

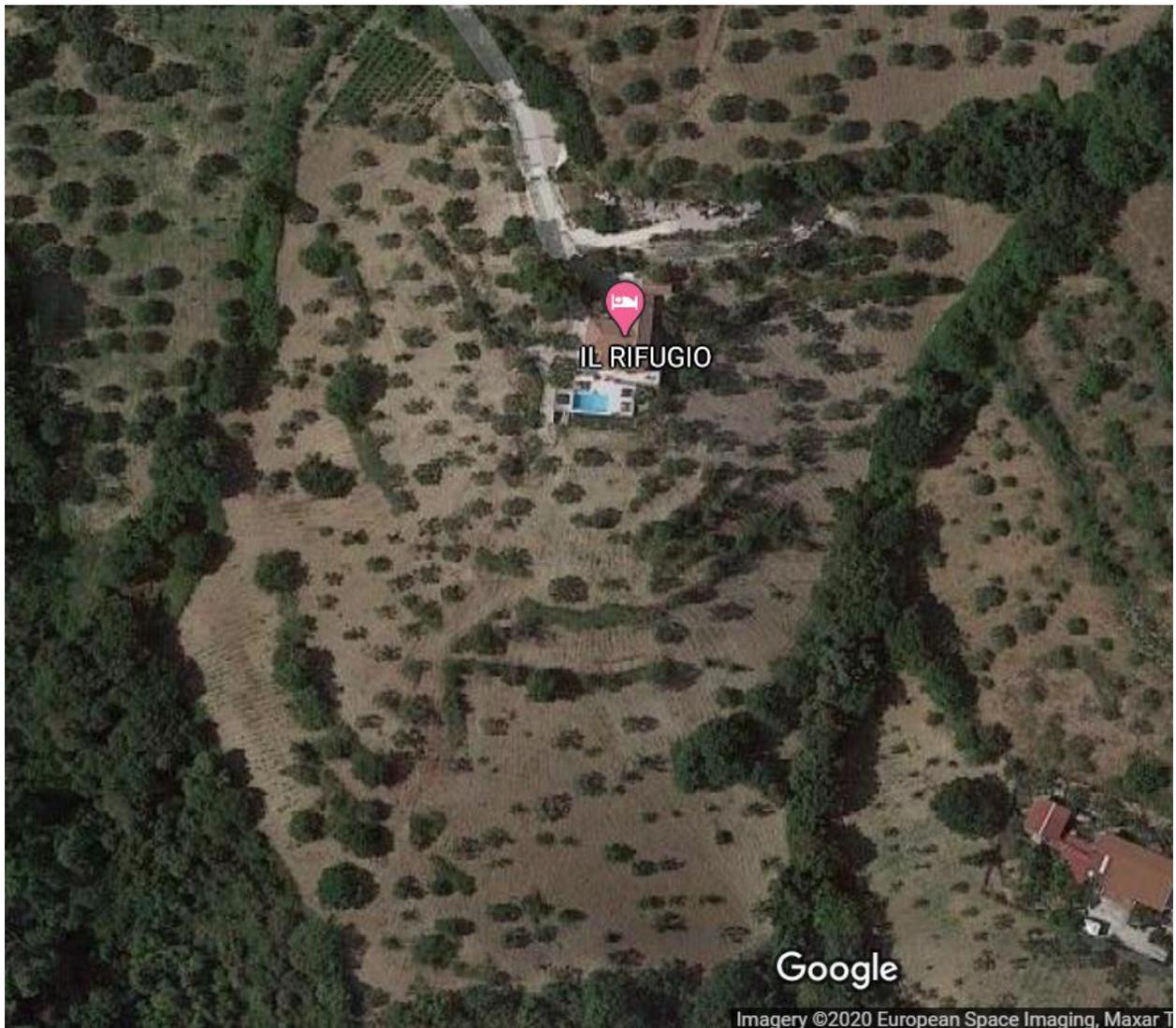
IL RIFUGIO

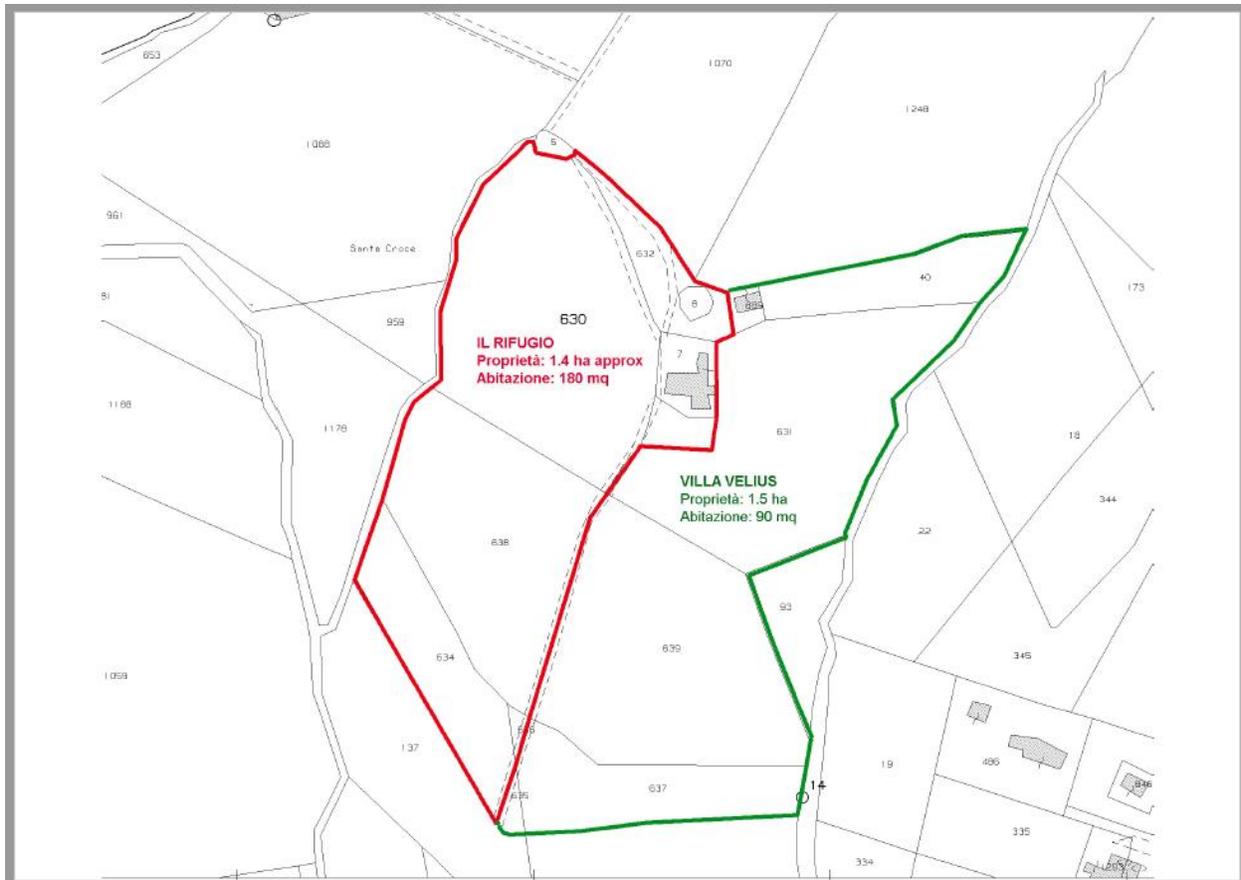
LAND USE AND DEVELOPMENT

Joseph Zannoni 1/18/21

I have offered to lead the discussion regarding potential land use and development options for our property encompassing 2.9 hectares or 7.166 acres.

My understanding is that the boundaries for the property are seen in the second image below.





I have not been to the property yet, but it does appear that a significant portion of the total acreage is either undeveloped or underdeveloped. Over the next 6-12 months I will continue to evaluate a several approaches to energy reduction, agronomic development and property landscaping for the property.

Energy

According to the most recent annual accountants report, the property was charged 12,967 Euro (USD\$15,704) for Electricity and 3,395 Euro (\$4,101) for Natural Gas in 2020.

There are several approaches to our current energy consumption which I am investigating. Even before knowing specifically where the energy is being consumed (i.e., pool, heating and cooling Il Rifugio, etc.), there are three alternative energy options worth researching:

- **Solar**
 - Benefits
 - excellent low risk investment
 - planned state contributions
 - high duration of the systems over time: 30 years
 - reduced maintenance
 - return on investment: from 4 to 5 years
 - reduction of the electricity bill

