

Glenn Matthews

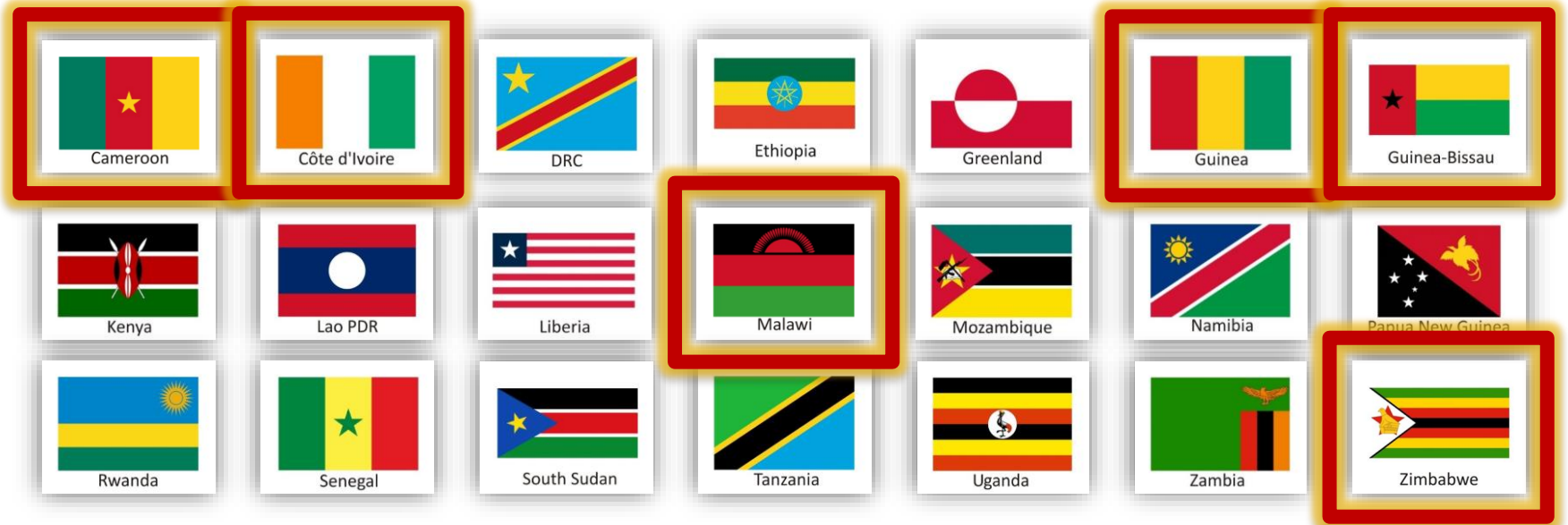
FEBRUARY 2017



# Landfolio Outside of the Mining Sector

# Public Sector Clients

## LONG TERM SUSTAINABLE IMPLEMENTATIONS



# Private Sector Clients

MAJORS, MID TIERS, EXPLORERS & ROYALTY OWNERS



# Landfolio Outside of the Mining Sector



- Land Use Permit Management – Indonesian Government



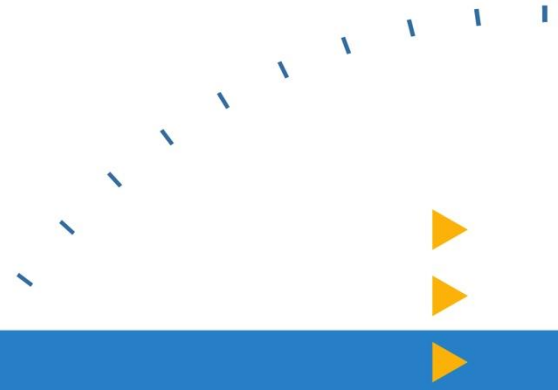
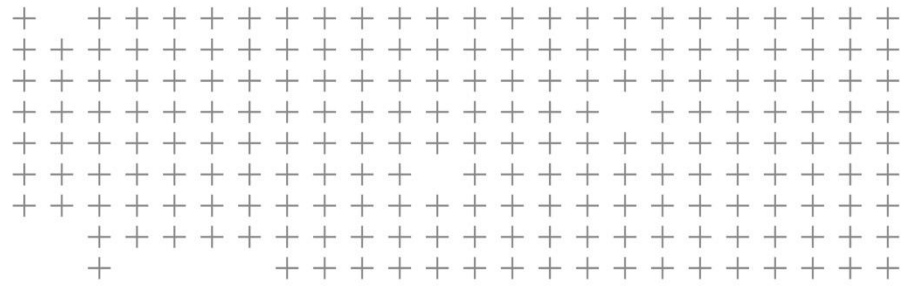
- Oil & Gas Sector - Origin Energy



- Land Cadastre - St. Kitts & Nevis Government



- Penmap - Trimble Land Administration



# Land Use Permit Management - Indonesian Government



# Millennium Challenge Corporation

## PARTICIPATORY MAPPING AND PLANNING (PMaP) PROJECT

- **District Information Management System:** ‘Implement a spatially enabled Information Management System (IMS) to integrate land use, land cover, and land use licensing information to be managed and used at the district level’

# IMS Project Delivery

- Implement IMS for four Districts: Muaro Jambi, Merangin, Mamuju and Mamasa (PMaP 1)
- Single, back-end Landfolio system and database, with individual portals developed and uniquely configured for each District
- Integrated GIS Data Sharing Application develop to sync data between District GIS servers and Landfolio server in Jakarta

INDONESIA  
SISTEM MANAJEMEN  
INFORMASI PERIZINAN  
RUANG KABUPATEN

MAMASA

Mamasa User 1 (Mamasa)

Semua Izin - Mamasa

Nomor Perizinan:   
Status:   
Tanggal Permohonan:   
Tanggal Berakhir:

Jenis Perizinan:   
Pemilik:

Tanggal Penerbitan:

Masuk  
Bersihkan

Nomor Perizinan	Jenis Perizinan	Status	Pemilik	Tan
005/ALS/IX/2015	IUP-B (MMA)	(Active) Aktif	PT Agro Lino Sejahtera (100%)	
IL/001/PMDN/2016	IL-PER (MSA)	(Active) Aktif	PT JAYA ABADI (0%)	09/C
IL/MSA/K/IX	IL-PER (MSA)	(Active) Aktif	Kate Wood (100%)	04/C
IUP/05/PMDN/2016	IUP-P (MMA)	(Active) Aktif	casles jaleng (100%)	09/C
MMA/BPTSP/IUP/2016/0002	IUP-B (MMA)	(Approved by technical) Disetujui Tim Teknis	Asian Dimension Pty Ltd (100%)	
MMA/BPTSP/IUP/2016/0004	IUP-B (MMA)	(Active) Aktif	Heri Santoso (100%)	09/C

Lokasi Perizinan

Rantepao Palopo

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# Land Use Spatial Validations

## Jalankan Validasi Ruang dan Verifikasi Koordinat

Dokumen pendukung: [Unggah](#)

Saved Today 7:17:12 AM  
[Simpan Batal](#)

Seluruh dokumen yang diperlukan telah diunggah

Koordinat: [Ubah](#) GCS WGS84 \*

[Lanjut](#)

[Kembali](#)

Type	Description	Area	Action
	Your selected shape overlaps the following: Permit Code/IL/KJW	7.103.490,5934 m <sup>2</sup>	<a href="#">Clip shape</a>
	Your selected shape overlaps the following: IUP/2016/00007	2.660.198,7468 m <sup>2</sup>	<a href="#">Clip shape</a>
	Your selected shape overlaps the following: Perkebunan	2.605.991,2563 m <sup>2</sup>	<a href="#">Clip shape</a>
	Your selected shape overlaps the following: Sempadan Sungai	467.965,5245 m <sup>2</sup>	<a href="#">Clip shape</a>
	Your selected shape overlaps the following: Sempadan Sungai	30.002,3949 m <sup>2</sup>	<a href="#">Clip shape</a>

## Review Coordinates

**Lintang:** **Bujur:**

- 1.01° 53' 11.52" S 103° 31' 17.44" E
- 2.01° 53' 16.46" S 103° 34' 10.47" E
- 3.01° 51' 37.63" S 103° 37' 8.45" E
- 4.01° 54' 0.93" S 103° 38' 7.78" E
- 5.01° 54' 40.46" S 103° 31' 37.21" E

**Area:** 3483.6756 Ha

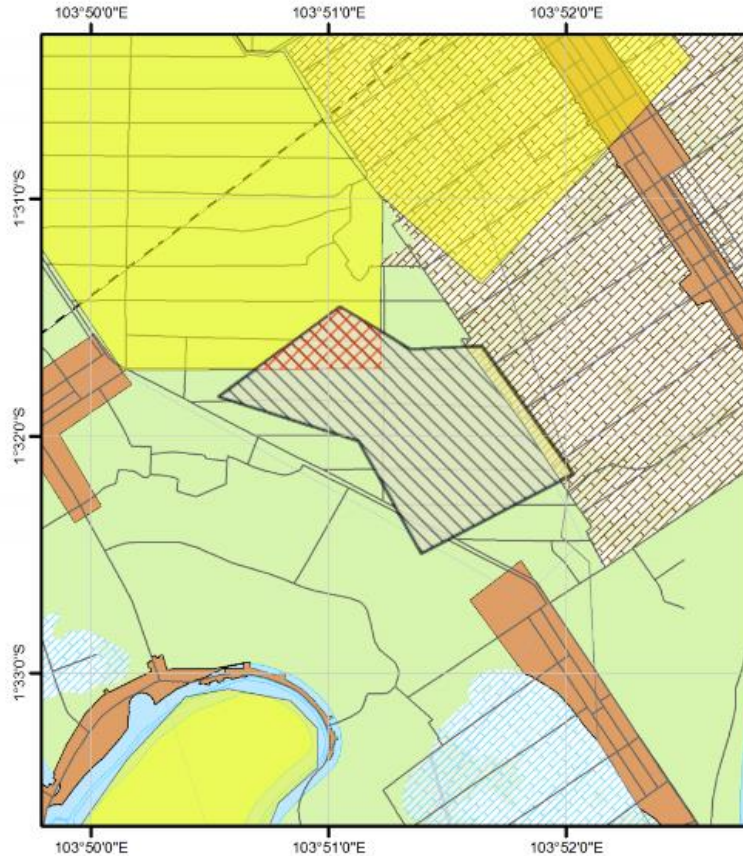
**Lokasi:** Jambi, KAB. MUARO JAMBI

- Validate competing land use permits such as:

- Farming
- Fisheries
- Forestry
- Industrial
- Military
- Mining
- Plantations
- Settlements
- ...



# Land Use Spatial Validations



PEMERINTAH KABUPATEN  
MUARO JAMBI

Lampiran: Surat Rekomendasi Tata Ruang  
Nomor Perizinan: MJ/BKPRD/KTR/2016/0054\_CH

PETA REKOMENDASI TATA RUANG  
PEMILIK: Asian Dimension Pty Ltd

0 0,2250,45 0,9 1,35 1,8 km

Koordinat: WGS 84

### Keterangan

- Permohonan Lokasi
- Tumpang Tindih dengan Perizinan Lain
- Tumpang Tindih dengan Rencana Pola Ruang
- Semua Izin
- Jalan
- Admkecamatan

### Rencana Struktur Ruang

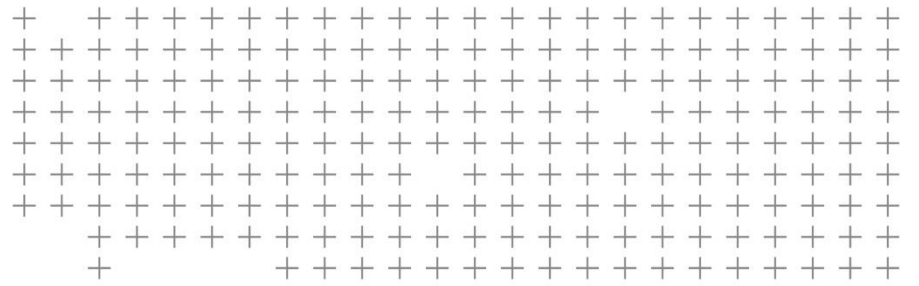
- Dermaga
- IPA PDAM
- waduk
- pembangkit\_gardu
- Bandar Udara
- Terminal Barang
- Terminal Type B
- Terminal Type C
- IPAL Komunal
- IPLT
- TPA Sampah
- Transmisi Gas\_MJ
- air baku
- Jaringan ENergi 500 kVA
- Jaringan Energi 275 KV
- Jaringan Energi 150 KV
- Jaringan Energi 20 KV
- Arteri Primer
- Jalan Bebas Hambatan
- Kolektor Primer 1
- Lokal Primer
- jalur kereta api
- rencana\_kar\_rtlj

### Rencana Pola Ruang

- Buper Tempino
- Danau
- HL
- Hutan Produksi Konversi
- Hutan Produksi Terbatas
- Hutan Produksi Tetap
- KSA/KPA
- Kawasan Hankam
- Kawasan Hortikultura
- Kawasan Hutan Rakyat
- Kawasan Industri
- Kawasan Perikanan
- Kawasan Perikanan Kolam
- Kawasan Resapan Air
- Kawasan Wisata Binaan
- Pariwisata (Pemancingan)
- Perkebunan
- Permukiman
- Permukiman Suku Anak Dalam
- Pertambangan Batu Bara
- Pertambangan Kuarsa
- Pertanian Lahan Basah Bukan Irigasi
- Pertanian Lahan Basah Irigasi
- Pertanian Lahan Kering
- Sempadan Danau
- Sempadan Sungai
- Sudetan
- Sungai
- Taman Hutan Raya Tanjung
- Taman Nasional Berbak

# IMS Project Highlights

- Successful Implementation in difficult environment
  - All user interaction through the Portal Interface, Landfolio only used for configuration
  - Complex Spatial Validation and clipping against the Spatial Development Plan
  - Register of Non-spatial construction permits
  - **Partial Go-Live End 2016** (cloud), awaiting hardware to complete



# Oil & Gas Sector Permitting - Origin Energy

# Oil & Gas Permit Management

- Maintaining important onshore and offshore permits and leases is crucial to the success for upstream and downstream businesses in the oil and gas sectors
- Origin's TMS is now managing permits and land tenure across 6 jurisdictions in Australia and New Zealand, under 14 separate regulatory acts
- Workflows created for 30+ license types



# Commercial Agreements

- Scope also included commercial agreement management for three separate (and sometimes competing) internal business units
- 100's of Joint Venture, Gas Sale, and Confidentiality Agreements
- Complex conditions linked to actions
- Required strict system authorisations to prevent the competing business units from viewing each other's data



# Origin TMS Project – now live

Corporate Demo (5.5.1.08)  
FlexiCadastr Admin (sign out)

Search Agreement > Details

### Telfer-Nifty CA 2003

Type: Confidentiality Agreement Start Date: 01-Jul-2003  
Name: Telfer-Nifty Gas Pipeline Confidentially Agreement, 2003 Sub Type: Mutual End Date: In Perpetuity  
Parties: Marubeni Corporation (100%), APA Group (50%), Osaka Gas Australia Pty Ltd (50%) Status: Active

General Parties (3) **Conditions** Signatories (3) Shape Map References Jurisdictions Documents (1)

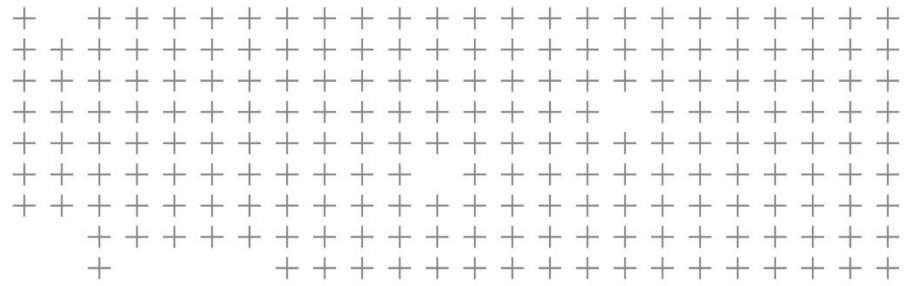
Commodities Licenses (1) