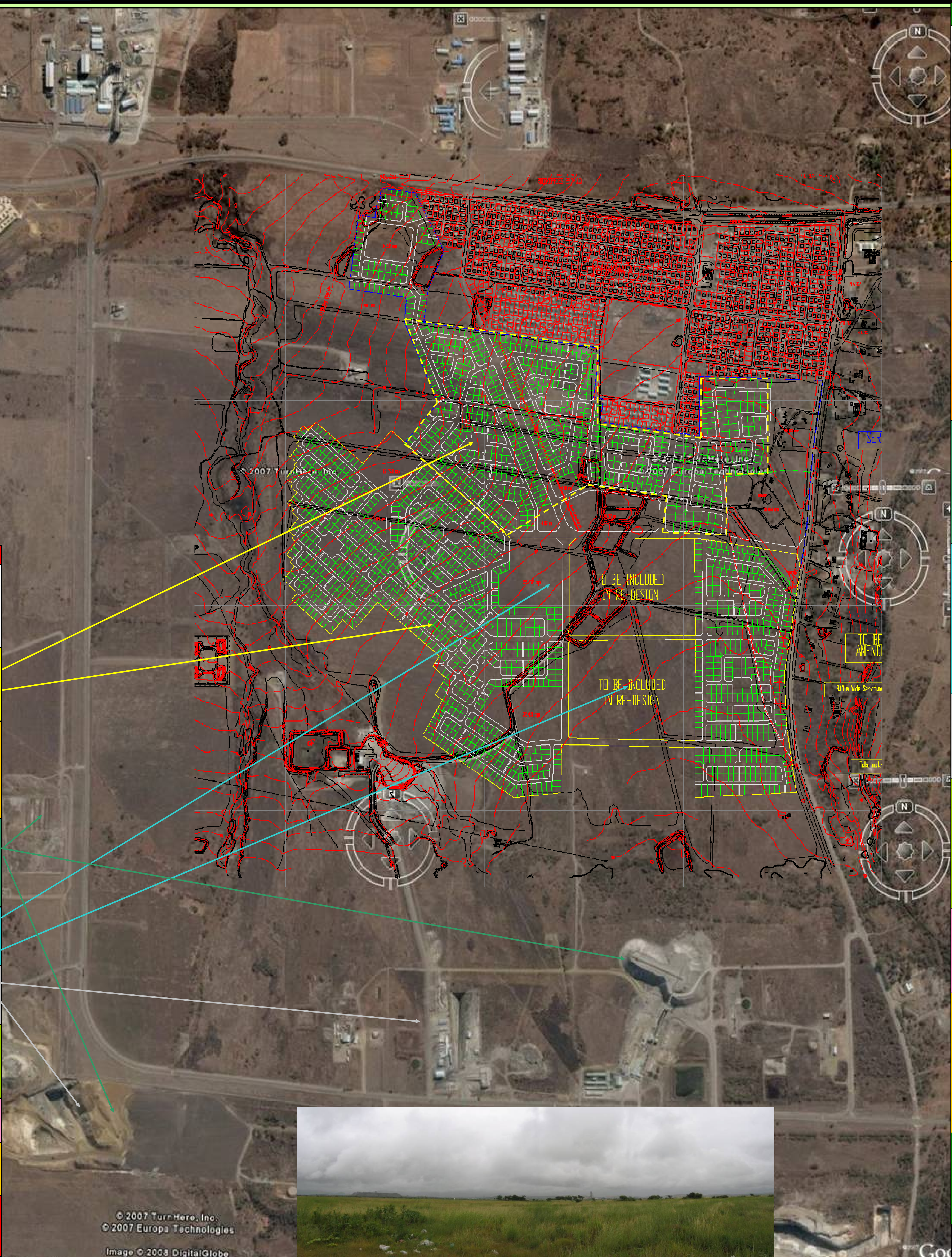




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# MARIKANA HOUSING PROJECT – PHASE 1 PROJECT SCOPING



Design Solutions	
<b>People</b>	<ul style="list-style-type: none"><li>Sensitize the client stakeholder group and professionals about sustainable design criteria at every available opportunity.</li><li>Undertake empowerment type training courses in sustainable design, such as, permaculture, natural building systems and ecovillages, for the housing beneficiary group, and also, extend this training to the existing adjacent community.</li><li>Extend the above training to public officials and professionals where appropriate.</li></ul>
<b>Town Planning</b>	<ul style="list-style-type: none"><li>Orientate houses to maximise benefits from passive and active solar energy systems.</li><li>Delineate public transport routes suitable for IPOD system, and/or, limited public and commercial vehicles.</li><li>Redesign town plan layout for balance of development and integrate with Phase 1 to allow for a holistic integration of housing, public realm, socio-economic and public transport routes.</li></ul>
<b>Housing</b>	<ul style="list-style-type: none"><li>Construct homes with natural building materials in order to reduce building costs, the ecological footprint, maintenance costs, and, operating costs.</li><li>Provide houses with solar energy.</li><li>Promote the design of semi-detached and series of row houses with a narrow road frontage and more functionally usable plot depth.</li><li>Provide rainwater tanks for on-site irrigation of homestead gardens.</li><li>Provide grey water recycling systems that can irrigate homestead gardens.</li><li>Provide homestead garden starter packs of fruit and indigenous trees, seeds, and, other plant material.</li></ul>
<b>Physical</b>	<ul style="list-style-type: none"><li>Establish large earth mounds along southern and western boundary and populate with indigenous trees and vegetation to mitigate against unsightly views, and, provide a safety and security barrier.</li><li>Re-establish small dams and integrate within public realm and open space facilities.</li><li>Establish a diverse variety of biomass through urban greening tree plantings in both proposed and existing developments in order to enhance micro-climates and mitigate against seasonal weather extremities.</li></ul>
