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Geothermal Energy Development Project - Exploratory Test Drilling

Volume IV - Livelihood Restoration Framework

September 2023

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Geothermal Energy Development Project - Exploratory Test Drilling

Volume IV - Livelihood Restoration Framework

September 2023

Issue and Revision Record

Revision	Date	Originator	Checker	Approver	Description
A	8 September 2023	Laura Estrada	Juliette Yasenko	Aline Martins	Draft LRF for public consultation

Document reference: 100401069 | 3 | A | Vol IV - LRF

Information class: Standard

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List of Abbreviation

CDB	Caribbean Development Bank
CLO	Community Liaison Officer
CMG	Community Grievance Mechanism
EHS	Environmental Health and Safety
ESIA	Environmental and Social Impact Assessment
ESMP	Environmental and Social Management Plan
GOG	Government of Grenada
GWG	Geothermal Working Group
IFC	International Finance Corporation
LAA	Land acquisition assessment
LRP	Livelihood Restoration Plan
LRP	Livelihood Restoration Policy Framework
NGO	Non-governmental organisations
NTS	Non-technical Summary
PAP	Project Affected Person
PS	Performance Standard
ROW	Right of way
SEP	Stakeholder engagement plan

Executive summary

Overview

This livelihood restoration framework (LRF) has been developed to guide the livelihood restoration activities associated with the Geothermal Energy Development Project which is currently focusing on the exploratory test drilling phase (hereafter referred to as 'the Project'). The Government of Grenada (GoG) is being supported in the development of the Project by the governments of Japan and New Zealand, which are providing technical assistance, and by the Caribbean Development Bank (CDB), which is providing technical assistance and grant funding support.

International Finance Corporation Performance Standard 5 (IFC PS 5) sets the basis for the international standards applicable to this Project. This standard is applicable when involuntary physical or economic displacement occurs due to project land acquisition. Resettlement is considered involuntary when affected individuals or communities do not have the right to refuse land acquisition or restrictions on land use which can occur when the buyer can resort to lawful expropriation if negotiated settlement fails. As the GoG has the power to expropriate or compulsorily acquire land for the public good, IFC PS5 is triggered.

Current land acquisition status and potential displacement impacts

Land is required for the construction of the well pads, as well as for the construction/upgrading of roads. A total of 67,892 m² (6.8 hectares) of land is required resulting in potentially adverse impacts to local livelihoods. As per the information provided by the GoG, for the well pads, road widening and pump station, a total of 67,892 m² (6.8 ha) are required from which 4,358 m² (0.4 ha) are State land and 63534 m² (6.4 ha) are privately owned.

The total timeframe for the project will be approximately nine months in duration. During that time the project will restrict access to agricultural lands and will need to permanently acquire land to improve existing roads and create new access roads to allow Project vehicles to access the two sites. The sites are referred to as Site C or 'Tricolor' and Site F or 'Florida/Plaisance' and located in the St Patrick and St John Parishes respectively.

Land needed for the Project is yet to be acquired or leased¹. A total of 13 landowners, including the State, have been identified so far² at the well pad areas, road widening and new access, as well as pump station. Some State land is being farmed by individuals or entities that are pending to be identified, and private land is being farmed by the owners or caretaker. Under international lender requirements landowners and land users (those with and without recognised rights) are entitled to compensation.

At the proposed Site C, the location of the drill pad is located within four land parcels which are used for farming. Crops include cabbage, courgettes, green peas, banana and commercial harvestable nutmeg trees. At the proposed Site F, land use is considered minimal, with some low-level agriculture on the plots required for the project components (including the well pad, pump station and temporary laydown areas during construction). The proposed location of the drill pad is owned by two owners. One is a businessman, whose main economic activities are away from the site, and the second owner is a business entity. Land use alongside the roads or corners to be widened for accessing the proposed sites is generally natural growth.

¹ Based on information received by the GoG as of July 2023: Landowner Information Matrix PRELIMINARY 29 March 2023 - Rev3

² Ibid.

For the exploration phase, land at sites C and F is expected to be leased, and for road widening and the access roads it is expected that permanent land acquisition will be required.

Preliminary calculations based on land plot boundaries indicates that the permanent and/or temporary loss of land will be less than 3% of the land for nine out of the thirteen private land plots. In the remaining four plots, the losses are estimated to be 10%, 19%, 32% and 53% of the total plots.

Legal and policy framework

The Land Acquisition Act, 1998 gives the Government of Grenada, through the Governor-General authority to acquire land for public purposes in accordance with the procedures set out therein for public interest, with due compensation paid to the seller. The GoG is aiming to achieve negotiated settlements with all landowners; however, even if expropriation is not currently anticipated, the GoG have the legal right to expropriate land.

Livelihood restoration planning principles

Livelihood restoration planning will follow the principles listed below:

- Avoiding and minimizing displacement, avoiding forced evictions.
- Determining land acquisition needs.
- Livelihood restoration plan preparation, approval and disclosure
- Meaningful consultation will underpin the development and implementation of resettlement plans.
- Lack of title will not hinder eligibility for resettlement related compensation and support.
- Negotiated settlement will be the preferred Project approach.
- Replacement value will be approach used for compensating lost or affected assets.
- Efforts will focus on restoring or improving livelihoods and socio-economic conditions of those displaced.
- Livelihood restoration mitigation measures will be managed as sustainable development activities.
- Monitoring of adherence to land agreements, leases and resettlement plans will be undertaken.
- Even though the possibility of resorting to expropriation makes the land acquisition “involuntary”, negotiated settlements are the preferred approach for this project and are promoted under IFC PS5. Negotiated settlements avoid compulsory expropriation and eliminate the need to use governmental authority to acquire land or remove people forcibly. The Ministry of Agriculture and Lands will undertake the land lease and acquisition process and sign agreements including details under which the negotiated was settled are to be fully documented.

Need for a livelihood restoration plan

The preliminary review for the preparation of the LRF identified that the potential involuntary displacement and loss of assets is likely to affect a small number of people but the probability of some landowners and land users being economically impacted is considered very likely. At this stage of the project, additional efforts to review location and/or design for avoidance or minimisation of land acquisition and economic displacement impacts are not foreseen.

The preliminary review for the preparation of the LRF identified that the potential involuntary displacement and loss of assets is likely to affect a small number of people but the probability of some landowners and land users being economically impacted is considered very likely. At this

stage of the project, additional efforts to review location and/or design for avoidance or minimisation of land acquisition and economic displacement impacts are not foreseen.

No physical displacement has been identified however to address economic displacement that is expected, a livelihood restoration plan (LRP) will need to be produced in line with national requirements, this LRF and the overarching requirements of IFC PS5. There are currently gaps in information regarding who will be impacted and the severity of impacts including verifying all landowners and land users and the extent to which their economic livelihoods will be permanently or temporarily impacted. It is expected that that information gaps will be addressed within the LRP.

The LRP will be a collaborative process between the Ministry of Climate Resilience, the Environment and Renewable Energy, and the Ministry of Finance. Prior to any displacement occurring, the plan will be prepared, payments made for land acquisition, land lease agreements and compensation paid for total or partial loss of assets and means of livelihoods.

Eligibility and entitlements

Although eligibility criteria will need to be finalized following completion of data gaps it is likely that the following categories of people will be eligible for compensation:

- Landowners or users with a land title for the land to be acquired
- Persons who do not currently possess legal rights but have a claim that is recognizable under customary or national law
- Persons who do not have any title or recognizable claim to the land lost

The main types of displacement impact from this project are:

- Permanent loss of agricultural land
- Loss of crops and trees
- Loss of business or farming related structures

Entitlements will be defined based on category of loss rather than category of person affected as each category of person may suffer more than one kind of loss. In-kind compensation (land for land) will be favored over cash compensation where the appropriate. Cash compensation will be based on replacement value.

Implementation and funding arrangements

The Ministry of Agriculture and the Ministry of Finance will be responsible for implementing the negotiated settlements and livelihood restoration plan. It is anticipated that negotiated settlement will be monetary payments.

The Ministry of Climate Resilience, the Environment and Renewable Energy, and the Ministry of Finance will be responsible for developing the livelihood restoration plan and ensuring the provision of compensation and assistance. Typical costs expected are:

- Plan preparation consultancy
- Cash compensation for land
- Cash compensation for crops, trees
- Budget to compensate structures
- Livelihood restoration measure costs
- Conflict resolution solutions
- Contingency (usually at least 10%)

Meaningful engagement and grievance redress

The livelihood restoration planning process will be based on primary source information and direct and detailed consultation with the affected communities and displaced people, as well as local leadership and authorities. Women and vulnerable people affected by displacement will be considered and directly involved in the decision-making process to ensure that their needs are also met in the choices made.

Potential conflicts, questions, comments, suggestions and other communications about land acquisition and resettlement will be addressed through the grievance mechanism which will be, available and accessible to all people. The grievance mechanism will receive, review, resolve, respond and monitor the grievances received.

Monitoring and reporting

The monitoring and evaluation will be the responsibility of the Geothermal Working Group (GWG). The GWG will be comprised of high-level membership across several ministries, agencies and entities that are connected in their roles and functions, to the goals of the geothermal development project. These are:

- Ministry of Climate Resilience, The Environment and Renewable Energy
- Ministry of Finance
- Ministry of National Security, Home Affairs, Public Administration, Information and Disaster Management
- Ministry of Economic Development, Planning, Tourism, ICT, Creative Economy, Agriculture and Lands, Fisheries and Cooperatives
- Ministry of Infrastructure and Physical Development, Public Utilities, Civil Aviation and Transportation

The GoG will identify a focal point for the GWG and project affected persons (PAPs) and other stakeholders. The focal point will be responsible for undertaking internal monitoring and reporting on LRP implementation. During implementation, each month an internal monitoring report will be produced. Key monitoring findings will be included in progress reports to the CDB. When the LRP is complete, the GoG will produce a completion audit report. The completion audit report should address the requirements presented in the guidance note on IFC PS5, namely an:

- Executive summary
- Review objectives
- Background with information about the monitoring process
- Legal framework
- Summary of eligibility criteria and entitlements
- Impacted communities
- Timing of displacement
- Displacement impacts and magnitude
- Restoration and compensation
- Outstanding issues
- Key findings and conclusion and key recommendations or corrective actions.

Monitoring of livelihood restoration and compensation will be aimed at determining:

- If PAPs have been meaningfully consulted and compensated in full and before implementation of the Project activities.

- If PAPs are now living at a higher standard than before, living at the same standard as before, or at a lower standard than before.
- If all elements of livelihood restoration are being and have been implemented according to plan.
- Indicators for monitoring will cover process, outputs and impacts.

1 Introduction

1.1 Overview

The Government of Grenada (GoG) is actively seeking to reduce Grenada’s dependence on imported fossil fuel for electricity generation, by exploring and increasing renewable energy options. Of the options under consideration, geothermal is considered the most promising to replace diesel power generation given the relatively large potential geothermal capacity in Grenada (sufficient to support a 15MWe power plant in the first instance) and the stable energy supply suitable for baseload electricity production (unlike more variable sources such as solar or wind).

With technical assistance from the governments of Japan and New Zealand, and grant funding provided by the Caribbean Development Bank (CDB), GoG has been investigating the potential geothermal sources across the island of Grenada. Following a comprehensive series of studies and investigations completed over several years, the Geothermal Energy Development Project is currently focusing on the exploratory test drilling phase (hereafter referred to as ‘the Project’) and now requires an internationally compliant Environmental and Social Impact Assessment (ESIA).

Mott MacDonald and EcoEngineering (Consultants) have been commissioned to undertake the ESIA for the exploratory drilling phase in accordance with GoG national laws, regulations and guidelines for environmental and social protection and the International Finance Corporation Performance Standard (IFC PS), associated PS Guidance Notes, and the World Bank Group Environmental Health and Safety (EHS) Guidelines (2007).

This livelihood restoration policy framework (LRF) has been developed to establish livelihood restoration objectives and principles, organizational arrangements and funding mechanisms for any livelihood restoration activity that may be necessary for the Project. In producing the LRF, specific reference has been made to national laws and regulations and the requirements of the IFC PS 5 on Land Acquisition and Involuntary Resettlement.

Resettlement is considered involuntary when affected individuals or communities do not have the right to refuse land acquisition or restrictions on land use which can occur when the buyer can resort to lawful expropriation if negotiated settlement fails. As the GoG has the power to expropriate or compulsorily acquire land for the public good, IFC PS5 is triggered.

1.2 The Proponent

The GoG is the Project Proponent and Project Authority.

Table 1.1: Project Proponent Contact Details

Information	Government of Grenada
Name	Herbert A Samuel
Position	Project Coordinator Geothermal Energy
Entity	Ministry of Climate Resilience, The Environment and Renewable Energy
Address	Ministerial Complex, Botanical Gardens, St Georges, Grenada
Telephone	+1 473 435 8708
Email	GrenadaGeothermalPC@gmail.com

1.3 ESIA Consultant

Table 1.2: Environmental and Social Consultants

Information	Mott MacDonald	EcoEngineering
Name	Andrew Day	Debbie Reyes
Position	ESIA Project Manager	ESIA local consultant
Entity	Mott MacDonald Limited	EcoEngineering Consultants Limited
Address	Mott MacDonald Victory House Trafalgar Place Brighton, BN1 4FY United Kingdom	62 Eastern Main Road, St. Augustine Trinidad
Telephone	+44 (0)1273 365303	+11 0 (868) 217-4420
Email	andrew.day@mottmac.com	ecoeng@ecoenggroup.com

Technical feasibility studies have been undertaken by Jacobs New Zealand Limited (Jacobs).

1.4 Structure of the report

The LRF is structured according to the following chapters:

- Chapter 1: Introduction
- Chapter 2: Project description
- Chapter 3: Potential displacement impacts
- Chapter 4: Legal and policy framework
- Chapter 5: Displacement planning and minimizing impacts
- Chapter 6: Livelihood restoration plan preparation
- Chapter 7: Eligibility and entitlements
- Chapter 8: Implementation and funding arrangements
- Chapter 9: Meaningful engagement and grievance redress
- Chapter 10: Monitoring and reporting

Other related documents relevant to the LRF are in the Environmental and Social Impact Assessment (ESIA) comprised of:

- Volume I: Non-technical Summary (NTS) of the ESIA main report
- Volume II: ESIA main report
- Volume III: Stakeholder engagement plan (SEP)
- Volume IV: Livelihood Restoration Policy Framework (LRF) – this document.
- Volume V: Environmental and Social Management Plan (ESMP)

2 Project description

In 2015, responding to requests from GoG, the New Zealand Ministry for Foreign Affairs and Trade (MFAT) and Japan International Cooperation Agency (JICA) funded technical assistance (TA) to execute preliminary surface-based exploration activities in Grenada which indicated the presence of underground geothermal reservoirs that could potentially support utility-scale power generation. The TA activities included a pre-feasibility assessment, environmental and social preliminary scoping exercise, and a preliminary drilling plan which was produced in 2016.

Seven locations were initially identified as possible drilling locations for deep slim hole exploration wells. This list was refined to a shortlist of three locations, following an initial assessment of water requirements and accessibility of the sites.