- Electricity: There is sufficient open land for a land based solar array for electric generation. There appear to be a variety of Italian government incentives for solar installations that will reduce the pay-back period for the investment. In addition, the cost of the solar panels continues to decline.
- Water Heating: A solar water heating system could be installed for both the pool and Il Rigugio.
- Below is a listing of solar system manufacturers and installers in Italy which I have located and will evaluate.
 - [Solar Energy Companies and Suppliers in Italy | Energy XPRT \(energy-xprt.com\)](#)
 - [Solar System Installers in Italy | PV Companies List | ENF Company Directory \(enfsolar.com\)](#)
 - [Solar System Installers - ENF PV Companies List \(enfsolar.com\)](#)
- **Geothermal**
 - Italy has a significant geothermal energy industry given its geography. It appears that a geothermal system may be an interesting alternative for Il Rifugio's heating and cooling. I am not sure with regard to heating the pool.
 - There are some interesting new Italian government tax incentives that have been introduced to facilitate the adoption of heat pumps in residential properties.
 - [Geothermal - Italian 'Superbonus' is one of the most ambitious heat pump installation schemes to date - Renewable Energy Magazine, at the heart of clean energy journalism](#)
 - When purchasing a heat pump or another green energy source, Italians receive a refund from the government on the purchase price of their heating system. More specifically, consumers are granted a 110 percent refund on the purchase price of their heating system via five annual tax breaks.
 - For consumers who prefer an immediate payback, the Superbonus also gives Italians the option to:
 - Receive a discount of up to 100 percent on the purchase price of a heating system directly via the installer of the system, who in turn becomes the new bearer of the credit (and can apply for tax breaks)
 - Receive a refund of up to 100 percent via a "credit pass" to the installer of the heating system, a bank, or another 3rd party (in this case the credit is sold or passed to a new bearer)
 - I have located a listing of geothermal energy companies in Italy for consideration
 - [geothermal Companies and Suppliers in Italy | Energy XPRT \(energy-xprt.com\)](#)
- **Wind**
 - Depending on the wind direction and average wind speed in the location of the villa, a wind energy system may prove to be an interesting alternative to solar, in terms of installation cost and investment payback (years). This needs to be investigated further.
 - I have located a listing of wind energy companies in Italy for consideration.

- [Wind Turbines Companies and Suppliers in Italy \(Wind Energy\) ... \(energy-xprt.com\)](#)

There appears to be sufficient open land for any of these options to be considered.

Agronomy

- **Current Crops**

As it stands now it is my understanding that the management and operation of the available land used for agronomic purposes is cash flow negative (-).

My understanding is that currently there is a small plot of grapes in the NW corner of the property. In addition, there appear to be a number of randomly located olive trees throughout the property. I need to gain a better understanding of the current plantings in order to be able to determine what options may exist going forward. Several thoughts have come to mind that I will consider to pursue.

I am not yet clear about the current cost of managing the land, including managing the grape vines and olive trees and any other plantings on the property. In addition, I have to find-out what currently done with the grapes and olives that are harvested, quantity and quality produced. Finally, I need to determine if there is any tangible commercial value to what is produced.

- Grapes: We need to evaluate the cost benefit relationship for the existing grape plantings in order to determine its value and function. It is unclear to me if the current grape plants are worth the cost to maintain/replace/manage in relation to the return to the owners (bottles of wine of unknown quality) or the revenue generated by the sale of the wine produced.
- Olives: Again, it is unclear to me if there is any commercial value to what is produced relative to the cost to maintain currently.
- Other Crops: Unclear at this time.

- **Alternatives**

- Grapes: In order to determine the viability of maintaining this crop, we will need to have the following information
 - The status of the current grape vines
 - Output in grapes and wine
 - Cost to maintain the current vines
 - Cost to process the grapes into wine
 - Value and quality of wine produced
 - The option of replacing the current vines with new plants
 - The option of expanding the current planting with a new variety
 - The option of renting this or a portion of the land to a local farmer in return for a portion of the output of wine or a fee based on the land used.

- Olives: Same as above
 - I have directly contacted several small family owned olive oil producing companies in our region who could potentially have an interest in either leasing the land for the purpose of expanding and managing a portion of the land that may be suitable for and expansion of the olive plantings in return for a structured long term land use and management agreement with us. Again, the objective here is to make the existing open land revenue (+) if possible.
- Other Crops: We may want to consider planting other crops on select locations on the property that are common to this region and can add visual appeal as well as output for our consumption or possible sale.
 - Citrus: Orange, lemon, lime, clementine
 - Nuts: Chestnut, walnut, hazelnut
 - Fruit: Apricot, apple, peach
 - Vegetables: I understand that there is a vegetable garden on property. Unclear what this looks like and what the cost benefit value is for this effort.

Landscaping

- Without having been to the property, I'm not sure what has been done or can be done regarding the landscaping of the property. This includes the drive to the Villa, the Villa itself and the property surrounding the Villa. Any plan to develop the property, including the possibility of installing land mounted solar panels, a geothermal installation, agronomy crops, should include the integration of a landscaping plan.
- The overhead Google Earth view seems to show a lack of foundation plantings around the Villa itself but it is difficult to tell. We should also consider plantings that will minimize noise and the potential privacy we might want from other properties in development.
- I would suggest that we consider planting local fruit, nut and citrus trees around the Villa as part of an overall landscape plan.
- Drip irrigation is an efficient and functional system for watering and may be ideal for this part of Italy to maintain and landscape plantings.