<b>Drainage</b>	<ul style="list-style-type: none"><li>Establish stormwater catchment swales to drain the central area of excess water and channel towards natural water courses and the earth mound along the southern and western boundary.</li><li>Integrate stormwater catchment swales with rainwater harvesting systems for agricultural allotments within and along the edges of housing areas.</li><li>Establish biomass through urban greening tree plantings in both proposed and existing developments as a means to improve the rate of evapotranspiration.</li><li>Establish permeable road paving systems to enhance the flow of stormwater drainage and the retention of the water table where required.</li></ul>
<b>Pollution</b>	<ul style="list-style-type: none"><li>Establish large earth mounds along southern and western boundary and populate with indigenous trees and vegetation to deflect noise and wind pollution.</li><li>Establish biomass through urban greening tree plantings as a means to improve the rate of carbon uptake and oxygen generation.</li></ul>
<b>Socio-Economic Opportunities</b>	<ul style="list-style-type: none"><li>Provide a node / corridor of facilities at an entrance to the development for small micro enterprises within the redesigned town plan layout.</li><li>Provide a node / corridor of facilities for social recreational and community facilities within the heart centre of the redesigned town plan layout.</li><li>Provide a green belt along the southern and western boundary and integrate within areas designated for passive open space.</li><li>Provide agricultural allotments along stormwater catchment swales and integrate with rainwater harvesting systems.</li></ul>
<b>Utilities</b>	<ul style="list-style-type: none"><li>Design houses and other facilities to take advantage of passive and fixed solar energy.</li><li>Design houses to recycle grey water into homestead gardens.</li><li>Make proposals for adopting zero waste management initiatives.</li></ul>
<b>Linkages</b>	<ul style="list-style-type: none"><li>Integrate the redesigned town plan layout with the existing adjacent housing development with special attention to the public transport route and public and community facilities .</li><li>Extend the urban greening tree planting initiative to the existing adjacent housing development.</li><li>Identify entrepreneurial opportunities arising from the greater Marikana area that can be accommodated within the development.</li><li>Identify entrepreneurial opportunities for extending sustainable development initiatives outwards to the surrounding Marikana area.</li></ul>
<b>Summary of Design Solutions</b>	
<b>A holistic and integrated sustainable design approach to create a vibrant, diverse and safe built environment that promotes a sense of community, socio-economic opportunities, and, an appreciation of the natural environment.</b>	