In 2016, Jacobs New Zealand Limited (Jacobs) undertook an infrastructure assessment to confirm the feasibility of access to the three shortlisted areas. As part of this study, one of the key aspects identified was the provision of a reliable water supply. In 2018, Jacobs subsequently produced an Exploration Drilling Plan, Water Resources Assessment and Drilling Site Definition Report. The Drilling Site Definition Report (dated 23 July 2018) further refined the proposed drilling site options, detailed water requirements and well pad locations. The report identified four possible drilling locations (Site B: Castle Hill, Site C: Tricolor, Site D: Barique, Site F: Florida/Plaisance). Subsequent analysis narrowed down the two preferred sites to:

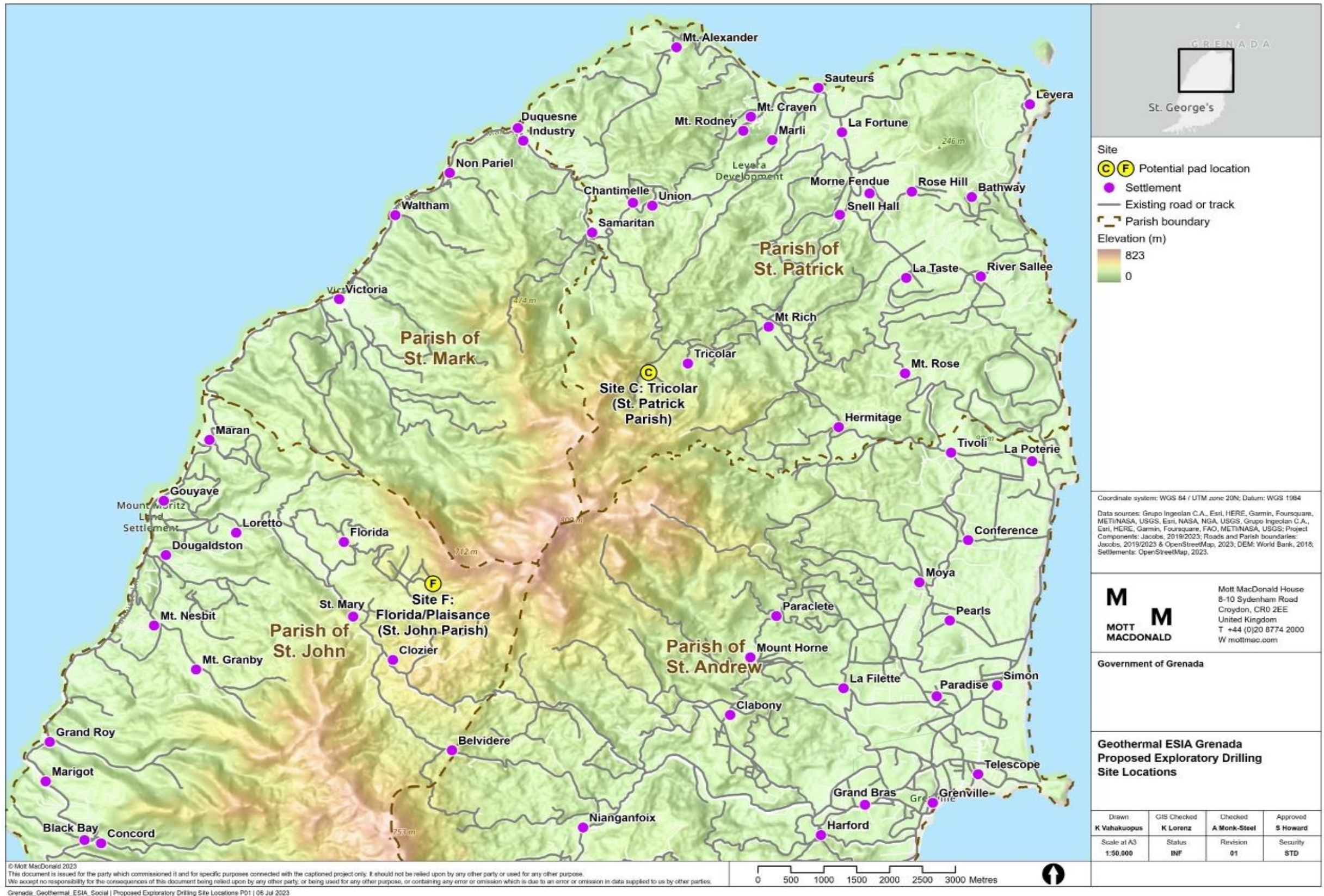
- Site C: Tricolor (St. Patrick Parish)
- Site F: Florida/Plaisance (St. John Parish)

Subsequent to the ESIA Scoping Consultation, further engineering review and analysis by Jacobs resulted in modifications to the proposed well pad at Site C (Tricolor).

2.1 Overview of Project locations

The two selected exploratory drilling pad locations are identified in Figure 2.1 and are described further in Section 2.1.1 and 2.1.2.

Figure 2.1: Proposed exploratory drilling site locations



Source: Mott MacDonald

2.1.1 Site C: Tricolor

Site C (Tricolor) is located to the north-east of Mount St Catherine. The site is generally well concealed with some areas currently cultivated for banana and nutmeg (amongst others) and surrounded by more mature secondary vegetation/forest habitat.

Figure 2.2: Photograph of site C (well pad location)



Source: Mott MacDonald water quality monitoring survey, June 2023

Figure 2.3: Photograph of site C (well pad location)



Source: Mott MacDonald water quality monitoring survey, June 2023

Figure 2.4: Photograph of site C (pump station location)



Source: Mott MacDonald water quality monitoring survey, June 2023

Figure 2.5: Photograph of site C (pump station location)



Source: Mott MacDonald water quality monitoring survey, June 2023

2.1.2 Site F: Florida/Plaisance

Site F (Florida/Plaisance) is situated to the southwest of Mount St Catherine and borders a forested area, which is also partly used as a plantation. The proposed pad location is reasonably flat with a slight incline. The land is currently used for some low-level agriculture. An access track runs through the middle of the site.

Figure 2.6: Photograph of site F



Source: Mott MacDonald ESIA scoping site visit 2019

Figure 2.7: Photograph of site F



Source: Mott MacDonald ESIA scoping site visit 2019

Figure 2.8: Photograph of site F (banana plantation)



Source: Mott MacDonald ESIA scoping site visit 2019

Figure 2.9: Photograph of site F (cocoa plantation)



Source: Mott MacDonald ESIA scoping site visit 2019

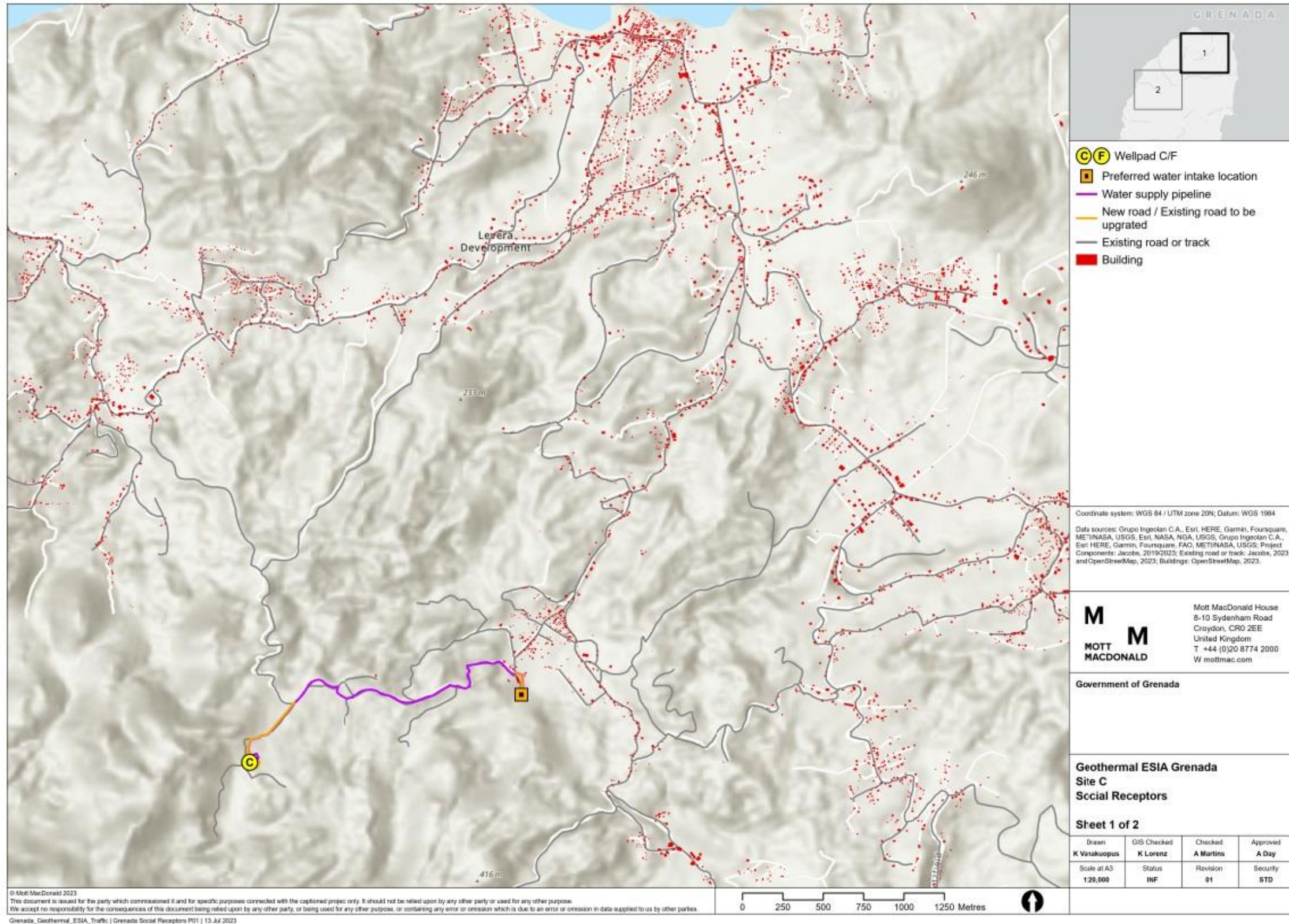
3 Potential displacement impacts

3.1 Overview

Displacement impacts can be categorised into physical displacement (loss of shelter and thus need for relocation) and economic displacement (loss of assets or access to assets that leads to loss of income sources or means of livelihood) as the result of land acquisition needed for the Project. The final well pad locations have been selected primarily on technical viability although avoidance measures to prevent physical displacement were also part of the selection process for the well pads and route design.

At Site C there is one house located along the access track which is proposed to be upgraded for access to the well pad from the public road and residential dwellings along the public road, in particular when passing through Tricolor village down to Tivoli. At Site F, there are several houses located on the farm track (which would be upgraded) leading from the public road to the well pad location – most of these are the Plaisance estate buildings. Houses and schools are located on the access road from the site to Gouyave. These residential and other properties may experience nuisance impacts from dust and noise but this will not be sufficient to require their relocation. These nuisance effects are assessed in Volume II ESIA (air quality chapter (Chapter 11) and noise and vibration chapter (Chapter 10)) and maps are shown below (Figure 3.1, Figure 3.2, Figure 3.3 and Figure 3.4).

Figure 3.1: Social receptors near to the access road to Site C



Source: Mott MacDonald

Figure 3.2: Noise area of influence for Site C

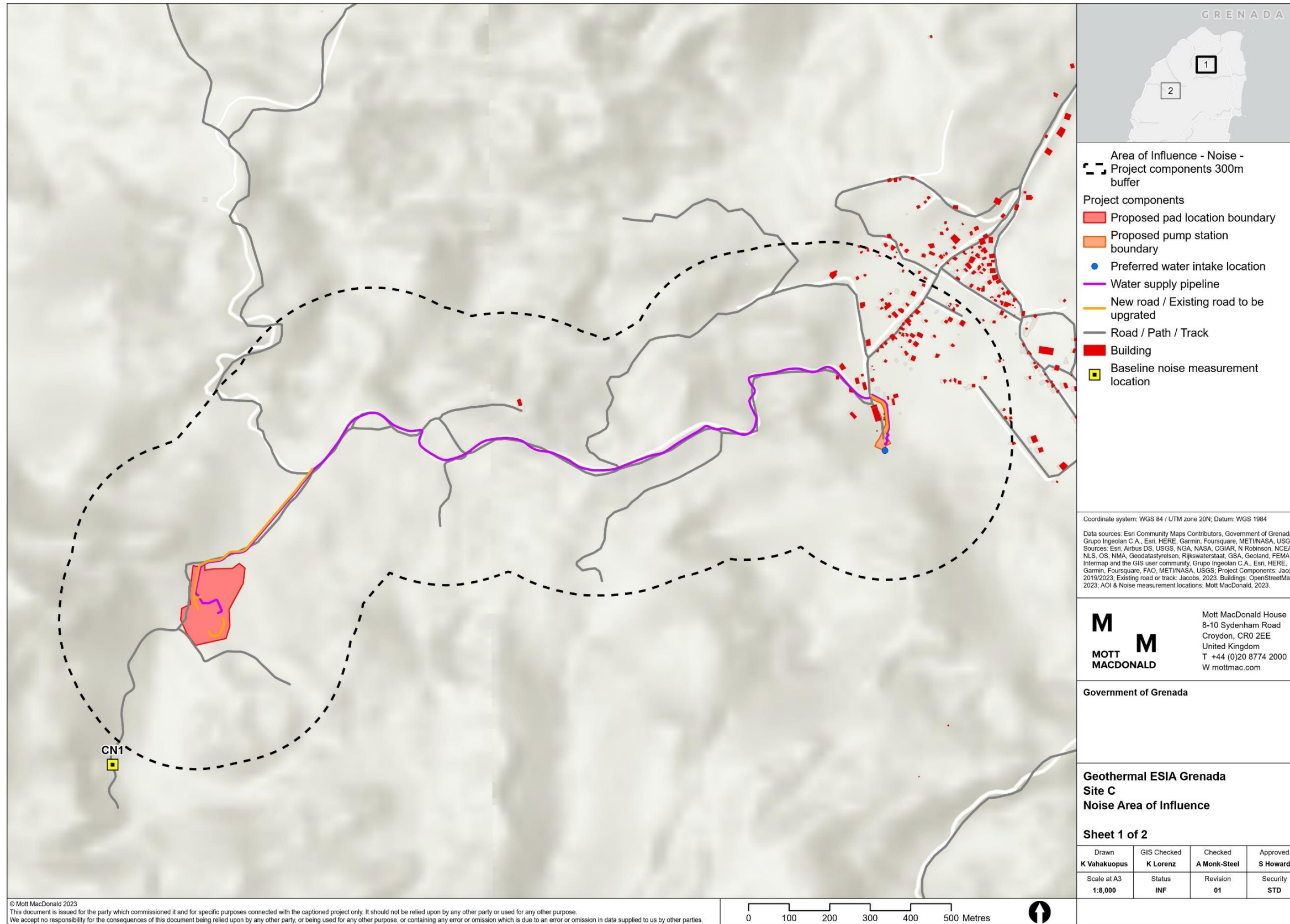
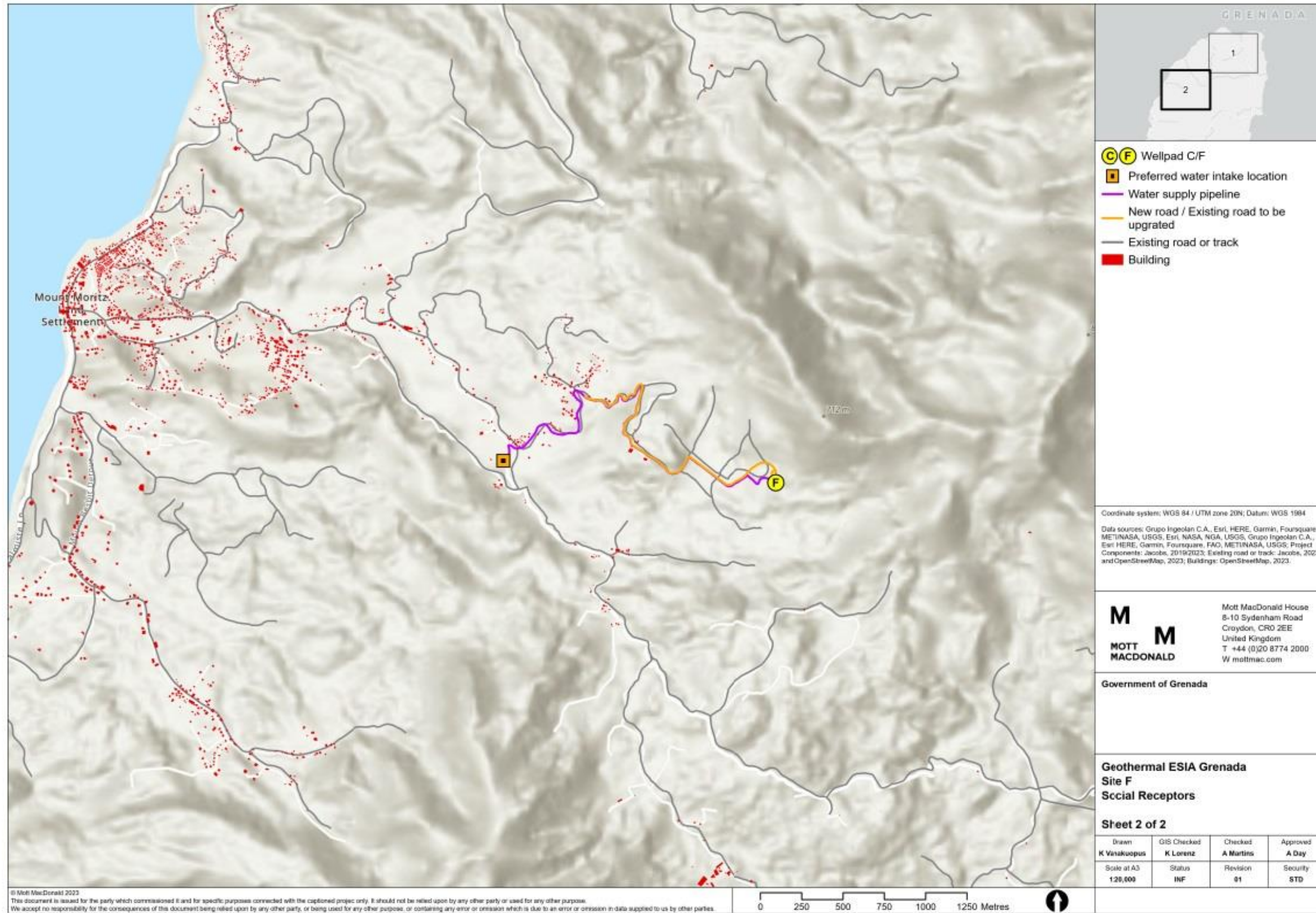
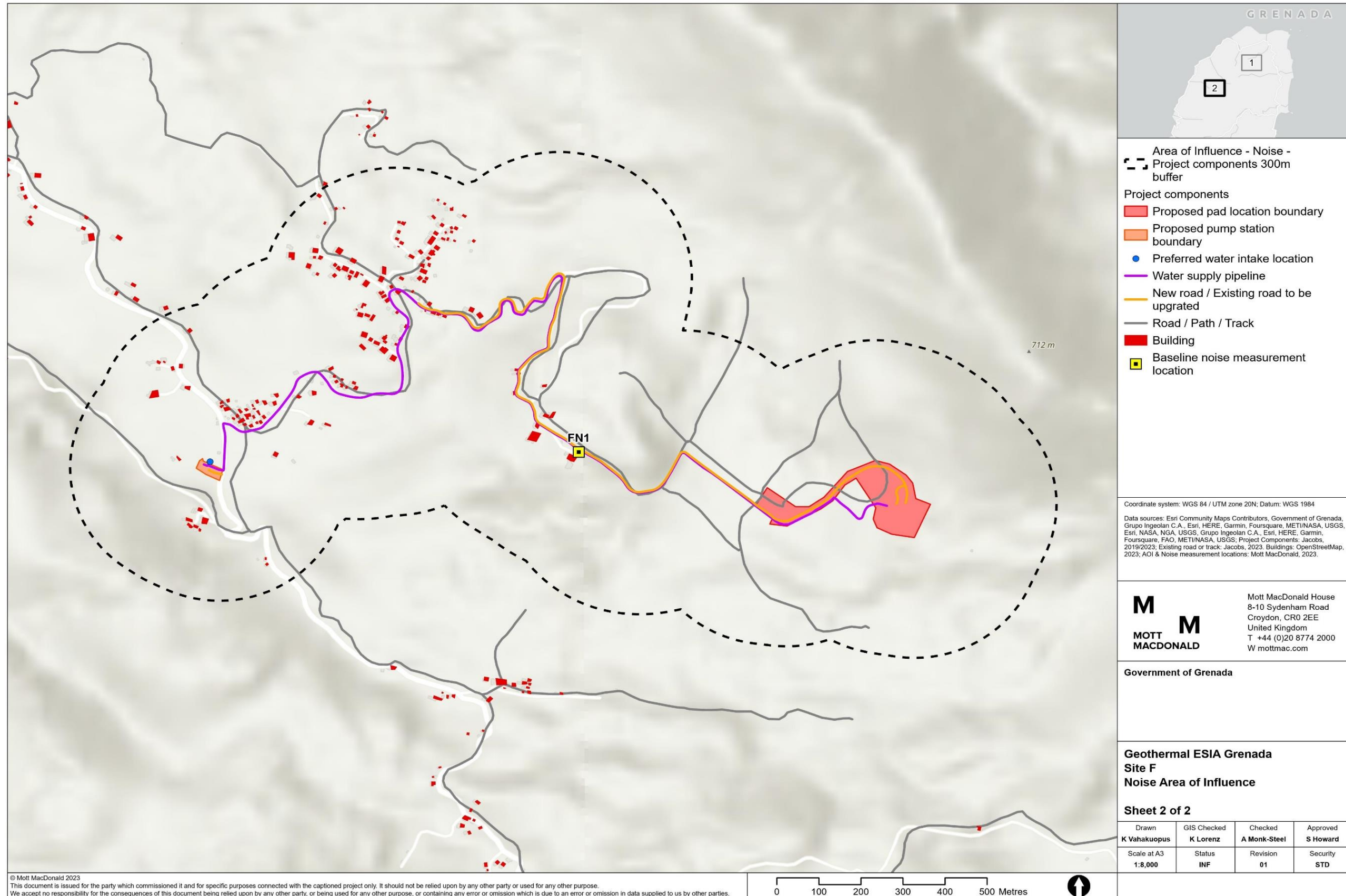


Figure 3.3: Social receptors near to the access road to Site F



Source: Mott MacDonald

Figure 3.4: Noise area of influence for Site F



3.1.1 Land tenure in Grenada

The current property rights legislation in Grenada is based on a pre-1925 system of the United Kingdom. Real estate property is either owned by the State or by individuals or entities of the private sector (or private land). Only the legal owner may transfer title on the property in the form of a freehold interest or a leasehold interest. Freehold properties are the lands sold with everything built on it and for an unlimited period of time. All permanent improvements to the property belong to the owner, and the use of the property and/or the buildings on it may be rented in terms and conditions mutually agreed upon by the parties. Encumbrances may be placed on the property per the owner’s decision. Leasehold properties respond to a similar concept of “rental properties”, but ownership of the land and permanent improvements to it revert back to the landlord after expiration of the term of the lease agreement. During “buyer-lessee” tenure, the house can be disposed of at will by renting it for shorter periods, selling the house to third parties (within the limitations of the leasehold agreement), or expanding it.

Family land, possession and/or ownership of land can be transmitted generationally within the same family as a customary right. It is not a legal category but has been common among descendants of African origin. Family land, when formalised, becomes private land.

Table 3.1 and Table 3.2 present the categorises of State land and private land tenures in Grenada respectively.

Table 3.1: State land tenure situation

Tenure	Title	Occupants
A. Formal	State entities	Land actually being occupied/used by the State and Government entities
B. Formal	Legal tenants	State land being leased or in another manner, formally allowed to be used by individuals and/or corporations
C. Quasi-Formal	Legal tenants but in breach of their obligations	Former squatters have been “dignified” (usually for political reasons), and land has been sold to them in favourable payment terms (commonly in the form of a long-term lease). Titling is withheld until full payment has been met. Most of these “buyers” have not paid as agreed and are in breach of contract, but no corrective actions being enforced.
D. Informal	Squatters (illegal but tolerated – tolerance is “unreliable” as governments may change view)	Illegal occupants have taken over the land. If time elapses and processes are complied with, Prescriptive Rights will give them the right to own and title the land after 30 years of unchallenged occupation.
E. Under State Control	Unoccupied	Empty land. Government officials argue that there is no idle flat land viable to be occupied for residency purposes.

Source: USAID, Grenada land tenure situation (2005)

Table 3.2: Private land tenure situation

Tenure	Occupants	Description
A. Formal	Legal owners	Land actually being occupied by its legal owne
B. Formal	Legal tenants (rent or lease)	Land actually being occupied by somebody other than the legal owner but protected by a formal contract or agreement that imposes mutual rights and obligations
C. Quasi-Formal IA	Apparent legal owners	Land actually being occupied by who is perceived to be its legal owner. There is no immediate challenge, but “owner’s” behaviour gives ground to suspect inability to provide evidence of Title.
D. Quasi-Formal IB	Legal tenants (rent or lease)	A combination of B and C (above). The occupancy is formalized, but there is no evidence of Title held by apparent owner.

Tenure	Occupants	Description
E. Quasi-Formal II	Family members on Family Land Non-conflictive	No division or titling has been done from the original “owner,” but the land is identified and the “rightful occupants” as well.
F. Quasi-Formal III	Family members on Family Land Conflictive	Same as above, but conflicts exist. Common conflicts are: <ol style="list-style-type: none"> the right of member(s) is being questioned, and/or the “share” of member(s) is being challenged, and/or an “outside” member wants to join the “family.” Major difficulty is that the extent of family beneficiaries is not specifically defined.
G. Informal (and Illegal)	Squatter in private land	Illegal occupancy by individuals on private land. Eviction legislation is in place to protect the legal owner.

Source: USAID, Grenada land tenure situation (2005)

3.1.2 Land acquisition status, tenure and use at the project sites

For the exploration phase, it is expected that land for Sites C and F will be leased. Land for road widening will need to be permanently acquired. The mechanism for this is not yet confirmed. For the well pads, road widening and pump station, a total of 67,892 m² (6.8 ha) are required from which 4,358 m² (0.4 ha) is State land and 63,534 m² (6.4 ha) is privately owned in some form.

A total of 13 private owners, including the State, have been identified at the well pad areas, road widening and new access, as well as pump station, and arrangements for acquisition or leasing are yet to be set up. Some of the State land is being farmed by individuals or entities that are pending to be identified, and that under IFC PS5 requirements are entitled to compensation. For two land plots, landowners or users have not been identified. One case has been identified in which the landowner is deceased, and potential heirs are out of state. Four landowners have not yet been identified.

The Land Acquisition Act describes the process by which land will be acquired/leased (please refer to section 4.2.2). The GoG is aiming to achieve negotiated settlements with all landowners. While expropriation is not currently anticipated, the GoG has the legal right to expropriate land.

Table 3.3 and Table 3.4 below provide summaries of landowners and plots identified at Site C and Site F. At the proposed Site C, the location of the drill pad is located within four land parcels which are used for farming. At the Site F, land use is considered minimal, with some low-level agriculture on the plots required for the project components (including the well pad, pump station and temporary laydown areas during construction). The proposed location of the drill pad is owned by two owners. One is a businessman, whose main economic activities are away from the site, and the second owner is a business entity. Information is still pending to be collected to fully assess the land tenure status of all land required for the Project, and the presence of all formal and/or informal occupants of the land. This will be completed as soon as possible and prior to the start of construction.

Table 3.3: Summary of lands required, ownership and use at Site C

Land plot #	Land purpose (access road/ water supply / well pad)	Ownership	Total area required (m2)	Occupants / land acquisition status
1	Pump station / access road	State land	2,032	Government land being farmed by individuals or entity to be confirmed
2	Road widening	State land	36	Government land being farmed by individuals or entity to be confirmed

Land plot #	Land purpose (access road/ water supply / well pad)	Ownership	Total area required (m2)	Occupants / land acquisition status
3	Road widening	State land	580	Government land being farmed by individuals or entity to be confirmed
4	Road widening	State land	950	No contact with landowner(s) made to date
5	Road widening	State land	760	No contact with landowner(s) made to date
6	Road widening	Not yet determined	410	No contact with landowner(s) made to date
7	Road widening	Not yet determined	1,280	Contact made with landowner. Arrangements to be formalized
8	Well pad	Privately owned – owner identified	3,261	Contact made with landowner. Arrangements to be formalized
9	Well pad	Privately owned – owner identified	7,011	Contact made with landowner. Arrangements to be formalized
10	Well pad	Privately owned – owner identified	10,224	Contact made with landowner. Arrangements to be formalized
11	Well pad	Privately owned – owner identified	474	Contact made with landowner. Arrangements to be formalized

Source: Landowner Information Matrix PRELIMINARY 29 March 2023 – Rev3.xls

Table 3.4: Summary of lands required at Site F

Land plot #	Land purpose (access road/ water supply / well pad)	Ownership	Total area required (m2)	Occupants
1	Road widening	Privately owned – owner and a caretaker identified	140	Owner has been contacted. Arrangements to be formalized. A caretaker has been identified and will be the contact person
2	Road widening	Privately owned – owner identified	365	Owner has been contacted, arrangements to be formalized
3	Road widening	Privately owned – owner identified	703	Owner has been contacted, arrangements to be formalized
4	Water supply / pump station	Privately owned – owner identified	1,628	Owner has been contacted, arrangements to be formalized
5	Road widening	Privately owned – owner identified	102	Owner has been contacted, arrangements to be formalized
6	Road widening	Privately owned – owner identified	241	Owner has been contacted, arrangements to be formalized
7	Road widening	Privately owned – owner deceased and potential heirs out of State	34	Owner deceased, potential heirs are out of state
8	Well pad / road widening / new access road	Privately owned – owner identified	40,497	Owner has been contacted, arrangements to be formalized

Source: Landowner Information Matrix PRELIMINARY 29 March 2023 - Rev1.xls

3.2 Economic displacement

The following economic displacement impacts are expected:

- Permanent economic displacement of livelihood activities
 - Permanent displacement due to upgrading of public roads and development of access roads
 - Permanent loss of land with standing crops and economic trees
 - Permanent displacement of economic structure due to ROW (currently assessed as one roadside stall)
- Temporary economic displacement of livelihood activities
 - Short to medium term temporary loss of livelihoods sources at well pads and pump station locations (up to nine months) and potential loss of access to temporary structures (day huts/ resting huts)
 - Short term temporary loss of livelihoods sources at construction laydown areas (approximately three months)

Preliminary calculations based on land plot boundaries indicates that the permanent and/or temporary loss of land will be less than 3% of the land for nine out of the thirteen private land plots. In the remaining four plots, the losses are estimated to be 10%, 19%, 32% and 53% of the total plots.

