances, materials, technologies and building techniques and would reduce the overall long-term energy consumption of projects within the Study Area.

## SECTION 7.0

# FUTURE SEQR ACTIONS

As noted in Section 1.3 the development of Kiliaen's Landing Preferred Alternative is considered a Type 1 action under SEQR Part 617.5. The City of Rensselaer as the project sponsor is responsible for lead agency procedures and preparation of this GEIS. The City Planning Commission declared themselves lead agency by resolution on July 10, 2017, conducted public scoping and filed the Final Scope on September 6, 2017. This included a Public Scoping meeting held on August 7, 2017.

Projects that fall within the thresholds and are consistent with the goals outlined in this GEIS will be considered to be consistent with the findings of this SEQR process and therefore will have no further responsibility under SEQR. Each project proposed for the Study Area will be evaluated against the thresholds and recommendations for the Preferred Alternative in this GEIS to determine if further SEQR action is required.

Projects that exceed the thresholds evaluated, don't meet the requirements outlined in this GEIS or the associated Statement of Findings, or are not consistent with goals outlined in this document will require further action under SEQR. For example, this GEIS evaluated the impacts of approximately 356 residential apartments near the Livingston Avenue Bridge. A project that proposes 400 units for example would be required to provide information to evaluate the potential impact of the additional units. This could include the evaluation of additional traffic, the potential for increased height of the structures or larger building footprints. The Planning Commission would determine the significance of any deviation from the Preferred Alternative and any associated environmental impacts. Depending on the level of impact resulting from a specific project the Commission could adopt a Negative Declaration (determination of no significant impact) or a Positive Declaration followed by the preparation of an environmental impact statement.