

Land Reclamation Project (LRP)

General Overview and Updates



Godfrey Scott - Project Coordinator

Discussion Points

- ▶ Background and context
- ▶ Project targets and requirements
- ▶ Execution process.
- ▶ Results/achievements.
- ▶ Challenges and the way forward



Background

- ▶ 2009 – Special Land Use Committee (SLUC) was established to provide recommendations for managing land use conflicts and issues (*in the context of degradation from extractive activities*).
- ▶ Recommendations addressing key mining issues:
 - (1) **Enhanced Land Reclamation**,
 - (2) Improved Infrastructure in Mining Districts,
 - (3) Sustainable Land Management in the mining and forestry sector
 - (4) Strengthening of Land–Use Planning and Coordination and
 - ▶ (5) Amendments to the Mining Act and Regulations among natural resource agencies.

- ▶ Committee was dissolved

- ▶ 2012 – Stakeholder engagement for advancing the recommendations of the SLUC

- ▶ 2012 – Outcome – the establishment of the Land Reclamation Committee (LRC) :
 - *Address specific recommendations/issues of the SLUC*
 - *Coordinating National level reclamation efforts*
 - *Multi stakeholder representation– GGMC, GGDMA, GFC, FPA, GGDMA, UG, OCC, DNRE EPA and NAREI*

What does Land Reclamation Project represent ?



- ▶ ***Model*** implementation of the activities / recommendations outlined by the Special Land Use Committee (SLUC).
- ▶ ***A building block initiative*** through which the strategic recommendations and interventions of the Land Reclamation Committee (LRC) will be implemented i.e. At the national level.

- Land Reclamation Project (LRP) is a specific requirement under the **Joint Concept Note (JCN)** of the Guyana – Norway Partnership.
- More specifically, **partnership Goal No. 4** – *(Ongoing implementation of activities by the Land Reclamation Committee (LRC) in accordance with its ToR and Work Plan)* under the **Enabling indicator of Governance.**

- ▶ A RELIABLE PROCESS OF INFORMING POLICY THROUGH LARGE SCALE DATA COLLECTION

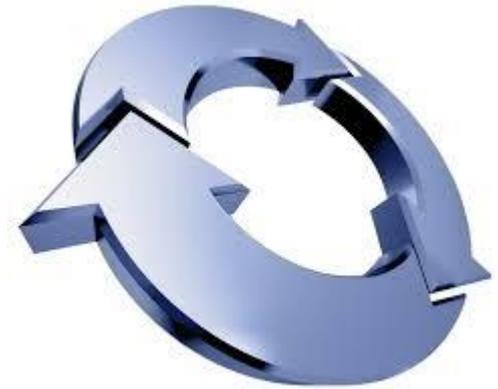
Targets

Deliverables specific to the JCN and TOR for the Land Reclamation Committee (LRC):

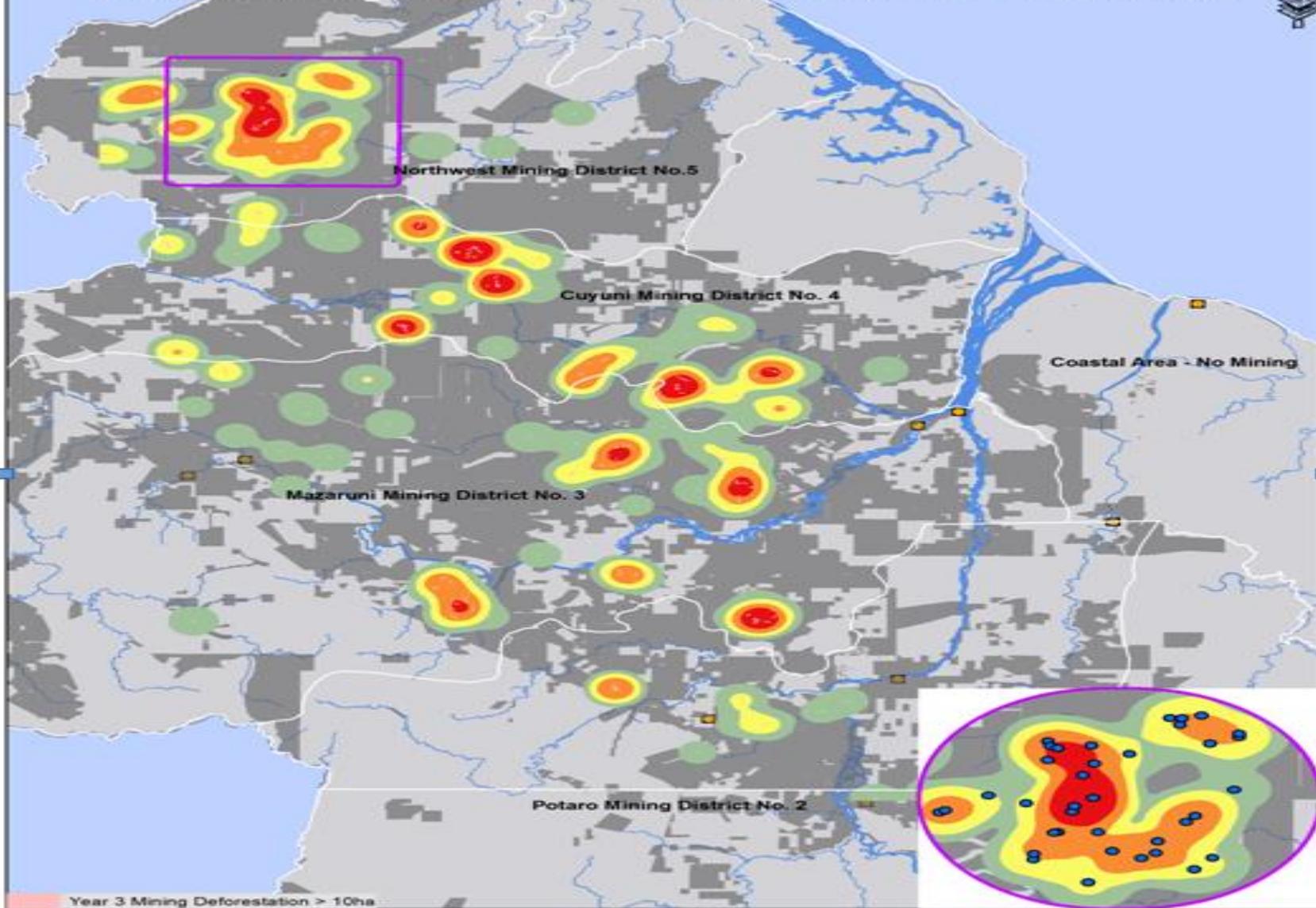
- A complete project document and financial plan to implement reclamation activities – June, 2014
- A detailed Work– Plan and Monitoring and Evaluation (M&E) framework for the Land Reclamation Committee – May, 2014.
- Biannual reports on the implementation of reclamation activities – July and December, 2014.
- To commence reclamation activities at three (3) project sites by 2015 .



Execution Process



Kernel Density Estimation of Deforestation > 10 Hectares

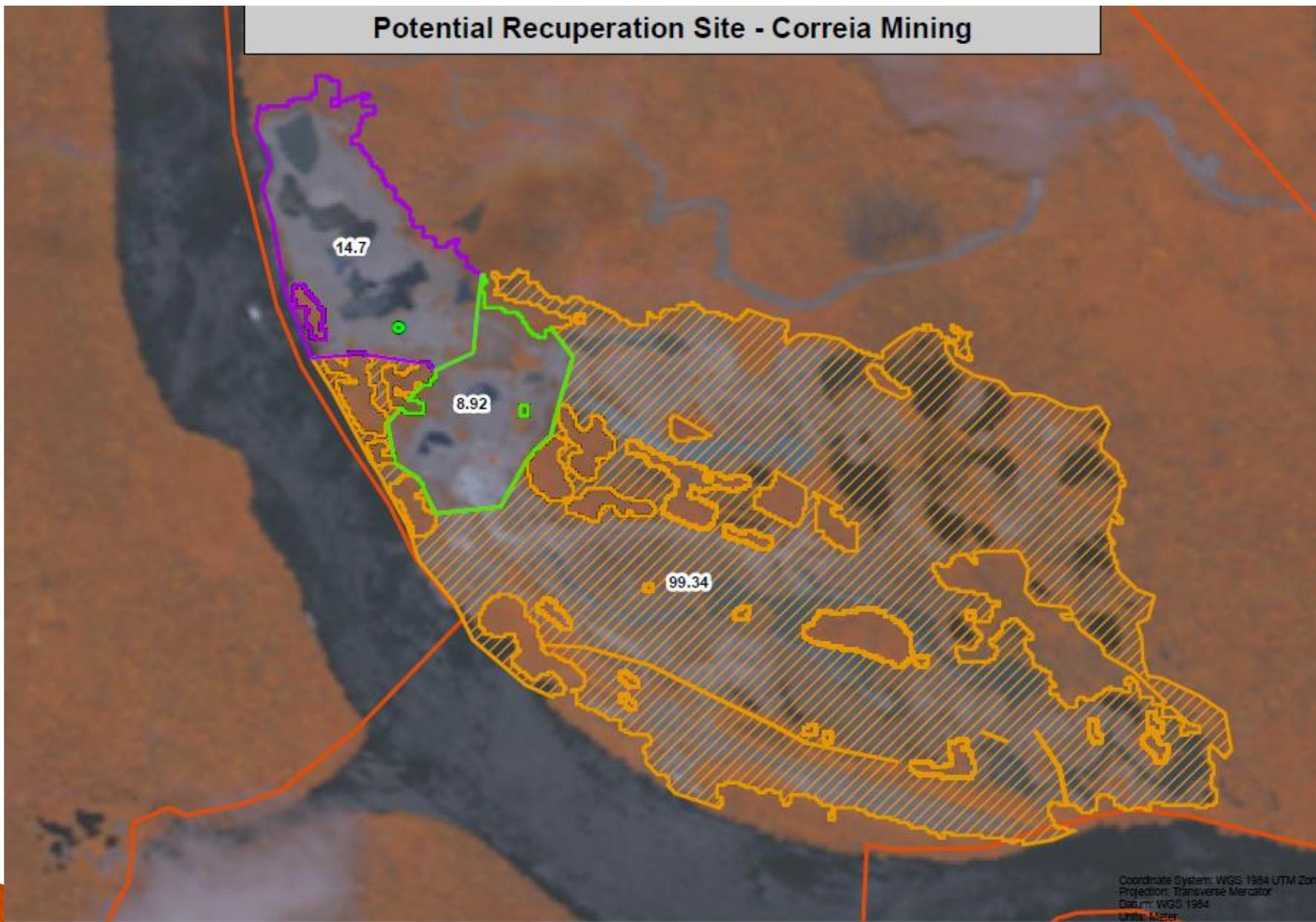


Coord Sys: WGS 1984 UTM Zone 21N
Projection: Transverse Mercator
Datum: WGS 1984

0 12.5 25 50 Miles



Potential Recuperation Site - Correia Mining



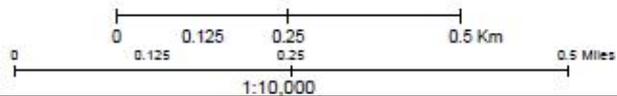
M.O. Correia_Mining_Deforestation (122.96 ha) M.O. Correia_(File_No. ML/02/2004)

Area A (14.7 ha)

GGMC_MPL

Area B (8.9 ha)

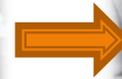
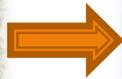
Original



Coordinate System: WGS 1984 UTM Zone
Projection: Transverse Mercator
Datum: WGS 1984
Units: Meter



Site Visit and Technical Evaluation



Site screening tool



This site screening tool addresses *prioritizing* or *ranking of mined-out sites* for land reclamation

- ▶ Environmental Extent
- ▶ Matrix – Evaluation of impacts

OBJECTIVE OF THE TOOL:

- Promote rational decision making.
- To ensure efforts are directed to sites that will generate the greatest benefits in the most cost-effective manner .

Components

Matrix – Evaluation of resource impacts

- ▶ Evaluates – 4 different variables.
- ▶ The Matrix consists of a list of *possible environment resources that may be affected* by reclamation activities as well **considerations any mitigation/control measure(s)** in the planning stage. E.g. Effect of pit fluids on stream water quality.

Part 1b: Matrix For Evaluation of Impacts on Valuable Components of the Environment

#	Category	Criteria	Y	N	Score		Maximum Score	Percentage
1	Landuse	<i>conflicts with:</i>					5	25%
		Amerindian Communities	<input type="checkbox"/>	<input type="checkbox"/>	0	0	1	
		Conservation of Historical Sites (Archeology, Historic Resources/ National Trust)	<input type="checkbox"/>	<input type="checkbox"/>	0	0	1	
		Protected Areas	<input type="checkbox"/>	<input type="checkbox"/>	0	0	1	
		<i>Will the project cause the need for?</i>						
		Relocation of residents	<input type="checkbox"/>	<input type="checkbox"/>	0	0	1	
		Other major socioeconomic negative impacts	<input type="checkbox"/>	<input type="checkbox"/>	0	0	1	
2	Air	<i>Will the project have the potential to emit?</i>					5	25%
		Noise	<input type="checkbox"/>	<input type="checkbox"/>	0	0	1	
		Particulate Matter	<input type="checkbox"/>	<input type="checkbox"/>	0	0	1	
		Odour	<input type="checkbox"/>	<input type="checkbox"/>	0	0	1	
		Greenhouse Gases	<input type="checkbox"/>	<input type="checkbox"/>	0	0	1	
		Vibrations	<input type="checkbox"/>	<input type="checkbox"/>	0	0	1	
3	Soil/Geolo	<i>Will the project:</i>					5	25%
		Include the clearing of vegetation	<input type="checkbox"/>	<input type="checkbox"/>	0	0	1.25	
		Include the removal of top-soil	<input type="checkbox"/>	<input type="checkbox"/>	0	0	1.25	
		Affect the soil stability/ geology	<input type="checkbox"/>	<input type="checkbox"/>	0	0	1.25	
		Cause deposition/ erosion	<input type="checkbox"/>	<input type="checkbox"/>	0	0	1.25	
4	Water	<i>Will the project have the potential to:</i>					5	25%
		Is the proposed site vulnerable to flooding	<input type="checkbox"/>	<input type="checkbox"/>	0	0	1	
		Impact groundwater quality	<input type="checkbox"/>	<input type="checkbox"/>	0	0	1	
		Impact surface water quality	<input type="checkbox"/>	<input type="checkbox"/>	0	0	1	
		<i>Will the project require:</i>						
		Flood control measures	<input type="checkbox"/>	<input type="checkbox"/>	0	0	1	
		Alteration of existing drainage patterns, streams/ rivers	<input type="checkbox"/>	<input type="checkbox"/>	0	0	1	

TOTAL

0

20

100%

Rating	Significance
High Significance	66.8 - 100%
Medium Significance	33.4 - 66.7%
Low Significance	0 - 33.3%

SIGNIFICANCE

0%

Components

Environmental Extent Criteria

- ▶ Evaluates 9 different categories of variables.
- ▶ The objective of this Criterion is to gain an general idea of the environmental **magnitude of the project /reclamation activity** .

SCREENING TOOL FOR SITE SELECTION OF MINED-OUT AREAS

Site Reference No:

GPS COORDINATES:

Part 1a: Environmental Extent Criteria

#	Category	Issue	Y	N	Score	Maximum	Maximum Percenta	
1	Location	Rate the Accessibility of the Site				15	11.1%	
		High Accessibility (Score 5)	<input type="checkbox"/>		0			
		Medium Accessibility (Score 10)	<input type="checkbox"/>		0			
		Low Accessibility (Score 15)	<input type="checkbox"/>		0			
2	Extent of Project	Indicate the Extent of the Project				15	11.1%	
		Less than 1 hectare (Score 5)	<input type="checkbox"/>		0			
		Between 1-5 hectares (Score 10)	<input type="checkbox"/>		0			
		Greater than 5 hectares (Score 15)	<input type="checkbox"/>		0			
3	Environmental Impa	See Attached Matrix				15	11.1%	
		High Significance (Score 15)	<input type="checkbox"/>		0			
		Medium Significance (Score 10)	<input type="checkbox"/>		0			
		Low Significance (Score 5)	<input type="checkbox"/>		0			
4	Nursery Establishm	Is the site in close proximity to a plant nursery?	<input type="checkbox"/>	<input type="checkbox"/>	0	0	15	11.1%
5	Proximity to Community	Is the site in close proximity to a community?	<input type="checkbox"/>	<input type="checkbox"/>	0	0	15	11.1%
6	Access to Backfilling	Is the site in close proximity to a readily available source of backfilling material?	<input type="checkbox"/>	<input type="checkbox"/>	0	0	15	11.1%
7	Access to Water Supply	Is the site in close proximity to good-quality, affordable and abundant water supply?	<input type="checkbox"/>	<input type="checkbox"/>	0	0	15	11.1%
8	Proximity to Important Biodiversity	Is the site in close proximity to important biodiversity conservation features? (e.g. endemics, critically endangered, vulnerable species etc.)	<input type="checkbox"/>	<input type="checkbox"/>	0	0	15	11.1%
9	Land Ownership	Is the present landowner willing to participate in land reclamation activities?	<input type="checkbox"/>	<input type="checkbox"/>	0	0	15	11.1%
TOTAL					0	135	100%	

ENVIRONMENTAL EXTENT =

0%

Evaluation Completed by:

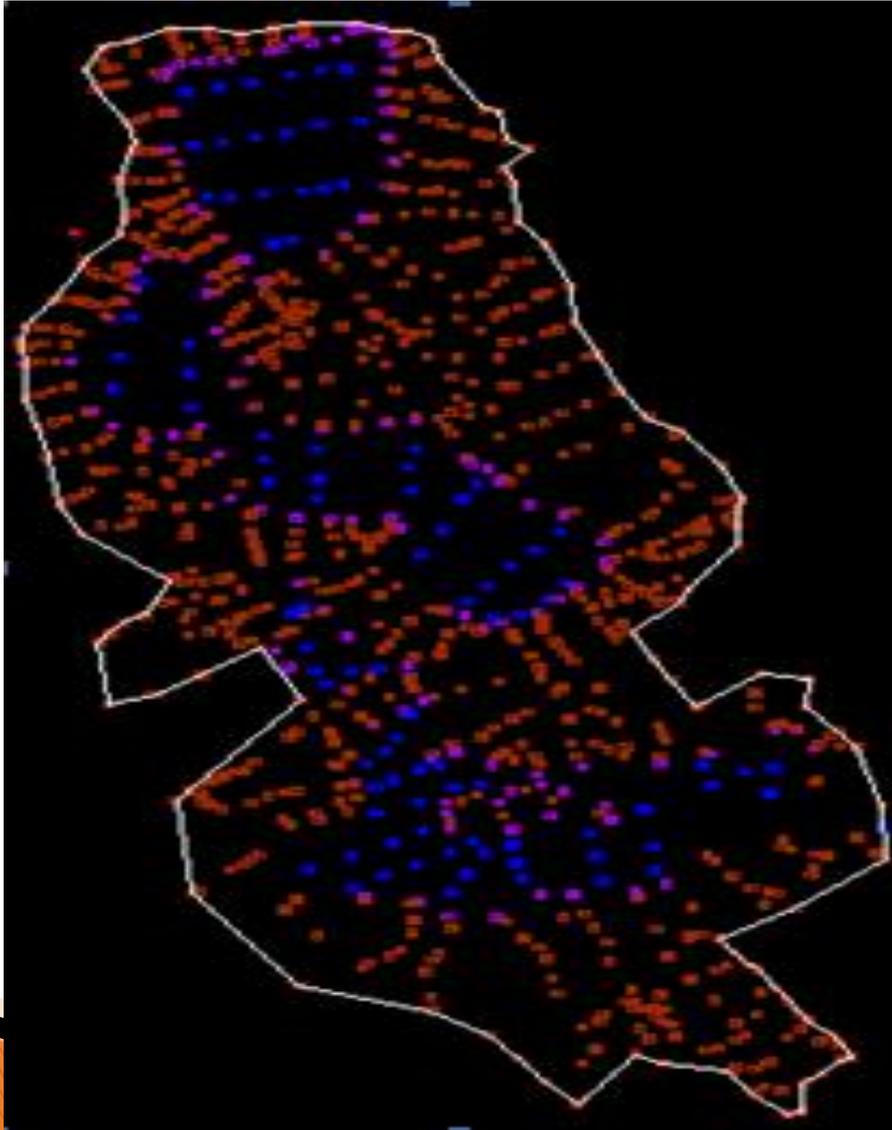
Date of Evaluation:



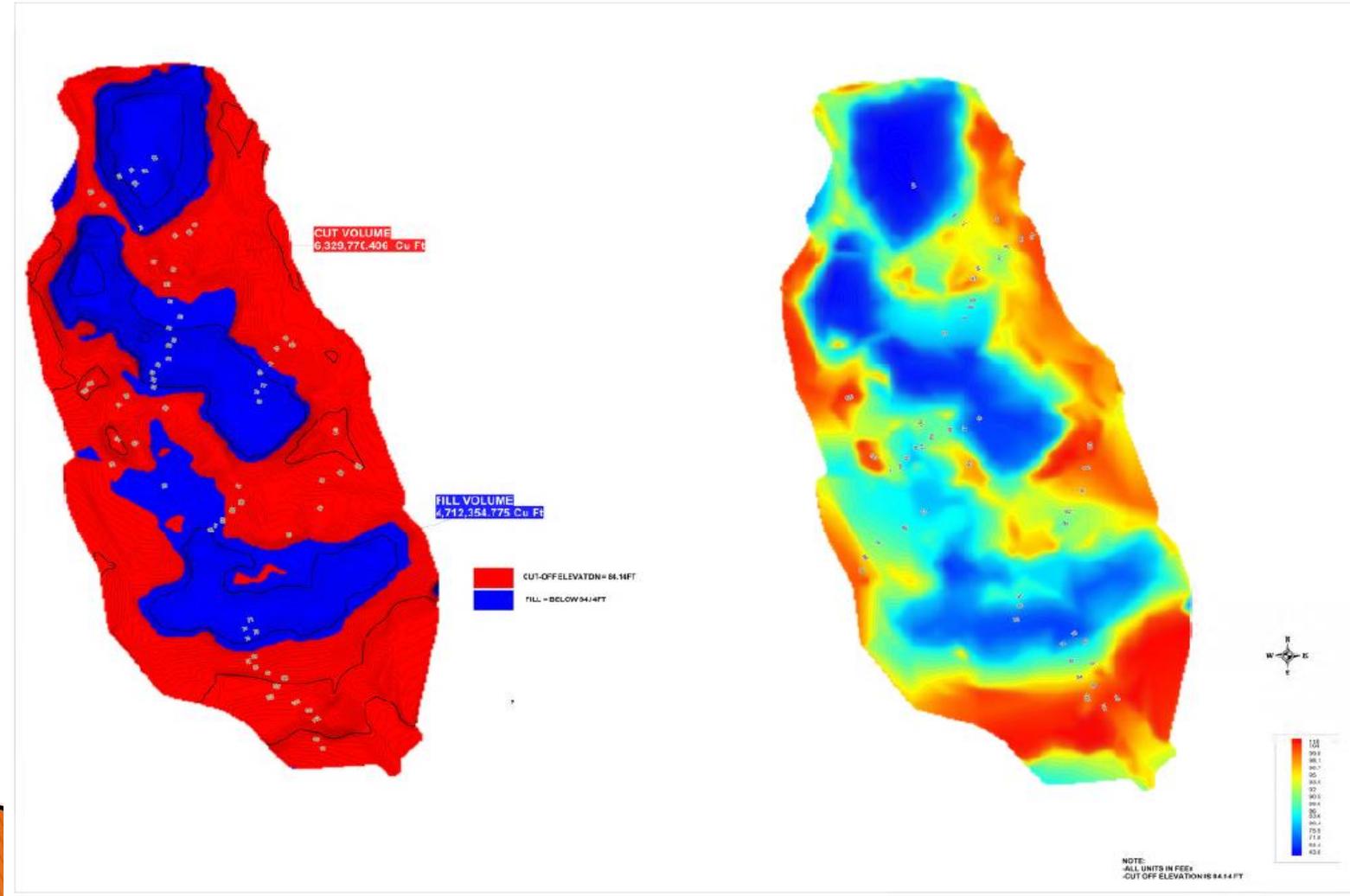
General rule of thumb

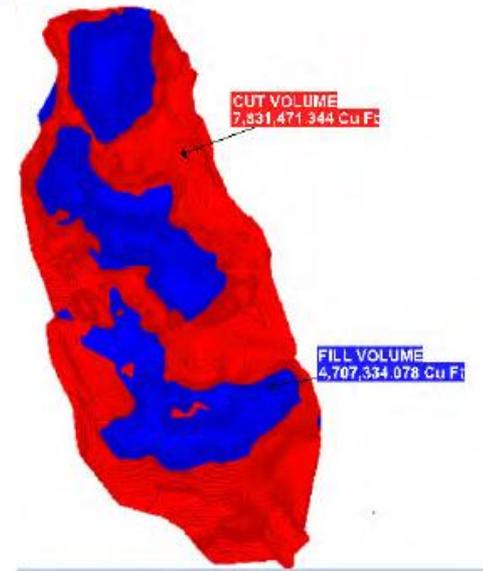
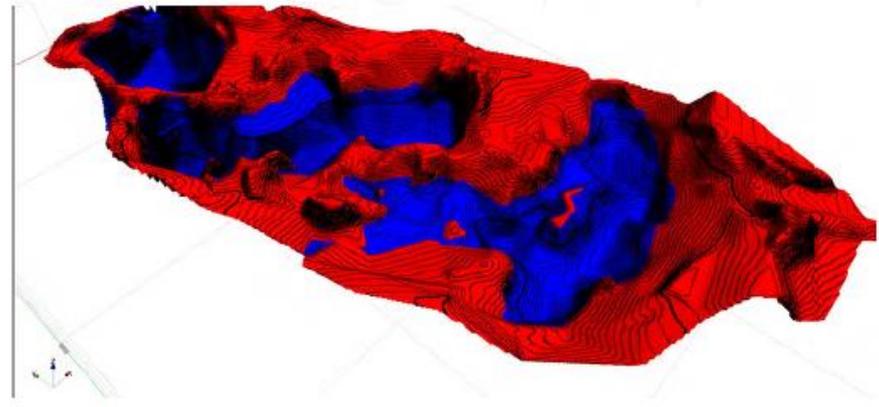
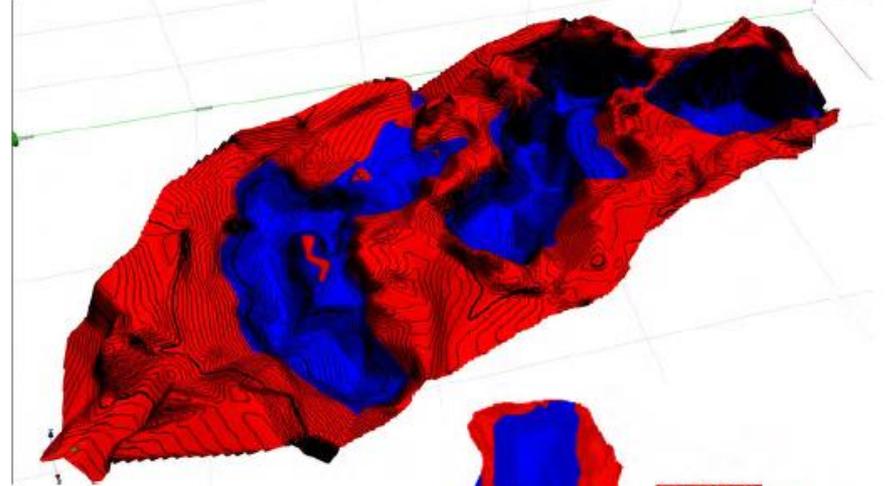
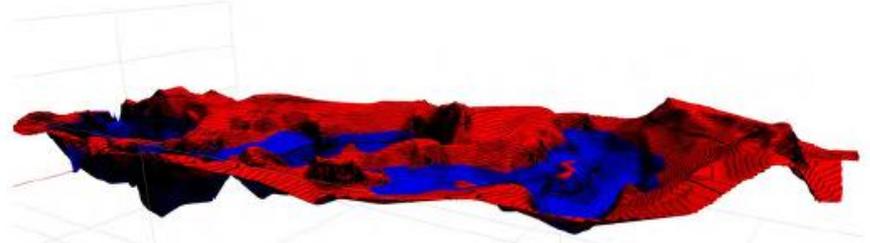
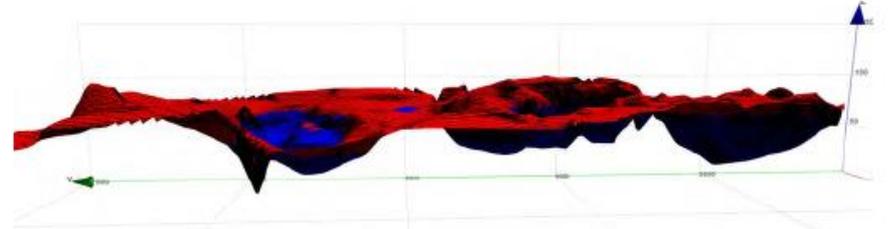
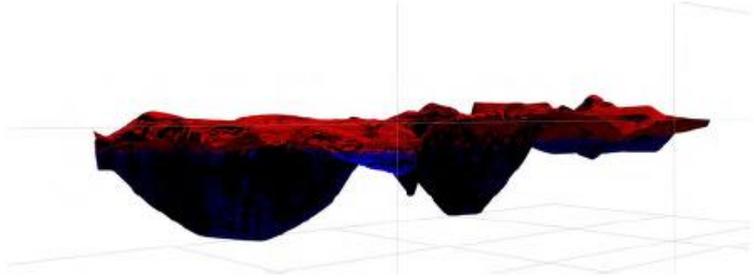
Sites which generate the lowest values for Environmental Extent should be prioritised for Land Reclamation Activities.

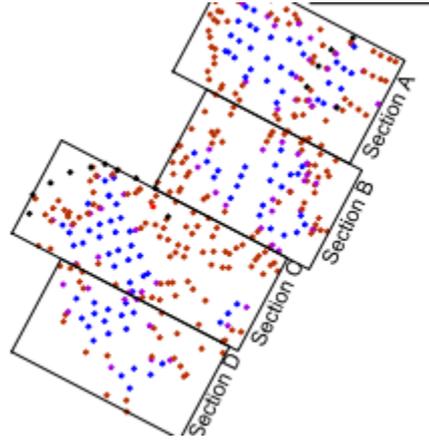
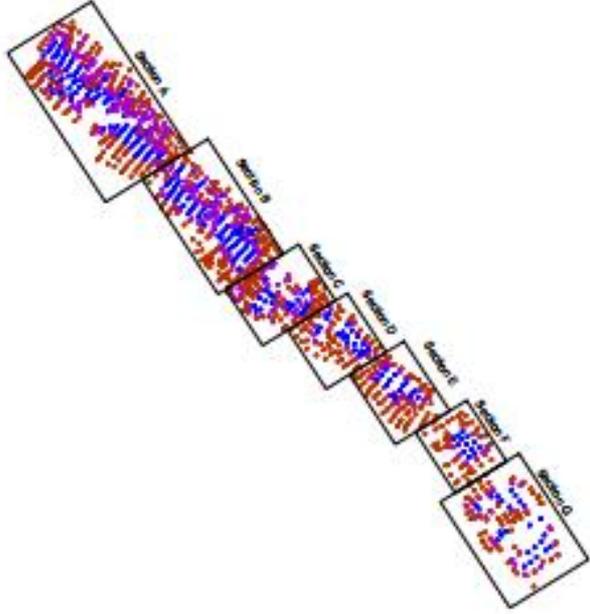
Data output – Distribution of data points



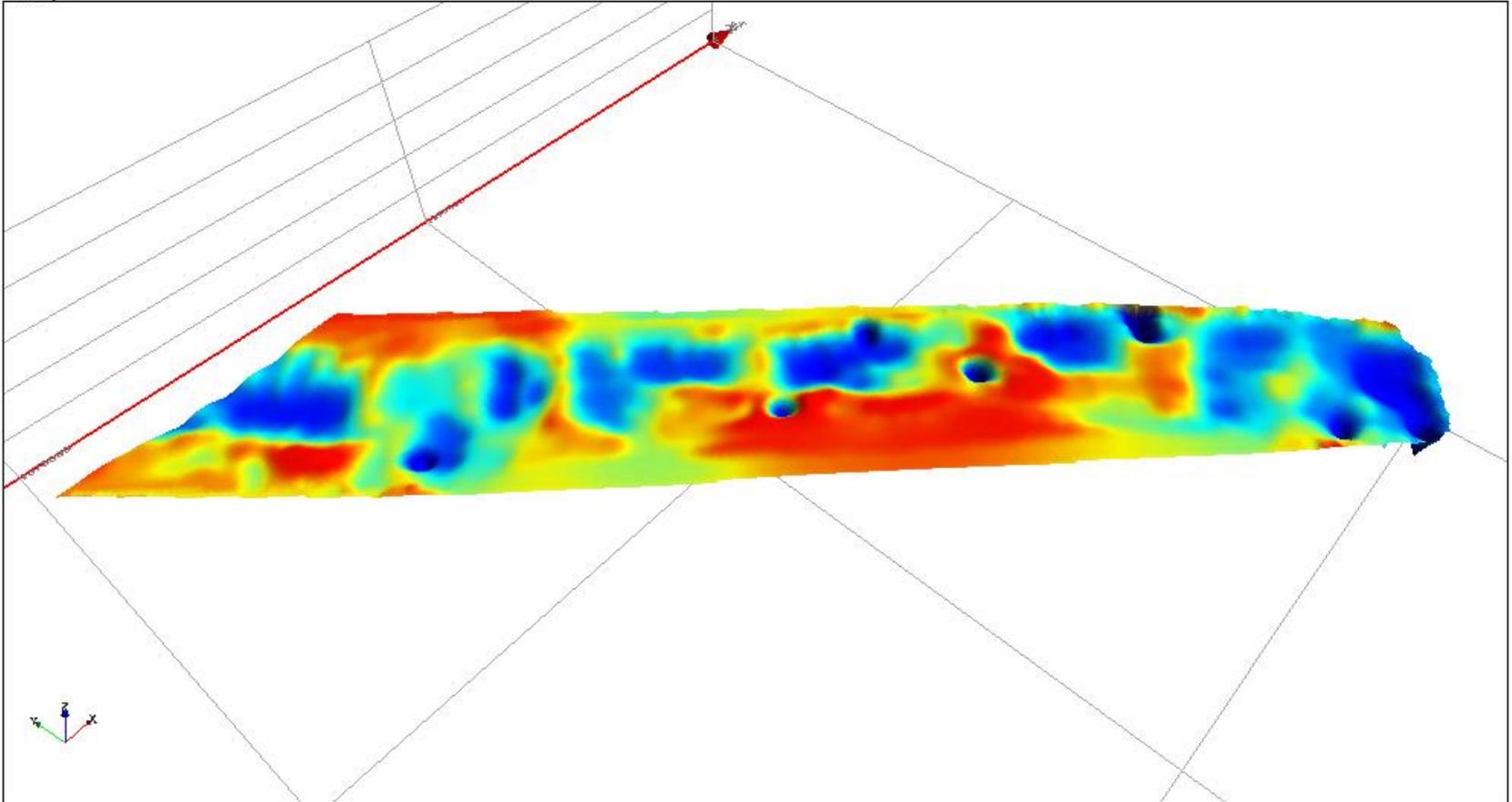
Output - Topographic characteristics



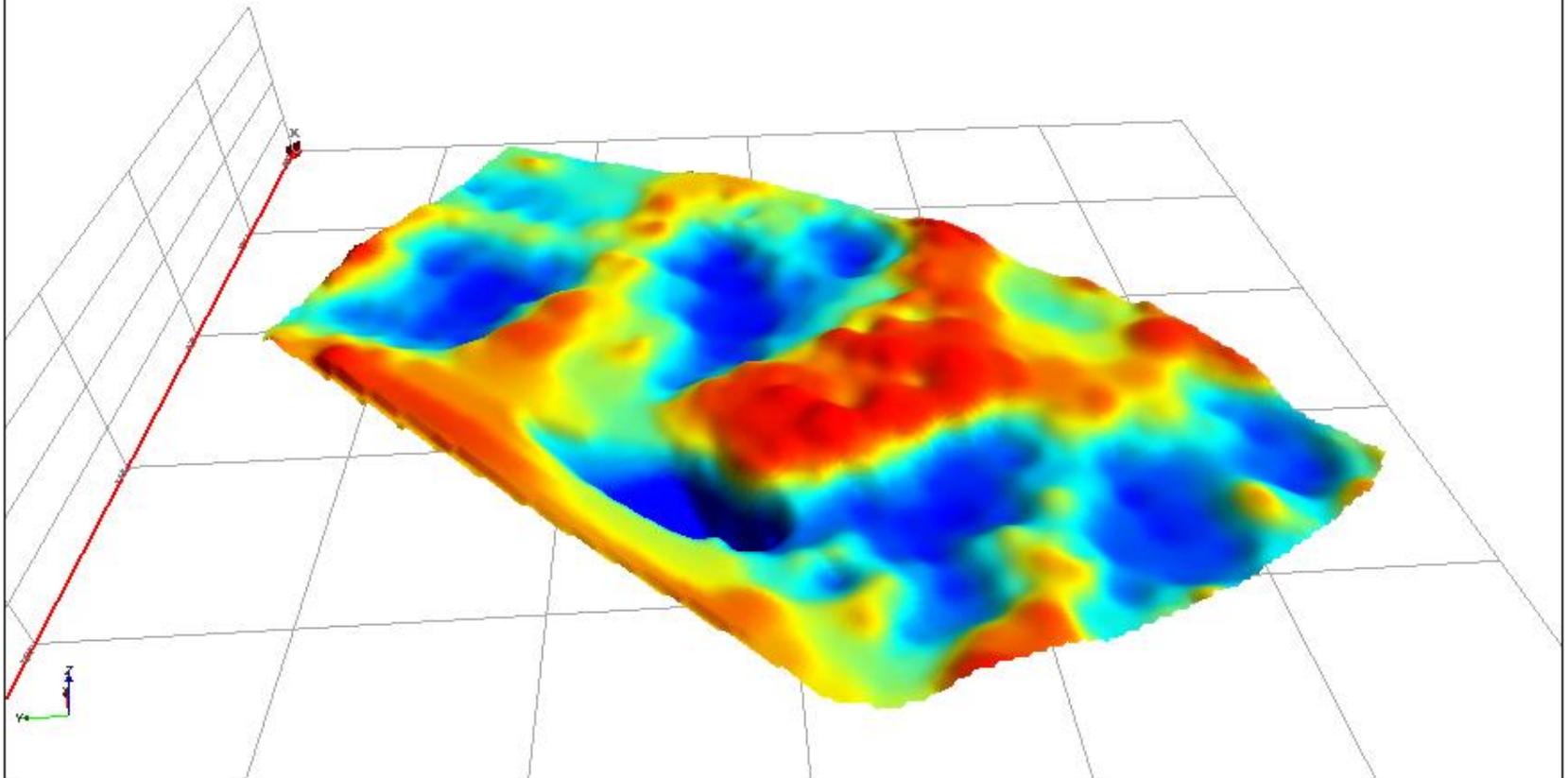




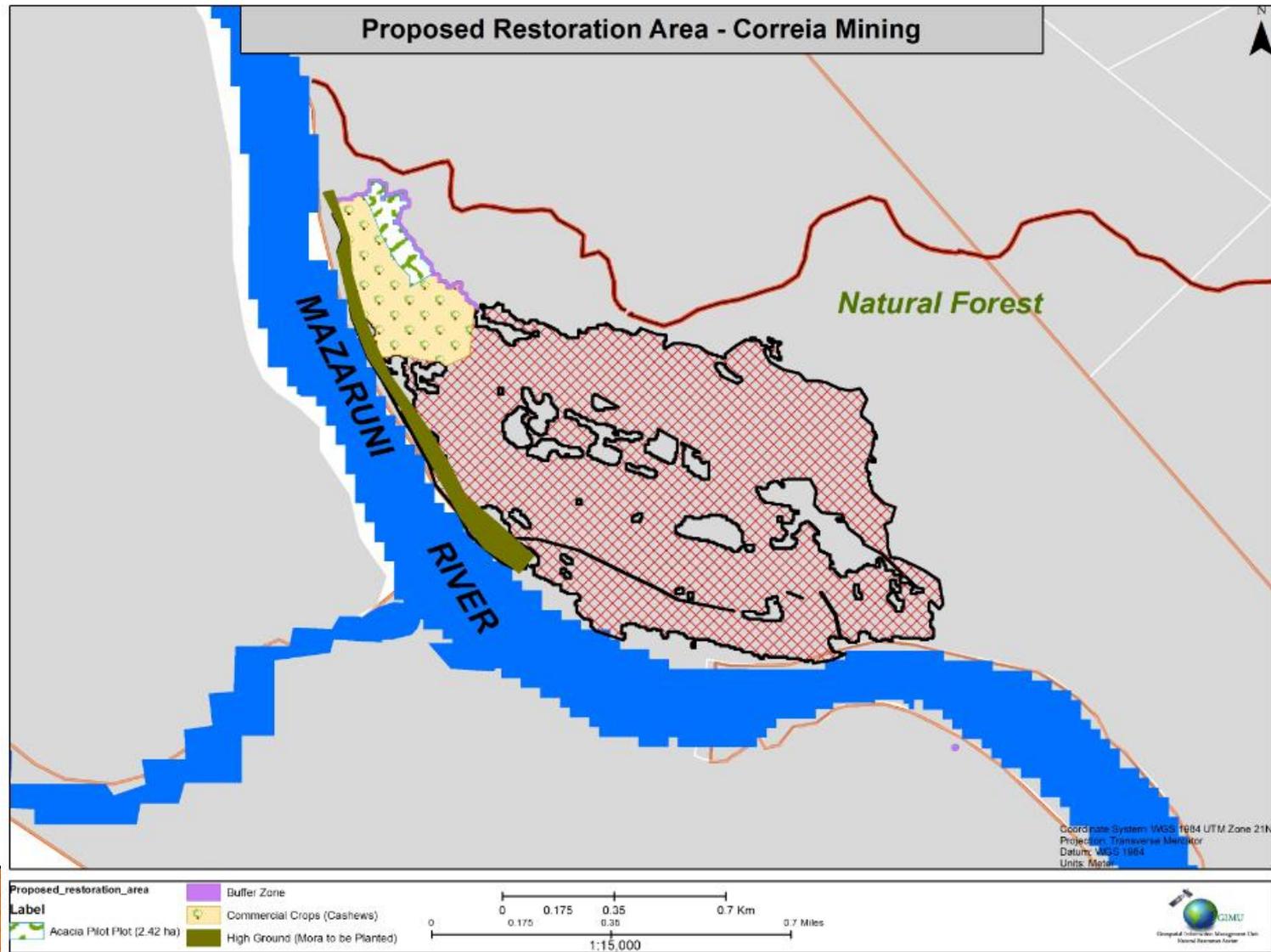
3D Map



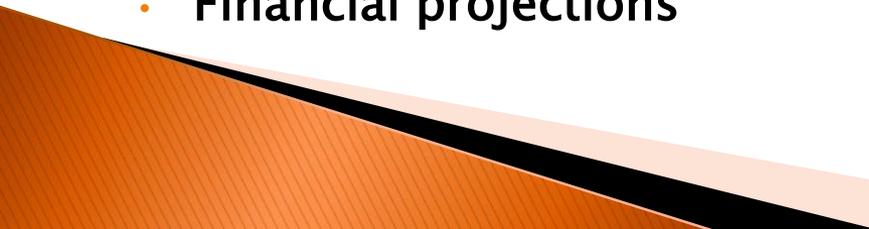
3D Map



Strategic Perspective-land use planning



Projections

- ▶ **Calculated parameters**
 - Amount of material available
 - Amount of material required
 - Project timelines (entire project , specific stages)
 - Financial projections
- 

Results / Achievements to date



Project Unit and Project Document

- ▶ **Land Reclamation Unit** – The Land Reclamation Unit was established and the requisite technical staff recruited.
 - ▶ **Project document** – A complete project document, inclusive of a financial plan was prepared and submitted for review in May 2014.
 - ▶ The project document was subsequently finalized and submitted to the Office of Climate Change (OCC) in June, 2014.
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Work Plan

- ▶ **Work-Plans and (M&E) framework** – In support of the project document, a detailed Work-Plans and accompanying Monitoring and Evaluation (M&E) framework for the LRC were prepared for 2014 & 2015.
 - ▶ **Project-level and site specific action plans framework** were prepared 2014.
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Reporting

- **Biannual reports (2)** on the implementation of reclamation activities for the periods (a) January – July and (b) July to December respectively were prepared.
- **Fortnightly Project Reports** were also prepared and are available .

Stakeholder engagement

- ▶ **One (1) Multi stakeholder engagement sessions on 16TH JULY, 2014.**

Objectives

- ▶ To promote dialogue and information sharing.
 - ▶ To stimulating stakeholder participation in the activities of the LRP.
- 



Site Selection

- Three (3) priority project sites have been identified for intervention through the LRP.
- Supporting **site specific action plans** to commence earth works have been prepared.

Site 1

- Olive Creek
– Mazaruni
Mining
District
No.3.
- Project Area:
8.78
Hectares or
21.69 Acres.





Before



After



Site 2

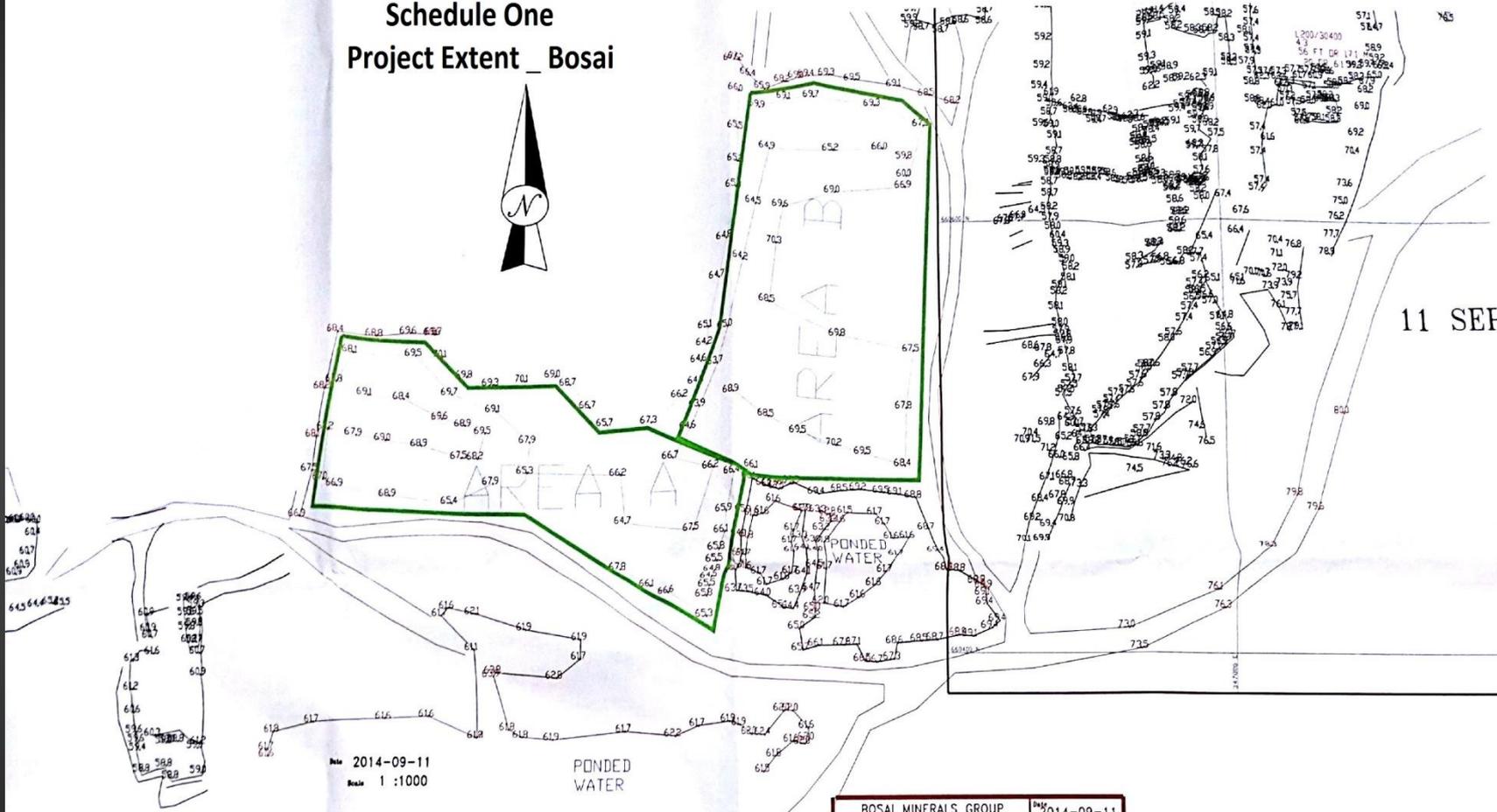
- Dacoura Mines – Mazaruni Mining District No.3



- Project Area: 3.5 HA – Hectares or 8.6 Acres.



Schedule One Project Extent _ Bosai



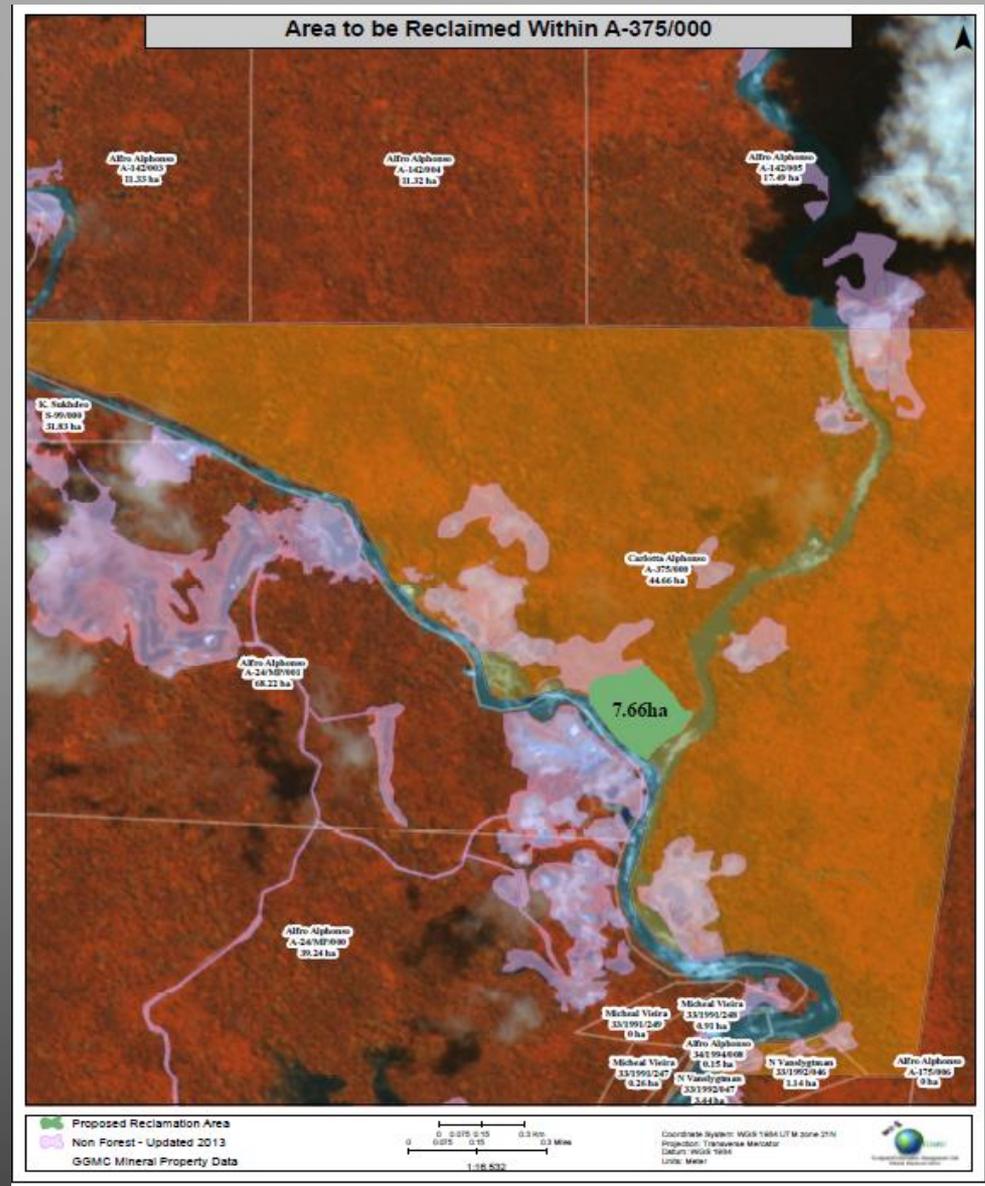
BOSAI MINERALS GROUP GUYANA INC. GUYANA S.A.	Date 2014-09-11
MINE ENGINEERING	Scale 1 :1000
DACOURA MINE PROPOSED RECLAMATION SITE	Approved by MINE ENG.
	Drawn by SURVEY DEPT.
	Supporting File C:\ACAD\DACOURA

AREA A: 3.7342 ACRES OR 1.5112 HECTARES
 AREA B: 4.9134 ACRES OR 1.9884 HECTARES



Site 3

- ▶ Thomas Island Puruni:-
Mazaruni Mining District No.3.
- ▶ Project Area:
7.6 hectares or
18.78 Acres





Mining Deforestation Within Area of Interest- "Issano"

Mazaruni Rv.

Legend
Mining Reach
Mining Points
Agency Name

Coordinate System: GCS
Datum: WGS 1984
Units: Degree

Challenges

- ▶ Buy in – Culture shift necessary
 - ▶ Mobilization
 - ▶ Site accessibility
- 

The way forward

- ▶ Aggressive data collection is critical !!
 - ▶ Continuous replication of reclamation experimental trials
 - ▶ Increased stakeholder awareness
 - ▶ Adjusted support systems (nurseries etc)
- 

Thank you

Questions!!