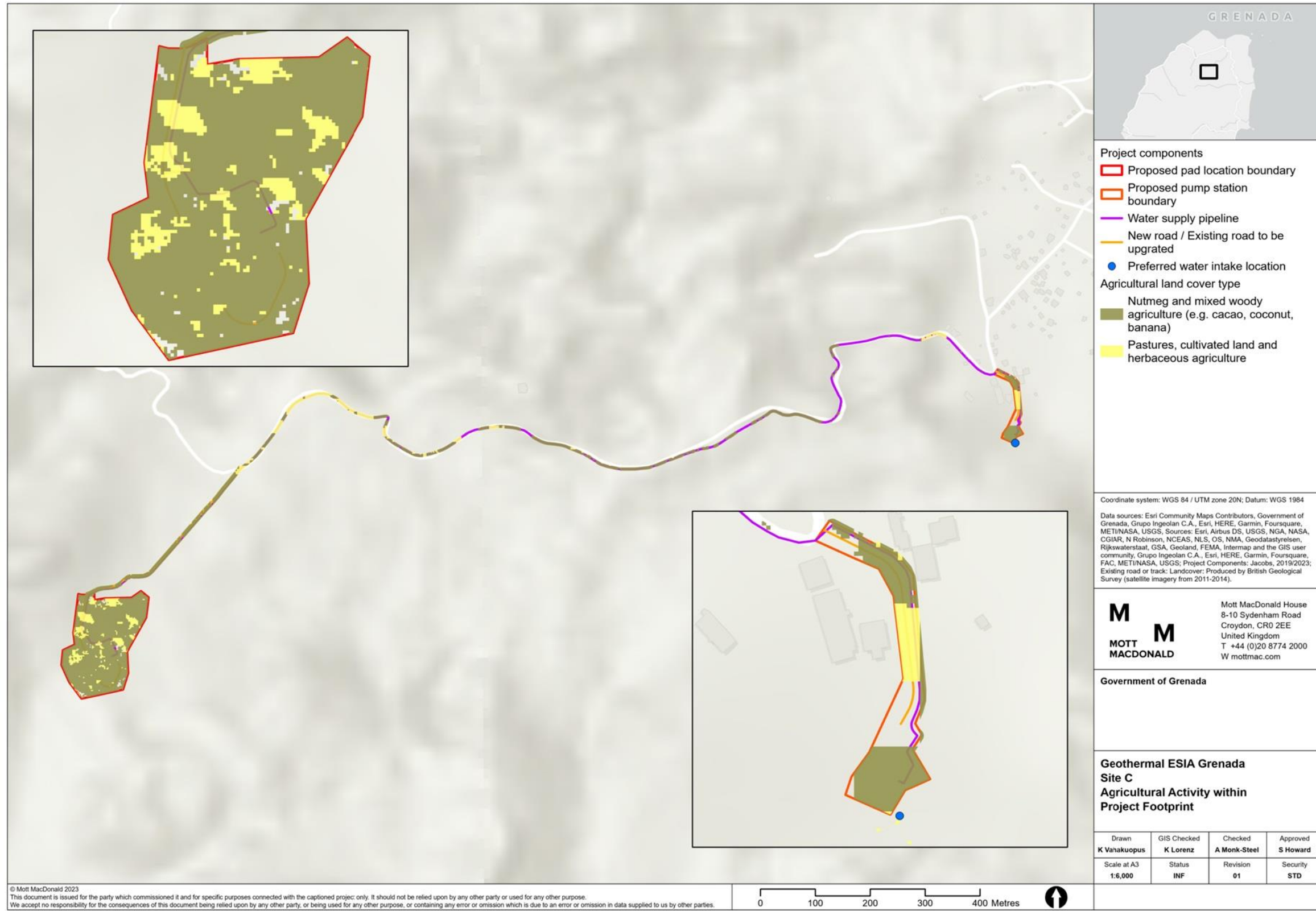
3.2.1 Permanent loss of land and displacement of livelihood activities due to upgrading of public roads and development of access roads

The need for land to accommodate upgrades to existing roads (such as widening of corners and junctions) and the construction of new access road segments to accommodate construction vehicles will result in the permanent acquisition of land. Modifications to the access route are considered permanent and will not be decommissioned or rehabilitated once the project ends resulting in the permanent loss for agricultural or other purposes.

The preliminary review for the preparation of this LRF identified that the magnitude of potential involuntary displacement and loss of assets is likely to be low ie, the number of PAPs affected is likely to be low but the probability of some landowners and land users being economically impacted is considered to be very likely. At Site C, road widening and creation of an access road will mainly take place on State land although two land owners remain unknown at the time of writing (July 2023). At Site F, a total of eight landowners will be impacted by permanent loss of land due to road widening.

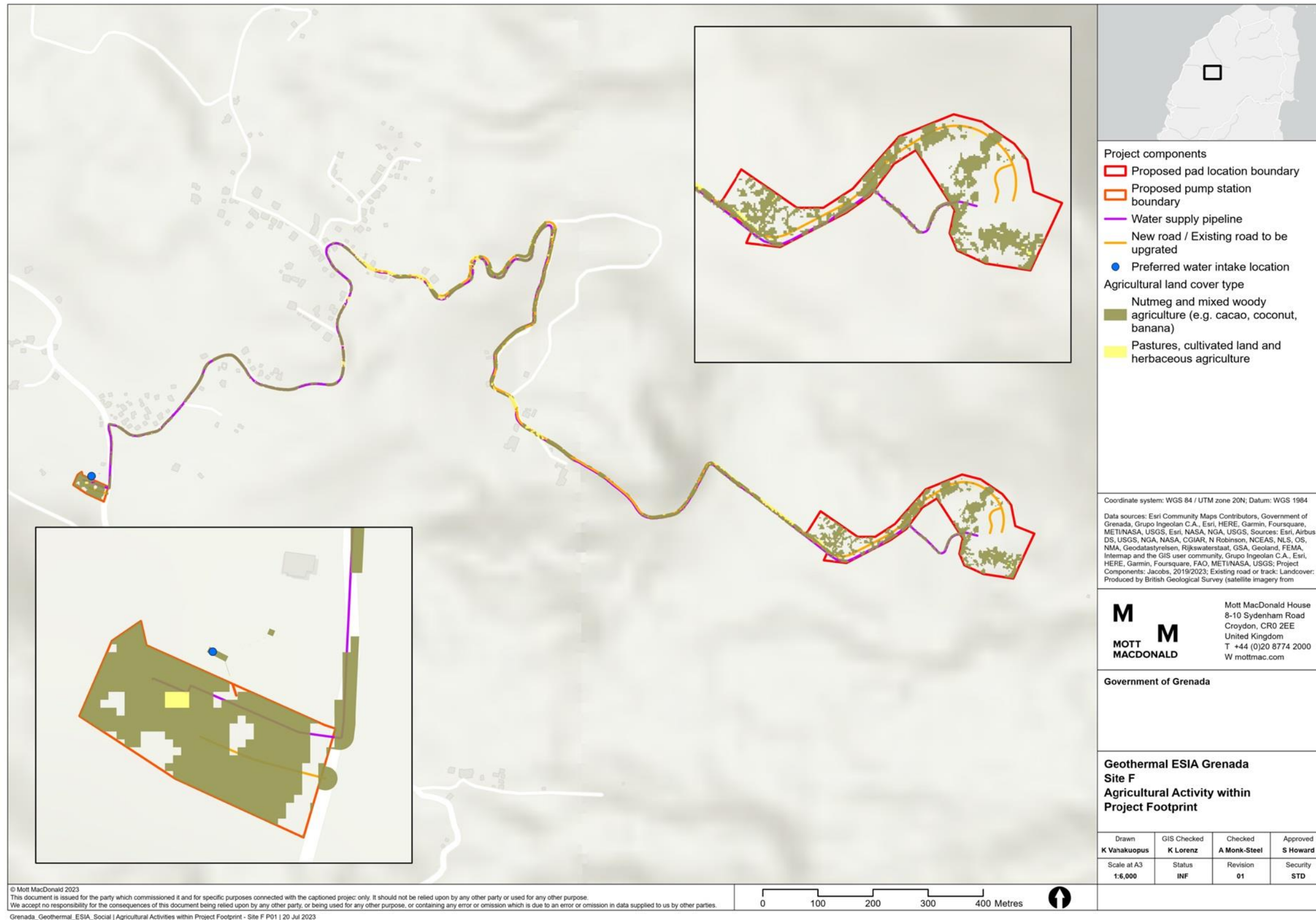
The agricultural land type within the Project footprint includes nutmeg and mixed woody agriculture (e.g., cacao, coconut, banana), pastures, cultivated land and herbaceous agriculture (refer to Figure 3.5 and Figure 3.6).

Figure 3.5: Agricultural activity in the Project footprint - Site C



Source: Mott MacDonald

Figure 3.6: Agricultural activity in the Project footprint - Site F



Source: Mott MacDonald

Under the existing national tenure system those with formal rights to land (as owners or tenants) are in a stronger position to negotiate for compensation under existing compensation processes. At this time, it is assumed that all formal landowners will be compensated through land lease agreements to be negotiated although if negotiations fail the landowners could be subject to expropriation procedures.

People that engage in illegal occupation of state-owned or private land (especially along the rights of way for roads) are less likely to be entitled to receive compensation under existing national requirements. The land affected by the road upgrades is yet to be surveyed with regards to formal or informal ownership and users but there may be farming activities along the right of way of public roads. A small road-side stall has been identified along the junction of the main road to Gouyave and the secondary road to the well pad F (Figure 3.7). It is not known at this time if the stall is occupying the site legally or informally and how often it is used. Further information is being collated by the GoG to ascertain the number of informal land users who are located within land required for the project. In these cases, occupancy is unlikely to be legal. Prescriptive rights to land are included in the legislation and there are some rights that can be conferred to illegal occupants who are able to meet a number of criteria including proof of a minimum number of years of uninterrupted unchallenged occupancy³.

Figure 3.7: Small road side stall from Gouyave to Well pad - Site F



Source: GoG, 2023.

3.2.2 Temporary economic displacement of livelihood activities

The Project is expected to result in temporary economic displacement arising from temporary land clearance and construction-operational and decommissioning activities including restrictions for people accessing livelihood resources (such as trees located within safety buffer zones around project components). These impacts are not expected to extend beyond the duration of the Project. Temporary livelihood impacts identified include:

³ 12 years for occupation of Private Land, 30 years for Crown Land.

- Short to medium term temporary loss of livelihoods sources at well pads and pump station locations (up to nine months).
- Loss of two temporary structures constructed on agricultural land plots.
- Short term temporary loss of livelihoods sources at construction laydown areas (up to three months).

The preliminary review for the preparation of the LRF identified that temporary displacement of landowners and users and loss of assets is likely to affect a small number of people but the likelihood of these people experiencing some loss of livelihoods is considered very likely. At sites C and F the well pad construction will mainly take place on private lands. At Site C, a total of four landowners and at site F a total of one landowner will be impacted by temporary loss of land due to well pad construction. At Site C, the pump station will be located on State lands and at Site F the pump station will be located on one private land plot. Agricultural land cover type in the project footprint includes nutmeg and mixed woody agriculture (e.g. cacao, coconut, banana) and pastures, cultivated land and herbaceous agriculture (refer to Figure 3.5 and Figure 3.6, above).

There are two small day huts used by farmers as a resting area located close to Site C project components: one approximately 20m south of the proposed well pad (Figure 3.8) and another approximately 10m north-west from the proposed well pad and 20m south-west from the proposed spoil disposal (Figure 3.9).

Figure 3.8: Farmer's hut (20m south) in Site C



Source: Ecoengineering

Figure 3.9: Farmer's hut (20m south-west) Site C



Source: Ecoengineering

3.2.3 Informal land users

As noted above under the existing national tenure system those with formal rights to land (as owners or users) will be in a stronger position to negotiate for compensation under existing compensation processes. At this time, it is assumed that all formal landowners will be compensated through land lease agreements to be negotiated although if negotiations fail the landowners could be subject to expropriation procedures.

One caretaker has been identified at one land plot where Site F is located. A portion of this land plot is required temporarily for the duration of the Project. Further assessment is required to

determine whether the individual will experience economic displacement or loss of livelihood due to the presence of the Project.

People that engage in illegal occupation of state-owned or private land that will be temporarily required for the Project are more vulnerable to economic displacement impacts as they have little to no legal recourse for compensation for lost crops or loss of income. The number of informal land users has not yet been determined.

3.3 Impacts on vulnerable people

Vulnerable groups are those who would be affected disproportionately by changes caused by relocation with less ability to adapt to changes in routine or mobility, to new housing locations or to new livelihood activities. They have few physical, social or economic resources to adapt to modifications in their reality⁴.

For the purposes of this LRF, vulnerable groups are considered to be those who would be unduly affected by changes caused by economic displacement.

The most vulnerable sectors of the population include people living below the poverty line, women, female-headed households, the elderly, and young people and children. Vulnerable, marginalised, and disadvantaged groups may be differentially impacted by the project or be less able to cope with project impacts than typical community members.

Women and groups considered to have specific vulnerability characteristics are identified in Table 3.5 below.

Table 3.5: Women and vulnerable groups

Group vulnerabilities	Identification
People living below the poverty line	In 2016, 38% of people in Grenada were living in poverty ⁵ and 2% were indigent ⁶ . Grenada has the highest poverty rate among countries in the Eastern Caribbean; significantly higher than the average of 23% for the region ⁷ . The groups most likely to be poor are women, young people and children, older persons, persons with disabilities, and farmers. Economic marginalisation may make individuals and households particularly vulnerable to negative impacts and less empowered to participate in consultation and access project benefits
Women	According to the World Bank collection of development indicators, the CPIA gender equality rating (1=low to 6=high) in Grenada was reported at 3.5 in 2021 ⁸ . Women face multiple and intersecting forms of discrimination such as poverty, gaps on labour and educational opportunities, different kinds of violence, rurality, or areas geographically inaccessible, etc.
Female-headed households	Almost half the households in Grenada (47%) are female-headed. Of these, more than 20% in the rural areas are poor according to the (Core Welfare Indicator), as compared to only 13% of male-headed households. Over half the female heads (56%) are unemployed compared with the male heads where a quarter has no work.

⁴ Rowan, 2017, Adapted guidance notes from IFC PS5.

⁵ World Bank, 2017. People don't have enough to meet their basic needs: <https://www.worldbank.org/en/news/video/2017/04/14/what-are-poverty-lines#:~:text=People%20living%20below%20a%20poverty,line%20of%20%241.90%20per%20day>. Retrieved 11 May 2023

⁶ Indigence entails living in a level of poverty in which real hardship and deprivation are suffered and comforts of life are wholly lacking. Retrieved 11 May 2023

⁷ Generation Unlimited: the Well-being of Young People in Grenada FACT SHEET. July 2021. <https://www.unicef.org/easterncaribbean/media/2961/file/GenU%20Grenada%20fact%20sheet.pdf> Retrieved 11 May 2023

⁸ World Bank: <https://data.worldbank.org/indicator/IQ.CPA.GNDR.XQ> Retrieved 11 May 2023

Group vulnerabilities	Identification
Elderly	<p>Female-headed households tend to be poor due to lower wages and have less access to assets and productive resources compared to men owing to gender bias against women⁹.</p> <p>The elderly population were found to be particularly vulnerable with 22.5% characterised as poor¹⁰. The difficulty of access to stable income and dependence on other family members (mostly women) is what makes this population the main pillars of their vulnerability. In addition, because they do not have a stable income, they are one of the populations most likely to take advantage of ecosystem services and to use subsistence farming systems. Therefore, the possible impact on land access could increase their vulnerability¹¹.</p>
Young people and children	<p>1 in 2 or 51% of children ages 0-17 and 18% of adolescents ages 10-19 were living in poverty, which is higher than the poverty rate for adults age 18+ years (30%). The poverty rate for young people ages 10-24 is not available because it has yet to be calculated. Grenada child and adolescent poverty rates are higher than the averages for the Eastern Caribbean (33% and 34% respectively)¹².</p> <p>The Gender Equality Observatory for Latin America and the Caribbean (2021) data shows a decreasing percentage on adolescent women aged 15-19 who are mothers, from 16.1% in 1981 and to 6.6% in 2021¹³. There is no data available on the rate of child pregnancies (i.e., girls aged 10–14 years)¹⁴.</p>

Source: Mott MacDonald (2023)

It is unknown at this time if any of the impacted landowners or users are considered vulnerable. Additional data is required to fully identify potentially impacted vulnerable PAPs.

3.4 Severely affected households

For this Project those households that will lose more than 50 percent of their cultivable land, businesses or livelihood source will be considered as ‘severely affected’. Displacement could push these people into deeper poverty and food insecurity, especially in areas where fertile land used for subsistence agriculture is lost. Particularly vulnerable people would also be those who do not have family or community support structures (e.g., single mothers) or those who already suffer social exclusion on disability, age or other grounds.

It is unknown at this time if any of the landowners or users will be severely affected, and the criteria will need to be refined based on primary data collected of affected households (household survey and assets survey).

⁹ Grenada UPR: Joint Submission from the United Nations Subregional Team for Barbados and the OECS. Annex 3: <https://uprdoc.ohchr.org/uprweb/downloadfile.aspx?filename=1482&file=Annexe3> Retrieved 30 May 2023.

¹⁰ Social policies in Grenada (2010): [Social Policies in Grenada \(ethz.ch\)](https://www.ethz.ch) Retrieved 11 July 2023.

¹¹ Oxford Poverty & Human Development Initiative (OPHI) (2015): [OPHIWP092_typosYD](https://www.ophi.org/) Retrieved 11 July 2023.

¹² UNICEF: <https://www.unicef.org/easterncaribbean/media/2961/file/GenU%20Grenada%20fact%20sheet.pdf> Retrieved 30 May 2023.

¹³ Gender Equality Observatory for Latin America and the Caribbean (ECLAC): <https://oig.cepal.org/en/countries/72/profile>. Retrieved 30 May 2023.

¹⁴ WHO: <https://www.who.int/news-room/fact-sheets/detail/adolescent-pregnancy>. Retrieved 30 May 2023.

4 Legal and policy framework

4.1 Overview

When details of land needs and involuntary resettlement that may occur in the future are not fully known (as for this Project), an LRF establishes the policy principles and guidelines for public information and discussion.

The LRF takes into account the provisions of national legislation. The principles outlined in the IFC PS 5 on Involuntary Resettlement have also been used in preparing this LRF and they will apply to all Project activities, whether or not the scale and complexity of economic displacement issues require preparation of a livelihood restoration plan (LRP).

The objective of this LRF is to ensure that by screening changes in land-use and by identifying where acquisition of land use rights for the project is inevitable that mitigating activities may be designed and carried out in a socially sustainable manner.

An outline of the applicable Grenadian and international land acquisition and resettlement standards for the Project is set out below.

4.2 Grenada legal framework for land acquisition

4.2.1 Constitution Order, 1973

All compensation for compulsory land or other asset acquisition originates from Grenada's Constitution. Compensation is established as a fundamental right of every citizen whose property is compulsorily acquired by the State for public purposes. Every person, regardless of race, place of origin, political opinion, colour, creed or sex is entitled to: "Protection for the privacy of his home and other property and from deprivation of property without compensation" (Chapter 1, No. 1 (c) and for "...prompt payment of full compensation" (No. 6 (1)).

4.2.2 Land Acquisition Act, 1998

The Land Acquisition Act, 1998 gives the Government of Grenada, through the Governor-General authority to acquire land for public purposes in accordance with the procedures set out therein for public interest, with due compensation paid to the seller. The following text from the Land Acquisition Land under section 3, indicates the land acquisition process:

(1) If the Governor-General considers that any land should be acquired for a public purpose he or she may cause a declaration to that effect to be made in the manner provided by this section and the declaration shall be conclusive evidence that the land to which it relates is required for a public purpose.

(2) Every declaration shall be published in two ordinary issues of the Gazette and copies thereof shall be posted on one of the buildings, if any, on the land or exhibited at suitable places in the locality in which the land is situate, and in the declaration shall be specified the following particulars relating to the land which is to be acquired

- (a) the parish or district in which the land is situated
- (b) a description of the land, giving the approximate area and such other particulars as are necessary to identify the land
- (c) in cases where a plan has been prepared, the place where, and the time when, a plan of the land can be inspected

(d) the public purpose for which the land is required

(e) whether the freehold, leasehold or mortgage interest is being acquired.

(3) Upon the second publication of the declaration in the Gazette as aforesaid the land if—

(a) freehold, shall vest absolutely in the Crown

(b) leasehold from the Crown, shall revert immediately with exclusive possession to the Crown

(c) leasehold other than from the Crown, the unexpired term of that lease shall vest in the Crown; or

(d) mortgage, the mortgage interest being acquired shall vest in the Crown, and the Crown shall in accordance with the relevant provisions of the Constitution and of this Act make prompt payment of such full compensation as may be due.

(4) Nothing in this section shall be deemed to prevent the acquisition of lands for public purposes by private treaty.

Under section 19 of the Act, rules for assessment of compensation is described as follows:

Subject to the provisions of this Act, the following rules shall apply to the assessment and award of compensation by a Board for the compulsory acquisition of land—

(a) the value of the land shall, subject as hereinafter provided, be taken to be the amount which the land, if sold in the open market by a willing seller, might have been expected to have realised at a date twelve months prior to the date of the second publication in the Gazette of the declaration under section 3:

Provided that this Rule shall not affect the assessment of compensation for any damage sustained by the person interested by reason of severance, or by reason of the acquisition injuriously affecting his or her other property or his or her earnings, or for disturbance, or any other matter not directly based on the value of the land

(b) the special suitability or adaptability of the land for any purpose shall not be taken into account if that purpose is a purpose to which the land could be applied only in pursuance of statutory powers, or for which there is no market apart from the special needs of a particular purchase or the requirements of any Ministry or Government department

(c) where the value of the land is increased by reason of the use thereof or of any premises thereon in a manner which could be restrained by any court, or is contrary to law, or is detrimental to the health of the inmates of the premises or to public health, the amount of that increase shall not be taken into account

(d) where land is, and but for the compulsory acquisition would continue to be, devoted to a purpose of such a nature that there is no general demand or market for land for that purpose, the compensation may, if the Board is satisfied that reinstatement in some other place is bona fide intended, be assessed on the basis of the reasonable cost of equivalent reinstatement

(e) no allowance shall be made on account of—

(i) the acquisition being compulsory or the degree or urgency or necessity which has led to the acquisition,

(ii) any disinclination of the person interested to part with the land acquired,

- (iii) any damage sustained by the person interested which, if caused by a private person, would not render such person liable to an action,
- (iv) any damage, not being in the nature of deprivation of or interference with an easement or legal right, which, after the time of awarding compensation, is likely to be caused by or in consequence of the use to which the land acquired will be put,
- (v) any increase in the value of the land acquired likely to accrue from the use to which the land acquired will be put,
- (vi) any outlay or improvement of such land which shall have been made, commenced or effected within twelve months before the publication of the declaration under section 3 with the intention of enhancing the compensation to be awarded therefor in the event of such land being acquired for public purposes.

On section 26 the Act provides indication on persons in possession to be deemed owners:

Where any question shall arise touching the title of any person to any land which may be entered upon or acquired for the purposes of this Act or touching any estate or interest therein, the person having the ostensible possession or enjoyment of the rents and profits of such land shall, for the purposes of this Act, be deemed to be the owner of the same until the contrary is proved.

4.2.3 Land Transfer Valuation Act, 1992

This Act provides a system of valuating land or other immovable property being transferred where such transfer attracts a tax. Specifically, whenever land is transferred in circumstances attracting any tax whatsoever, the taxing authority shall be entitled to require the Valuation Division of the Inland Revenue Department of the Ministry of Finance to determine the prevailing market value of such land for the purpose of its use. A crop compensation schedule dated from 1995 is to be used for crop compensation value (refer to Appendix A).

4.2.4 Land Settlement Act, 1969

This Act gives the Minister and/or the Land Settlement Development Board¹⁵ authorization to purchase, take or lease land by agreement with the owner for the purpose of providing small holdings. If the Minister or the Board is unable to acquire by agreement, and on reasonable terms, suitable land for the purpose of providing small holdings, the Governor-General may for that purpose acquire land compulsorily in accordance with the provisions of the Land Acquisition Act (see section 4.2.2 above), or any other Act which may hereafter be passed dealing with the compulsory acquisition of land by the Government and, for that purpose, the establishment and location of small holdings shall be deemed to be a public purpose.

4.3 International Standards – International Performance Standard 5 (IFC PS5)

The project is required to meet the IFC Performance Standards (PSs) requirements including PS5 Land Acquisition and Involuntary Resettlement (IFC PS5). Displacement is considered involuntary when affected individuals or communities do not have the right to refuse land

¹⁵ The Act defines the Land Settlement Development Board as a (1) A body corporate is hereby established to be known as the Land Settlement Development Board with perpetual succession and a Common Seal, with power in that name to contract, to sue and be sued, to acquire by purchase, lease, exchange, gift or otherwise and to hold and dispose of all kinds of property whether movable or immovable, and to draw, accept, make, endorse and negotiate bills of exchange, promissory notes, bills of lading and other negotiable instruments. (2) The Land Settlement Development Board shall be governed by the provisions of the First Schedule.

acquisition, in which case IFC PS5 is triggered. IFC PS5 recognises individuals with no recognizable legal right or claim to the land or assets they occupy or use. Key provisions include:

- Efforts must be made to avoid and minimise resettlement whenever possible, in particular physical displacement. When resettlement cannot be avoided, mitigation of potential negative impacts is required.
- Efforts must be made to improve, or at a minimum restore, the livelihoods and standards of living of displaced (physically or economically) persons to pre-project levels. Projects are responsible for improving living conditions among displaced persons through provision of adequate housing with secure tenure.
- Displaced persons (DP) may include owners or non-owner residents, and people occupying land without formal, traditional, or recognisable usage rights.
- Resettlement activities must be implemented with disclosure of information, consultation, and the informed participation of PAPs.
- Special provisions must be made for individuals belonging to vulnerable groups.

The IFC defines a livelihood as ‘the full range of means that individuals, families, and communities utilize to make a living, such as wage-based income, agriculture, fishing, foraging, other natural resource-based livelihoods, petty trade, and bartering’ (IFC, 2012).

4.4 Land acquisition and livelihood restoration framework principles

The Project’s guiding LRF principles take account of national requirements and incorporate the guiding principles of IFC PS5 and are as follows:

- Involuntary resettlement and land acquisition will be minimized or avoided where possible. Where acquisition of land use rights is unavoidable, management measures will be identified to minimise adverse impacts.
- Forced evictions will be avoided.
- Lack of title will not hinder eligibility for livelihood restoration support or compensation. Land acquisition affected people without clear land titles will have access to entitlements for assistance and compensation for the loss of non-land assets and land.
- Displaced persons (DPs), including untitled land users, will be meaningfully consulted.
- Negotiated settlements (willing buyer/willing seller or willing leaser/willing lessee) is the preferred Project approach.
- Compensation levels will be sufficient to replace the assets at full replacement cost in local markets (using current market prices).
- Livelihood restoration mitigation measures will be managed as sustainable development activities programmes. Particular attention will be given to vulnerable displaced persons without land titles (eg the poor, the illiterate).
- Compensation levels will be sufficient to replace the assets at full replacement cost in local markets (using current market prices).
- All compensation and allowances will be paid prior to economic dislocation; Payments in negotiated settlements such as leases will be made according to the signed schedules.
- When livelihoods are affected, DPs will be assisted in their efforts to improve their livelihoods and standards of living or at least to restore them to pre-project levels or to levels prevailing prior to the beginning of project implementation, whichever is higher.
- Monitoring of adherence to land agreements, leases and livelihoods restoration plans will be undertaken.

- Land losses may be total but are expected to be partial. Should replacement agricultural land be identified as a mitigation measure it must be at least equivalent in terms of productive potential, access and other locational advantages in relation to the old location. The absence of legal title to use and benefit from land does not limit rights to compensation. Conflict resolution and grievance redress mechanisms will be identified as part of planning, implementation and monitoring phases.

Payment of cash compensation for lost assets may be appropriate where livelihoods are not land-based. Payment of cash compensation may also be appropriate when the land taken for the Project is a small fraction of the affected asset, for instance 10 percent or less of the holding and the residual is economically viable. Cash compensation may also be paid where there are active markets for land use titles and labour, people actively use such markets, and there is sufficient supply of land. For the Project:

Acquisition of land use rights for the project may need to be subject to a land acquisition assessment (LAA) as part of the project development process if information is outstanding to verify land owners and land users to be displaced or goods lost as a result of the Project. Should a LAA be required it will identify the land, people occupying or using it and land uses. Their signed agreement would be necessary to provide documented proof of compliance of the project proponent with project financing agreements with regard to resettlement activities.

- For the Project, any damages to land and assets on the land caused by contractors during the construction activities will be addressed through cash compensation for lost productivity and by the provision of restoration measures (returning the land to its pre-project condition, providing seeds for the next harvest). The principles of this LRF will guide the provision of compensation for unforeseen damages caused advertently or inadvertently during construction and operation.

4.5 Methodology used to prepare the Livelihood Restoration Policy Framework

The LRF was prepared based on primary and secondary data collated for the social impact assessment. The approach to data collection is described in Chapter 7, Volume II ESIA. Primary data sources included focus groups discussions with landowners, women and small local businesses in 2019 and 2023 as well as meeting with key government ministry representatives, secretaries and authorities of the national level, parish/district governments, private sector companies and non-governmental organisations (NGOs) and visiting the main project sites (in March 2019 and April 2023).

5 Displacement planning and minimising impacts

5.1 Overview

This section outlines how the Project will minimise land acquisition, estimate the value of the land and assets on it, and establish plans or agreements that detail the terms of the land acquisition or lease.

5.2 Land acquisition needs and avoiding and minimising displacement

The final well pad and pump station locations, as well as land for road widening have been selected primarily on technical viability. As previously discussed, land needed for the development of the project has been minimised to the extent feasible (discussed in section 3). The preliminary review for the preparation of the LRF identified that the potential involuntary displacement and loss of assets is likely to affect a small number of people but the probability of some landowners and land users being economically impacted is considered very likely. At this stage of the project, additional efforts to review location and/or design for avoidance or minimisation of land acquisition and economic displacement impacts are not foreseen. If any changes to the location and/or design happen, criteria to avoid and minimise displacement impacts will need to be considered.

5.3 Identification of landowners/land users

As describe in section 3, at the present time not all landowners and users have been identified. Also, it remains unclear which owners are considered to be formal or informal owners. Previous to any land acquisition or lease agreement, the GoG will need to gather all information required under PS5 requirements and national legislation to proceed with negotiations. Progress has been made by the GoG in:

- Identifying properties to be acquired/leased, with relevant details.
- Contact property owners to inform them of the need to acquire/lease their property, reason and the amount required.
- Contact property users to inform them of the of the need to acquire/lease the property being used, reason and the amount required.

Additional information is to be collected on:

- Collection of legal documents to prove ownership of land.
- Collection of personal identification and banking information from property owners to facilitate transfer of funds.

5.4 Valuation process

The Land Transfer Valuation Act (1992) provides a system of valuating land or other immovable property (eg, business structures). The Valuation Division of the Inland Revenue Department of the Ministry of Finance is responsible for determining the prevailing market value of such land and/or immovable property for the purpose of its use.

For trees and crops, the land surveyors will consult the Ministry of Agriculture and Lands, Valuation Division of the Inland Revenue Department, market traders, and academic specialists regarding full replacement cost. The Ministry and the Department have data on the prices of

crops at the industrial and household production level which could be indicative of value. Where trees will be lost, replacement cost will need to consider value of productivity and number of fruit bearing years for fruit trees, and the age and value of timber/fuel for wood trees. All land leases will aim to allow harvesting of existing crops on the land and include notice to not plant new crops or trees. To the extent possible, trees on plots should be kept in situ and not removed.

An inventory of assets that will be lost or impacted will be conducted to register the degree of impact. The inventory will cover each individual's assets that will be lost or impacted, including physical structures like stalls for sales of goods, crops in the ground, day huts-resting huts, land area for cultivation, tree crops; and income generating activities.

It is important at this stage to gather enough information to be able to identify the total income per family and the proportion that will be interrupted or lost due to project activity. Follow up verification may be required for families with high proportions of land, crops or livelihoods sources to be lost.

Procedures for calculation of compensation values will involve:

- Attribution of monetary values or materials at agreed-to rates equivalent to current replacement costs for shelter assets owned by families who only use them in the agricultural season or trade.
- Attribution of monetary values to the crop assets according to rates per crop calculated by the government agricultural sector and agreed by the affected families.
- Attribution of monetary values to cover interrupted income for those with businesses wholly or partially affected by project development.

All compensation agreements should be recorded and signed with local witnesses as well as signed verification by the local authorities. Copies of these documents should be held by the affected person and the GoG.

Commercial agricultural or forest plantations will be valued with the owners at replacement cost plus a factor for loss of business. The GoG will aim to reach agreement with the owner or concessionaire on fair compensation payment based on private negotiation.

5.5 Negotiation of settlements

Even though the possibility of resorting to expropriation makes the land acquisition "involuntary", negotiated settlements are the preferred approach for this project and are promoted under IFC PS5. Negotiated settlements avoid compulsory expropriation and eliminate the need to use governmental authority to acquire land or remove people forcibly. The Ministry of Agriculture and Lands will undertake the land lease and acquisition process and sign agreements including details under which the negotiated was settled are to be fully documented.

Negotiated settlements are typically achieved by providing fair and appropriate compensation and other incentives or benefits to affected persons or communities, and by mitigating the risks of asymmetry of information and bargaining power. The Ministry of Agriculture and Lands will discuss with landowners and users to determine what conditions would be required to make them open to negotiated settlements. The land needs for the Project are not anticipated to be large and the project team will use meaningful consultation to identify affected properties whose landowners are amicable to establishing a negotiated settlement.

If the land acquisition is temporary or permanent and a negotiated settlement can be established, a legally binding lease that is fully compliant with national laws will be used. As per the GoG the intention is that road widening areas will be acquired, and areas that encompass new access roads adjacent to well pads and/or pump stations may be leased. This is yet to be confirmed at a later stage.

IFC PS5 requires that full replacement cost is used for involuntary resettlement impacts. Replacement cost means that the affected person can replace the affected asset to the same condition. Full replacement cost typically reflects market value (when a property market exists) without deduction of transaction costs, transfer or retitling fees, or depreciation and salvageable materials.

Price is to be negotiated, and a report will need to be prepared with the complete list of properties and final agreed price. If an agreement is not reached, the owner may provide a private assessment value for further negotiation. The Valuation Division of the Inland Revenue Department of the Ministry of Finance will be required to determine the prevailing market value of such land for the purpose of its use (ie. to identify rates for land, crops and trees) that can be used for land agreements. Land is normally appraised taking into consideration productive value, location (closer to roads is generally higher value), recent land transactions, and official notices related to property values by land departments. The Ministry of Finance will be in charge of payments.

6 Livelihood restoration plan preparation

6.1 Overview

As described in Section 3 the Project is likely to result in permanent and temporary impacts on people's livelihoods. There are currently gaps in information regarding who will be impacted and the severity of impacts. As identified in Section 4.4 a LAA may be required to verify all landowners although it is expected that that information gaps will be addressed within a livelihood restoration plan (LRP). The LRP planning will be a collaborative process between the Ministry of Climate Resilience, the Environment and Renewable Energy, and the Ministry of Finance. Prior to any displacement occurring, the plan will be prepared, payments made for land acquisition, land lease agreements and compensation paid for total or partial loss of assets and means of livelihoods.

6.2 Content of a livelihood restoration plan

The LRP will be based on the principles outlined in section 4.4 and based on compensation for losses at full replacement cost. Although the number of affected persons and the extent of their displacement is not fully understood it is expected that cash compensation equal to full replacement cost as identified under IFC PS5 will be provided rather than replacement land or property of equal or greater value as losses are expected to be small, with alternative land already available to affected persons and impacts predominantly temporary in nature (up to approximately nine months).

The process of identifying and valuing lost assets will be designed to be participatory. The following methods will be used to inform the preparation of the LRP:

- Census of all affected legal and illegal landowners, tenants and users
- Inventory of all affected assets located within the Project footprint

The minimum information to be presented in a livelihood restoration plan (LRP) for this Project is:

- An introduction to the project and regulatory framework.
- A description of the project activity that create impacts on livelihoods and actions to minimise them.
- An survey of displaced persons (census), asset inventory and valuation and the social baseline, including, if the scale of impacts merits it, results of a socio-economic survey
- A detailed description of compensation and other assistance.
- Results of consultations with displaced people (landowners and land users) about the livelihood restoration planning process.
- A description of institutional responsibility for implementation and procedures for grievance redress.
- Arrangements for implementation and monitoring.
- A timetable and budget detailing all costs, including relocation, compensation, administrative costs and monitoring fees.

6.3 Data collection requirements

To produce the plan, a household census will be carried out. These surveys will be undertaken with 100% of the displaced persons (DPs) (individuals or households, land owners and land users).

The following information must be collected through the household census:

- Demographic household data (household members by age and relationship to household head), ethnicity, religion, educational attainment, health determinants.
- Livelihood and income sources with details disaggregated per income source.
- Household expenditures including basic services such as water, sewerage, electricity and taxes (as applicable).
- Identification of systems in place for livelihood and subsistence and identification of areas for improvement.
- Identification of factors determining vulnerability (poverty level, women or child-headed households, elderly, disabled and those with long-term illness including HIV/AIDS).

Baseline information will be disaggregated by gender. This household socio-economic data along with the ESIA social baseline data will be used during monitoring and evaluation to assess the extent to which measures in the LRP are effective in mitigating negative land acquisition and economic displacement impacts and providing similar or improved living standards and socio-economic conditions.

The asset inventory will involve: a) staking out the affected land on the ground based on the engineering design of the Project, b) measurement of all affected land assets and c) determination of non-land affected assets. The asset inventory will result in:

- Number and types of buildings and other assets on the land that will be affected.
- Land use survey of types of land use affected by the Project.
- Land tenure arrangements for each affected property.
- A technical drawing of plot and structures.
- Measurements of affected land and other fixed assets.
- Detailed descriptions and specifications of building materials.
- Photographs of the property and each structure.
- Recording of location with coordinates.

The asset inventory will be used to produce the final list of affected households and inventory of impacts. All fixed assets (i.e., lands used for commerce, agriculture (including ponds), stalls or shops and secondary structures such as fences, wells, trees with commercial value, etc.) that will be affected by Project activities will be identified, tagged, measured, their owners and users identified, with a record of the exact location with coordinates. The asset inventory will be the basis for calculating replacement cost of affected assets and determine severity of impact on affected assets and severity of impact to the livelihood and productive capacity of persons affected by such losses.

The GoG will be responsible for organizing the asset inventory, census and replacement cost analysis. The GoG will engage accredited land surveyors who will determine compensation rates that reflect prevailing market prices for all types of affected assets. The rates will be reflected in the LRP.

Should land acquisition or leasing result in negative changes to or loss of productive assets used for subsistence living or income generation, livelihood restoration measures may also need to be identified. This would be decided upon the results of the census and asset inventory. If in addition to cash compensation further livelihood restoration measures are also required these measures will need to be elaborated with the meaningful and active participation of the affected persons. Livelihood restoration typically involves the provision of training and marketing support.

The LRP will identify displaced persons eligible for compensation and the entitlement package using the guidance in this LRF. Based on IFC PS5, those affected by involuntary resettlement are entitled to compensation at replacement cost for lost assets. Replacement cost¹⁶ means that the affected person can replace the affected asset to the same condition. Full replacement cost typically reflects market value (when a property market exists) without deduction of transaction costs, transfer or retitling fees, or depreciation and salvageable materials. GoG will use full replacement cost as a basis for identifying fair and transparent negotiated settlements for permanent and temporary land acquisition.

Private sector or government accredited land surveyors will be hired to identify rates for land, crops and income sources that can be used for agreements. Land is normally appraised taking into consideration productive value, location (closer to roads is generally higher value), recent land transactions, and official notices related to property values by land departments. All requirements of national legislation, including rules set forth by the Ministry of Agriculture and Ministry of Finance will be followed. The LRP should aim to allow harvesting of existing crops on the land and include notice to not plant new crops or trees.

The LRP should be accompanied by an effective process of negotiation that includes the definition and presentation of a range of feasible options which the affected households can decide on. Time and effort should be afforded to ensure that options are understood and that the decision is based on full comprehension of aspects of each option. Women should be involved in the decision-making process to ensure that their needs are also met in the choices made. Women of the household should be encouraged to sign legal documents where possible and where not disallowed by legal requirements.

Chapter 7 Eligibility and entitlements presents eligibility criteria that will guide the treatment of DPs who experience involuntary resettlement impacts.

6.4 Livelihood restoration plan approval and disclosure

The Ministry of Agriculture; the Ministry of Climate Resilience, the Environment and Renewable Energy, and the Ministry of Finance will be responsible for organising the production of land leases/agreements and the LRP. The LRP will need to be approved by the Caribbean Development Bank safeguard team. Once an acceptable draft has been prepared, the LRP must be publicly disclosed. During the public disclosure period, the LRP will be presented to key stakeholders and made available in a summarised or full form as appropriate for the public consultation audience. Feedback from public disclosure will be incorporated in the final document and then it will be re-disclosed.

¹⁶ The calculation of full replacement cost will be based on the following elements: (i) fair market value; (ii) transaction costs; (iii) interest accrued, (iv) transitional and restoration costs; and (v) other applicable payments, if any.

7 Eligibility and entitlements

7.1 Overview

This section deals with the methods of identifying categories of PAPs and their potential eligibility for compensation and other assistance. Once the basic principles governing inclusion of PAPs and exclusion of ineligible people are defined, they help clarify the basis of eligibility for PAPs and help protect GoG from speculators. The eligibility criteria and entitlements are established with reference to both Grenadian law and IFC PS5.

7.2 PAP Categories

Categories of people who lose assets are likely to be those indicated in Table 7.1. If other categories are identified during land acquisition and livelihood restoration planning, they will be included according to the principles of this LRF. The exact numbers of PAPs and the degree of impact on the households' livelihoods (their losses, ownership status, tenancy status etc.) will be determined during livelihood restoration planning. Households in which single members are affected by the Project construction are considered members of affected households.

Table 7.1: Criteria for Assessment of Potentially Affected Households

Impact Type	Description
I.	Households who own land that is required for the project (well pads, pump station, roads, other).
Permanent loss of land	Households that will lose part of their land plot Households that will loss rental income from tenants on their land plot Households that will lose part of their land, their produce and any structure located within the project footprint Households that may only lose tree crops.
Temporary loss of access to land	Households that will lose access to their land plots temporarily and produce. Households that will loss rental income from tenants on their land plot Households that may lose access to tree crops located within safety buffers around project components.
II.	Households who own structures on land required for the Project
Permanent economic losses.	Households that will lose income from closure of business and who lose structures erected for this activity due to road widening
III.	Households who use land but do not own it
Permanent economic losses	Households who are tenant farmers and will lose their produce and any structure located within the project footprint Households without legal entitlement who will lose their produce and any structure located within the project footprint
Temporary economic losses	Households who are tenant farmers and will lose their produce and any structure located within the project footprint Households without legal entitlement who will lose their produce and any structure located within the project footprint

Physical displacement is not expected, and no cultural properties are located within the Project site. Ecosystem services are not expected to be adversely affected by the project. Agricultural services and, other ecosystem services are utilised by local residents including medicinal plants, firewood, fishing and use of water sources for bathing and laundry. The magnitude of impacts on ecosystem services is considered to be negligible. The impact of the Project on ecosystem, service users is considered minor and therefore not significant (Chapter 7 Socio-economic and cultural).

The impacted persons can be categorized into three groups, namely: affected individual, affected household, and vulnerable groups (either individuals or households that may include people living below the poverty line, female-headed households, elderly, young people and children). Vulnerable groups require special attention of their needs in the socio-economic assessment so that:

- They are individually consulted and given the opportunity to participate.
- Their compensation is designed to improve their pre-Project livelihoods.
- Special attention is paid to monitor them in a meaningful and participatory manner to ensure that their pre-project livelihood is indeed improved upon.
- They are given assistance if they wish to make use of the grievance redress mechanism.
- Decisions concerning them are made in the shortest possible time.

7.3 Procedures for assessing entitlement

Procedures for assessing entitlement to compensation and other forms of assistance will be organised along the following lines:

- Based on the census of all people who are known to be affected by the Project to be carried out in the early planning stages to identify those eligible for assistance (outlined in section 6.3).
- Asset inventories of each affected family to make a detailed register of all affected assets recording types of crops, their age, and productivity; quantity and size of land areas impacted and all non-farm livelihoods sources.
- The decision about entitlement will be made by GoG following analysis of all claims. Each household eligible for compensation or other assistance will then be informed of the basis of the decision and the options for assistance they have.
- This process will be fully documented for the full LRP, including the decisions taken and their reasons at every step of the way. Should complaints be lodged against decisions about eligibility, these will be dealt with through the established procedures for communicating and responding to grievances described in Section 9 below.
- Agreements on compensation types and amounts will be signed by each household and witnessed by a local leader and government officer. The document will serve to clarify the rights of affected households and defend GoG in the case of any claims against it.

7.4 Cut-off date

For all land needs, the GoG will identify who owns and uses the land, and who is eligible to be considered for compensation or assistance due to land acquisition. For each activity, eligibility will be based on a cut-off date, which will typically be the completion date of the household census and detailed measures of land and other assets affected by the Project.

PAPs who are identified in the project area prior to the cut-off-date will be entitled to compensation for their affected assets and to restoration measures sufficient to assist them to improve or at least maintain their pre-project living standards, income-earning capacity, and production levels (where applicable). Those who encroach into any Project area after the cut-off date will not be entitled to compensation or any other assistance. Encroachment is not anticipated as the Project location is not very inhabited and exploration activities will allow staff to keep aware of land use in surrounding areas. The PAPs and community leaders will be informed of the cut-off date at the time of the census and asset inventory. Notification will aim to ensure PAPs do not make improvements to their land and to advise any people who illegally settle in the Project area after the cut-off date that they will not be entitled to compensation or assistance under the Project.

For the Project, PAPs eligible for compensation and Project assistance include:

- Landowners or users with a land title for the land to be acquired or leased
- Persons who do not currently possess legal rights but have a claim that is recognisable under customary or national law
- Persons who do not have any title or recognisable claim to the land lost

PAPs included under i) and ii) will be compensated for the affected land and assets on the land. PAPs included under iii) will not be entitled to any compensation for the affected land, but will be entitled to compensation for their non-land assets and other assistance. If any businesses are affected, they will also be entitled to compensation.

Although it is not anticipated, sufficient notice will be given to any entity using land who is not eligible¹⁷ requesting them to vacate premises and dismantle any structures prior to the Project's mobilisation and implementation. As necessary, for instance if the affected persons are identified as being vulnerable, shifting assistance can be provided.

At this stage of advanced design for exploration phase, there is no indication that any Project land acquisition will impact existing community facilities, such as water pipelines, energy distribution towers, schools, health units, or market places. The Project will make all efforts to avoid such impacts in the future. Should such a situation occur, lost community resources will be eligible for compensation and GoG will take necessary steps guided by this LRF and IFC PS5 to prepare mitigation.

In some cases, the process for identifying eligibility depends on the type of displacement impact. Some guidelines for eligibility per type of impact are presented below. These will be more fully defined based on the results of the census and asset inventory.

7.4.1 Loss of agricultural land

The total impact of loss of agricultural land will be estimated based on the total footprint of the final design of the Project and all of its components. All forms of agricultural use (for crops as well as for animals) will be considered. The accredited surveyors will use nationally recognised sources (agricultural department, rural extension service providers, market traders, real estate professionals and trade specialists) to determine replacement cost of land as well as the structures and assets on the land.

Once the final design of all Project components is complete, the footprint will be mapped and all properties overlapping the affected areas will be identified. This process will be undertaken through consultation with residents, headmen and the chief. If there are any disputes regarding land ownership, the grievance mechanism for solving disputes will be utilized.

Once all affected properties are identified, calculations will be made as to how much land with potential to be used for agriculture will become unusable on a temporary or permanent basis. To produce a conservative estimate based on a worst-case scenario land that is not currently in use for some other purpose and that has the soil that could be needed for planting or animal raising will be considered in the calculations.

7.4.2 Loss of crops

All of the permanent and temporary components of the Project will be considered when analysing this impact, as will crops that will be affected from damage caused by dust or other effects of the construction, operation or decommissioning process. As mentioned above, the

¹⁷ For instance, if someone moves into the area after the cut-off date.

accredited surveyors will be able to make estimates based on footprints and nationally recognised sources for replacement cost.

7.5 Entitlements

The household census and asset surveys will provide the basis of the identification of PAPs and assets. A detailed entitlement matrix setting out the eligibility of each category of affected person and their entitlements will then be developed based on the results of those surveys. It is expected that losses will include those listed in the preliminary entitlement matrix below (Table 7.2:) for example land, structure, trees and crops. Entitlement packages to be developed for the LRP will be classified in terms of category of loss rather than category of person affected as each category of person may suffer more than one loss. In-kind compensation (land for land and house for house) will be favoured over cash compensation where this is deemed appropriate. Table 7.2 presents initial recommendations for the entitlements which will be further developed as information becomes available and will be finalised in the LRP.

Table 7.2: Preliminary entitlement matrix

Type of Loss	Category of Project Affected People	Initial recommendations for compensation entitlements
Permanent loss of land	Landowners (individuals or companies or groups) who have a formal title or recognizable ownership claim to the land	Cash compensation at replacement cost or if land loss is considered severe (>50%) replacement land (in-kind compensation)
	Tenant or other user with recognizable entitlement to use land	Cash compensation to cover lost rental paid (if applicable) If land loss is considered severe (>50%) support to find alternative land including transitional allowance for land development (if applicable)
	Illegal landowners or landowners and users without recognizable entitlement to use land	If land loss is considered severe (>50%) support to find alternative land including transitional allowance for land development (if applicable)
Temporary loss of access to land (agricultural)	Landowner (Individuals or companies or groups) who have a formal title or recognizable claim to the land	Cash compensation to cover loss of income from land rental income the duration of the Project – if applicable.
	Tenant or other user with recognizable entitlement to use land	Cash compensation to cover lost rental paid and cover any costs incurred preparing land for cultivation
	Illegal land user without recognizable entitlement to use land	Cash compensation to cover any costs incurred preparing land for cultivation
Commercial or non-residential building loss	Owner (individuals or companies) who have a formal title or recognizable claim to the building	Replacement cash compensation at replacement cost Relocation allowance
	Owner or user without recognizable ownership claim	Replacement cash compensation at replacement cost Relocation allowance
Crop losses	Owner of crops	Notice to harvest crops Cash compensation to replace cost of standing crops plus cost of replacement seed
Tree losses	Owner of trees	Notice to harvest tree products Salvage tree material free of cost Cost of replacement seedlings Cash compensation to cover lost income from tree products until seedling reaches maturity

Type of Loss	Category of Project Affected People	Initial recommendations for compensation entitlements
Income losses	Any person affected by business or employment loss	<p>For permanent impacts, cash compensation of one-year net business income or salary</p> <p>For temporary impacts, cash compensation of net income or salary for the number of months of business or employment stoppage for a period up to one year</p> <p>Assessment based on paper evidence, oral testimonies or similar situation. At least government decreed minimum wage will be provided.</p>
Allowance for vulnerable people affected by economic displacement	Households headed by a single parent, woman or widow; elderly headed households, households with a pregnant woman or newly born child; households with a family member with a disability or long-term illness or who has mobility challenges	Further assistance to be determined following discussions with identified persons
Allowance for severe impacts	Rehabilitation assistance for displaced person (regardless of ownership status) with more than 10% of land holding affected	Further assistance to be determined following discussions with identified persons
Damage to physical assets and to livelihood sources (agricultural resources)	Owner of damaged asset (regardless of ownership title status) living adjacent to areas where construction will take place	Compensation paid by the Contractor according to replacement cost for damage to property, crops, trees
Unforeseen impacts		Will be documented and mitigated or compensated based on the principles of this LPF

8 Implementation and funding arrangements

The GoG will be responsible for the development and implementation of the LRP. Specifically, the Ministry of Agriculture will be responsible for the negotiated settlements, the Ministry of Finance will be responsible for ensuring payments according to schedule and the Ministry of Climate Resilience, the Environment and Renewable Energy and the Ministry of Finance will be responsible for developing the livelihood restoration plan and ensuring the provision of compensation and assistance.

Monitoring roles and responsibilities are discussed further in Section 10.3. Details on the breakdown of responsibilities for land acquisition and livelihood restoration will be provided in the LRP.

The LRP will provide details on the budget for preparing and implementing the plan. Typical costs included are:

- Land acquisition and livelihood restoration plan preparation
- Core management organisation and supervision
- Compensation costs for land
- Compensation costs for crops, trees
- Compensation costs for economic assets (structures)
- Relocation allowance (if applicable)
- Livelihood restoration measure costs (if considered applicable)
- Conflict resolution solutions
- Contingency (usually at least 10%)

9 Meaningful engagement and grievance redress

9.1.1 Overview

The LRF is aligned with Chapter 5 Information disclosure, consultation and participation in Volume II the ESIA. All project complaints related to land access and acquisition will be managed through the Community Grievance Mechanism (Volume III of the ESIA).

9.1.2 Participation, consultation, and disclosure

The views of PAPs on land acquisition and economic displacement matters that affect them directly will be considered during livelihood restoration planning. The LRP preparation process will be managed in a participatory manner. Potential conflicts and communication channels for grievances will be addressed via meaningful consultation and the grievance mechanism. Consultations and negotiations will be carried out with all PAPs who are open to negotiated settlements or who lose assets involuntarily because of the Project.

The GoG will undertake the following activities:

- Dissemination of information about the Project and its land acquisition needs.
- Meetings with PAPs to inform them of their rights, entitlements, and the grievance mechanism and to solicit feedback on the planned resettlement activities.
- Incorporation of feedback from PAPs into livelihood restoration planning if required.
- A meeting to inform PAPs about the intended household census, the asset inventory survey and how the census and survey are part of the establishment of the cut-off date.
- Sign off by PAPs of household census and asset inventory results.
- Engage with PAPs individually about their preferred compensation (land or cash) and relocation options.
- Inform PAPs when payments will and have been made into their bank accounts.
- Include PAPs perceptions about effectiveness and logistical efficiencies in monitoring livelihood restoration.

All consultation and disclosure efforts will be documented. If appropriate, the views of men and women will be recorded separately. Women and vulnerable groups such as people living below the poverty line, female-headed households, elderly, and young people and children will be identified and special measures put in place to enable their contributions to resettlement planning.

As appropriate, GoG will actively engage with other key stakeholders in livelihood restoration planning and monitoring.

9.2 Disclosure of livelihood restoration plan

It is expected that the Draft ESIA (including this LRF) will be disclosed as part of a public consultation process in October 2023. The LRF will be made available on the Project website and in hard copy within the direct AoI communities. Public consultation feedback will be incorporated into the final LRF.

Any LRP produced for the Project in the future will also need be disclosed in alignment with IFC PS requirements.

9.3 Grievance redress mechanism

Care will be taken to proactively prevent grievances through careful land acquisition design and implementation, by ensuring full participation and consultation with the PAPs, and by establishing communication and coordination among the various implementation entities. Nonetheless, there may be unanticipated events that give rise to grievances.

The Stakeholder Engagement Plan (SEP) (Vol. II of the ESIA) includes the community grievance mechanism (CGM) to be implemented for the Project which aligns with the requirements of IFC PS1 and PS5. The CGM will be available to address concerns and grievances including those related to land acquisition and economic displacement impact. A GoG staff member will be responsible, and trained appropriately, for managing the grievance process.

The most common grievances related to land acquisition and economic displacement are valuation amounts, boundary disputes, ownership objections or requests to subdivide a property. PAPs will have the right to appeal the valuation provided it is within a 30-day calendar period from receipt of notification of the valuation.

The CGM will follow the steps outlined below.

9.3.1 Step 1: Receive, acknowledge and record grievance

PAPs may raise issues, concerns or grievances physically or digitally (by telephone, website or e-mail). Then the grievance will be lodged and the GoG will be send an acknowledgement letter within seven working days.

9.3.2 Step 2: Assess and assign grievance

Grievances raised will be ranked based on a four-tier scale: Low (Tier 1), Medium (Tier 2), High (Tier 3) and Critical (Tier 4). A variety of factors will be considered when determining the applicable grievance tier such as potential impacts on vulnerable groups, local perceptions, and upcoming Project activities.

Based on the nature of the concern/grievance and its risk categorisation, the GoG will identify an appropriate team of one to three people to undertake an initial investigation.

9.3.3 Step 3: Investigate complaints and grievances

Investigations will be undertaken as soon as practicable. Investigations may include photographs and other evidence, witness statements, interviews with affected stakeholders and other parties, review of site registers, and other information gathering activities.

Depending on the nature of the grievance, investigation and definition of fair resolution may be undertaken by a third-party specialist if considered necessary.

9.3.4 Step 4: Respond to grievance and agree on resolution

Parties involved in the investigation will prepare a resolution to be presented to the complainant. If the proposed resolution is accepted by the complainant, it will be implemented, and the grievance moved to the close out stage. The results of the initial investigation including any proposed actions will be communicated to the complainant within 30 days.

If the proposed resolution is not accepted, it may be reviewed to identify ways to improve (see 9.3.6)

9.3.5 Step 5: Close out grievance

If the proposed resolution is accepted by the stakeholder, the grievance will be marked as closed and resolved and the relevant documentation completed. Corrective actions, compensation and other activities related to the close out of the grievance must be implemented before the grievance can be fully closed.

Completion of actions and closure of the grievance will be recorded at the grievance resolution form.

9.3.5.1 Record Keeping and Documentation

Throughout the process records will be kept including the grievance receipt, investigation, close out reports and grievance resolution form. Grievances will be logged in a register and tracked.

9.3.5.2 Monitoring and Evaluation

The outcome will be monitored by the GoG and evaluation will include satisfaction of the complainant.

All costs involved in resolving the complaints (meetings, consultations, communication and reporting/information dissemination) will be borne by the Project.

9.3.6 Escalation procedure

The CGM identifies three levels in the resolution process:

9.3.6.1 Level 1: Immediate resolution through dialogue with complainant

In some instances, the appropriate response to resolve the grievance may be obvious and agreed immediately, or within a short timeframe, by all parties. If the explanation or proposed solution is not accepted at this level, then it will be escalated to Level 2 and an investigation may be required.

9.3.6.2 Level 2: Involvement of GoG (other than CLO) and/or, third party organisations

In the case of more complex grievances, the approaches to find a resolution may take longer and require that more than one approach may be implemented as the discussions around resolving the grievance progress. The involvement of GoG (in addition to the CLO) and/or external third-party organisations to help investigate and come up with a proposed resolution may be needed. The Project will aim to close out a grievance within a maximum of 30 days after it is registered whenever possible.

9.3.6.3 Level 3: External mediation or a legal process

If discussions have not resulted in an acceptable resolution, the complainant or the Project may decide to refer the matter to an external mediator or the legal process. The Project could invoke a legal resolution process based on the Law of Electric Industry, complemented by the Law of Exploration and Use of Geothermal Resources Act. The use of the resolution initiates a negotiation process. The Project has already used this process successfully to agree leasing terms with one landowner. The resolution is an alternative administrative procedure to the Expropriation Law that is used as a last resort.

Whether the resolution is accepted by the complainant and GoG or not, the grievance moves to close-out and is recorded as resolved or unresolved.

10 Monitoring and reporting

10.1 Overview

The overall objective for monitoring livelihood restoration and compensation is to make an evaluation of the process to determine:

- If PAPs have been meaningfully consulted and compensated in full and before implementation of the Project activities.
- If PAPs are now living at a higher standard than before, living at the same standard as before, or are poorer than before.
- Indicators for monitoring will cover process, outputs and impacts.

10.2 Monitoring indicators

Typical livelihood restoration monitoring indicators are presented in Table 10.1 and will be adapted for the LRP based on the measures to be implemented.

Table 10.1: Indicators for monitoring

Monitoring Indicators	Basis for Indicators
Budget and timeframe	<ul style="list-style-type: none"> ● Has all land required been acquired in time for project implementation? ● Are funds for livelihood restoration being allocated as agreed and on time? ● Have livelihood restoration implementation activities been achieved according to the agreed plan?
Delivery of DP entitlements	<ul style="list-style-type: none"> ● Have all PAPs received complete entitlements according to the amount and categories of loss? ● Has compensation been disbursed to the PAPs according to the plan?
Consultation, grievance and special Issues	<ul style="list-style-type: none"> ● Has consultation taken place as scheduled? ● Has any PAP used the grievance redress procedures? ● What were the outcomes? ● Have conflicts been resolved? ● Are there any special issues related to land acquisition or leasing that affect other Project activities or creating new Project risks?

10.3 Monitoring roles and responsibilities

Monitoring and evaluation will be the responsibility of a Geothermal Working Group (GWG). The GWG will need to be comprised of high-level membership across several ministries, agencies and entities that are connected in their roles and functions, to the goals of the geothermal development project as follows:

- Ministry of Climate Resilience, The Environment and Renewable Energy
- Ministry of Finance
- Ministry of National Security, Home Affairs, Public Administration, Information and Disaster Management
- Ministry of Economic Development, Planning, Tourism, ICT, Creative Economy, Agriculture and Lands, Fisheries and Cooperatives
- Ministry of Infrastructure and Physical Development, Public Utilities, Civil Aviation and Transportation

10.3.1 Evaluation and reporting

The GoG has identified that the CLO will be the main point of focus for the GWG and PAPs, and other stakeholders. The focal point will be responsible for undertaking internal monitoring and reporting on LRP implementation.

During implementation, an internal monitoring report will be produced monthly.

External reporting will include progress reports to the CDB.

When the LRP is complete, the GoG will produce a completion audit report. The completion audit report will address the requirements presented in the guidance note on PS5, namely an: executive summary; background with information about the monitoring process, impacted communities, displacement impacts and magnitude, legal framework, summary of eligibility criteria and entitlements, timing of displacement, restoration and compensation, any outstanding issues; review objectives; key findings and conclusion and key recommendations or corrective actions.

Appendices

A. Crop compensation schedule

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A. Crop compensation schedule

RECOMMENDED (1995) CROP COMPENSATION SCHEDULE

REVISED (1995) DATA RESULTING FROM REVIEW OF 1984 SCHEDULE, IN ACCORDANCE WITH THE AGRICULTURAL CROPS (COMPENSATION) ORDINANCE NO. 9, OF 1967. THESE VALUES ARE SUBJECT TO REVIEW AFTER FIVE YEARS.

NOTE THAT THE VALUES QUOTED ARE THE MAXIMUM RECOMMENDED TO BE CHARGED PERSONS DOING THE VALUATION SHOULD USE THEIR DISCRETION BASED ON THE SITUATION AS SEEN.

ALL VALUES ARE QUOTED IN T.C. DOLLARS.

NUTMEG	BEARING OR MATURE (15 YEARS +)	IMMATURE (5 - 15 YEARS)	PLANTS
Nutmeg (Marcott)	\$160.00	\$50.00	\$9.00
Nutmeg (Seedling)	\$300.00	\$100.00	\$6.00
COCOA	(10 YEARS +)	(1 - 9 YEARS)	(< 1 YEAR)
Cocoa (Clones)	\$200.00	\$100.00	\$5.00
Cocoa (Seedling)	\$200.00	\$100.00	\$5.00

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FRUITS AND OTHER TREE CROPS:

NAME	BEARING OR MATURE (OVER 5 YEARS)	IMMATURE (1 - 5 YEARS)	PLANTS UNDER 1 YE.
Ackee	\$50.00	\$15.00 - 50.00	\$15.00
Atemoya	\$75.00	\$15.00 - 50.00	\$15.00
Avocado	\$200.00	\$15.00 - 75.00*	\$15.00
Breadfruit	\$200.00	\$15.00 - 75.00	\$15.00
Breadnut	\$150.00	\$15.00 - 75.00	\$15.00
Cashew Nut	\$150.00	\$15.00 - 75.00	\$15.00
Chenip	\$350.00	\$15.00 - 75.00	\$15.00
Coconut	\$100.00	\$15.00 - 75.00	\$15.00
Coffee	\$30.00	\$10.00 - 30.00*	\$5.00
Condicion	\$50.00	\$10.00 - 30.00	\$15.00
Custard Apple	\$60.00	\$15.00 - 50.00	\$15.00
Damson	\$50.00	\$10.00 - 30.00	\$15.00
French Cashew	\$50.00	\$10.00 - 30.00	\$15.00
Golden Apple	\$350.00	\$15.00 - 75.00	\$15.00
Governor Plum	\$50.00	\$10.00 - 30.00	\$15.00
Grape (Vines)	\$20.00	\$10.00	\$3.50
Guava	\$40.00	\$10.00 - 20.00	\$10.00
Marmle Apple	\$150.00	\$15.00 - 75.00	\$15.00
Mango (Seedling)	\$250.00	\$15.00 - 75.00	\$15.00
Mango (Grafted)	\$250.00	\$15.00 - 75.00	\$15.00

NB Pineapple has not been included
 Soursop

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FRUITS AND OTHER TREE CROPS CONT'

NAMES	BEARING OR MATURE (OVER 5 YEARS)	IMMATURE (1 - 5 YEARS)	PLANTS UNDER 1 YEAR
Mauby	\$100.00	\$15.00 - 75.00	\$15.00
Passion Fruit	\$20.00	\$10.00	\$3.50
Pawpaw (Table)	\$40.00	\$10.00	\$3.00
Plum (Red & Yellow)	\$75.00	\$10.00 - 50.00*	\$10.00
Sapodilla (Pomegranate)	\$250.00	\$15.00 - 75.00	\$15.00
Star Apple (Soursop)	\$125.00	\$15.00 - 75.00	\$15.00
Sugar Apple	\$50.00	\$15.00 - 50.00*	\$15.00
Tamarind	\$200.00	\$15.00 - 75.00	\$15.00
West Indian Cherry	\$50.00	\$10.00 - 30.00	\$10.00
Miscellaneous	\$50.00	\$10.00 - 30.00	\$15.00

eg. Soursop

*Note: The following guidelines should be followed in determining value of fruit trees between 1 - 5 years:

RANGE	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5
\$15.00 - 50.00	15.00	23.75	32.50	41.25	50.00
\$15.00 - 75.00	15.00	30.00	45.00	60.00	75.00
\$10.00 - 30.00	10.00	15.00	20.00	25.00	30.00
\$10.00 - 50.00	10.00	20.00	30.00	40.00	50.00

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SPICES, CITRUS AND BANANAS.

SPICES	BEARING (OVER 5 YEARS)	IMMATURE (1-5 YEARS)	PLANTS UNDER 1 YEAR
Bay Leaf	\$40.00	\$15.00	\$4.00
Cinnamon	\$40.00	\$15.00	\$4.00
Cloves	\$150.00	\$30.00	\$8.00
Mountain Spice	\$40.00	\$15.00	\$4.00
Pimento	\$150.00	\$30.00	\$8.00
Sapot	\$40.00	\$15.00	\$4.00
Tonka Bean	\$40.00	\$15.00	\$4.00
CITRUS - ALL TYPES	\$150.00	\$15.00 - 75.00	\$15.00
BANANA FAMILY (Price per plant)	(7 months to harvest)	(3 - 7 months)	(1-3 months)
✓ Banana	\$12.00	\$6.50	\$4.00
✓ Bluggoes	\$10.50	\$5.75	\$1.80
Greendle	\$8.00	\$4.00	\$2.00
Gros Michel	\$20.00	\$10.00	\$3.00
Pellpita	\$6.00	\$3.00	\$1.00
Plantain	\$30.00	\$12.00	\$5.00
Rock Fig	\$8.00	\$4.00	\$2.00

N.B.: Limit to a maximum of three mature plants per stool when determining values

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ORNAMENTALS:

NAME	BEARING (OVER 5 YEARS)	IMMATURE (1-5 YEARS)	PLANTS UNDER 1 YEAR)
Cassia	\$25.00	\$22.00	\$1.65
Casurina	\$45.00	\$30.00	\$3.15
Flamboyant	\$40.00	\$30.00	\$3.15
Immotell	\$75.00	\$25.00	\$1.65
Wild Tamarind	\$45.00	\$25.00	\$1.65
Black Tulp	\$140.00	\$40.00	\$10.00
Costos	\$100.00	\$45.00	\$4.00
H. Sexy Pink	\$140.00	\$40.00	\$10.00
H. Golden Opal	\$60.00	\$20.00	\$4.00
H. Collisina	\$140.00	\$40.00	\$10.00
H. Rostrata	\$140.00	\$40.00	\$10.00
H. Wagneriana	\$140.00	\$40.00	\$10.00
H. Golden Torch	\$50.00	\$15.00	\$2.00
H. Richmond Red	\$140.00	\$40.00	\$10.00
H. Flame Red	\$140.00	\$40.00	\$10.00
Heliconia Caribea	\$140.00	\$40.00	\$10.00
Musa Coccina	\$150.00	\$70.00	\$5.00
Musa Onatto	\$150.00	\$70.00	\$5.00
Musa Veluctina	\$150.00	\$70.00	\$5.00
Perfume Ginger	\$140.00	\$40.00	\$10.00
Pineapple Ginger	\$140.00	\$40.00	\$10.00
Pink Ginger Lily	\$80.00	\$20.00	\$4.00
Red Ginger Lily	\$80.00	\$20.00	\$4.00
Shampoo Ginger	\$140.00	\$40.00	\$10.00
Torch Lily	\$140.00	\$40.00	\$10.00

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VINES AND ROOT AND STEM TUBERS:

VINES	BEARING	IMMATURE	PLANTS
Butternut Squash	\$5.00	\$3.00	\$0.50
Cantaloupe	\$6.00	\$3.00	\$0.50
Melon (Vine)	\$20.00	\$5.00	\$0.50
Melon (Fruit)	\$10.00		
Pumpkin Vine	\$20.00	\$5.00	\$0.50
Pumpkins (Fruits)	\$5.00		
Cucumber	\$6.00	\$3.00	\$0.50

ROOT & STEM TUBERS:

NAMES	BEARING	NON BEARING OR IMMATURE	PLANTS
Beet	\$1.00	\$0.75	\$0.25
Carrot	\$0.75	\$0.50	\$0.25
Cassava	\$2.50	\$1.25	\$0.25
Cut Yam (Bush Yam)	\$3.00	\$2.00	\$0.20
Dasheen (Holes)	\$2.50	\$1.40	\$0.50
Eddoes (Holes)	\$2.50	\$1.50	\$0.50
Ginger	\$3.00	\$2.00	\$0.25
Ground Nut	\$2.50	\$1.20	\$0.25
Onion	\$0.35	\$0.20	\$0.10
Sweet Potatoes (Holes)	\$1.00*	\$ 0.60 (1-3 months)	\$0.20
Tannias (Holes)	\$3.00	\$2.50	\$0.50
Yam (Lisbon etc)	\$4.50	\$2.50	\$0.50

* A hole comprises one (1) vine.

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GRASS BARRIERS AND HEDGES:

\$1.00 per running foot.

LEGUMES AND LEGUMES MIXED AND LEAFY VEGETABLES.

LEGUMES AND LEGUMES MIXED	BEARING	IMMATURE	PLANTS
Corn & Peas together (Max. 4 per hole)	\$4.00	\$2.20	\$1.00
Peas Stool (Solid Stand)	\$4.00	\$2.20	\$1.00
Corn Stool (Solid Stand)	\$4.00	\$2.20	\$1.00
String Beans (Stool, 3 plants)	\$5.00	\$3.00	\$1.00
Beans (Bush type) (Stool 3 plants)	\$5.00	\$3.00	\$1.00
LEAFY VEGETABLES:			
Broccoli	\$3.00	\$1.50	\$0.50
Cabbage	\$3.00	\$1.00	\$0.50
Cauliflower	\$3.00	\$1.50	\$0.50
Celery	\$3.00	\$1.50	\$0.50
Lettuce	\$1.50	\$0.75	\$0.50
Parsley	\$2.50	\$1.00	\$0.50
Thyme	\$4.00	\$2.00	\$0.50
Water Cress (Sq. Ft.)	\$3.00	\$1.50	\$0.50
Chives	\$3.00	\$1.50	\$0.50

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OTHER VEGETABLES AND SUGAR CANE

OTHER VEGETABLES	BEARING	IMMATURE	PLANTS
Egg Plant	\$6.00	\$3.00	\$0.50
Hot Pepper	\$6.00	\$2.00	\$0.50
Okra	\$2.50	\$1.25	\$0.50
Sorrel	\$1.50	\$0.75	\$0.50
Sweet Pepper	\$5.00	\$2.50	\$0.50
Tomatoes	\$10.00	\$4.00	\$0.50
SUGAR CANE:			
Per Square Foot	\$0.75	\$0.50	

NOTE: FOR SUGAR CANE = The values quoted are based on row planting, 5 feet between rows, and sets of 30 cm (1 foot) long within the rows. The actual rows should be measured, excluding spaces between rows.

Where cane is interplanted with other crops, those crops should be valued separately.

The economic life of a field is expected to be 6 years (5 crops). After that period, there should be no compensation if the farmer has to give up the land.

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COMPENSATION SCHEDULES FOR FOREST TREES

CATEGORY 1	BOTANICAL NAME	MATURE (EC\$)	IMMATURE (EC\$)	PLANTS (EC\$)
Mahogany	Swietenia mahogany	3.50 per bd.ft	100.00 per tree	5.00
Red Cedar	Swietenia macrophylla	3.50 per bd.ft	100.00 per tree	5.00
Teak	Cedrella odorata	3.50 per bd.ft	100.00 per tree	5.00
Saman	Tectonia grandis	3.50 per bd.ft	100.00 per tree	5.00
Bagui	Samanea saman	3.50 per bd.ft	100.00 per tree	3.00
Gommier	Dacryodes excelsa	3.50 per bd.ft	100.00 per tree	3.00
Christmas Trees	Cupressus lusitanica	30.00 per tree over 8 ft	5.00 per ft - 8 ft	5.00
Bullet	Manilkara bidentata	3.50 per bd.ft	100.00 per tree	5.00
CATEGORY 2				
Blue Mahoe	Hibiscus elatus	1.50 per bd. ft	50.00	3.00
Eucalyptus	Eucalyptus spp	1.50 per bd.ft	50.00	5.00
Galba	Calliophyllum lucibum	1.50 per bd.ft	50.00	3.00
Poisdoux	Inga venosa	1.50 per bd.ft	50.00	3.00
Maruba	Simaruba amara	1.50 per bd.ft	50.00	4.00
Tapana	Hieronyma caribaea	1.50 per bd.ft	50.00	3.00
Mangrove		1.50 per bd.ft	50.00	2.00
Gliricidia	Gliricidia sepium	1.00 perbd.ft	30.00	1.00
Almond	Richeria turbinata	1.50 per bd.ft	50.00	3.00

COMPENSATION SCHEDULE FOR FOREST TREES

CATEGORY 2 CONTINUED	BOTANICAL NAME	MATURE (ECS)	IMMATURE (ECS)	PLANTS (ECS)
Cassia	Cassia spp	1.50 per bd.ft	10.00 (50.00) per tree	1.00 (5.00)
White Cedar	Tabebuia heterophylla (pallida)	1.50 per bd.ft	40.00	1.00
Pine	Pinus spp	1.50 per bd.ft	50.00	5.00
Tantakayo	Albizia caribaea	1.00 per bd.ft	40.00 per tree	
CATEGORY 3				
Penny Piece	Pouteria multiflora	1.00 per bd.ft	25.00	1.00
Cuttet				
Calabash	Crescentia cujete	1.00 per bd.ft	20.00	
Hog Plum	Spondias mombin	1.00 per bd.ft	20.00	1.00
Lowland Gommier	Bursera simaruba	1.00 per bd.ft	20.00	1.00
Sandbox	Hura crepitans	.50 per bd.ft	10.00	1.00
Silkcotton	Ceiba pentandra	1.00 per bd.ft	15.00	1.00
Cacolay		1.75 per bd.ft	35.00	1.00
Boisbande		1.25 per bd.ft	10.00	1.00
Leucaeria	Leucaena leucocephala			
Others not Specified		35.00 trees over 15 ft.	10.00 (20.00) up to 15 ft.	1.00 (3.00)
CATEGORY 4				
Bamboo	Bambusa vulgaris	1.00 per bd.ft	20.00	1.00
		.50 per ft	.50 per ft.	

NOTE: FOR FOREST TREES:

1. Where there are two prices for immature trees and plants, the figure in bracket indicates the price for plants raised in the nursery.
2. Unless otherwise stated in the individual columns: seedlings refer to nursery plants and those planted in the field up to one (1) year old. Immature trees refer to plants between one year old and 5.5 ins Diameter at Breast Height (DBH) where DBH is measured at 4'7" from the ground. Mature trees are those greater than 5'5" DBH.
3. All mature trees will be cut into logs. The length of the log and its diameter at midpoint will be measured. The volume of the recoverable lumber is estimated, using Scribner's formula.

$$V = (0.7D^2 - 4) L / 16$$

Where V = Volume
D = Mid diameter of log
L = Length of log.

4. Figures quoted are maximum. The person assessing the damage may use their discretion eg. deformed stems, rotten trunk and conservation impact.

THE ABOVE SCHEDULE WAS PREPARED BY A COMMITTEE COMPRISING REPRESENTATIVES FROM THE MINISTRY OF AGRICULTURE: AGRONOMY, EXTENSION, FORESTRY AND LANDS AND SURVEYS DIVISIONS; THE COMMODITY BOARDS: COCOA, NUTMEG, BANANAS; AND COMMERCIAL FARMERS.

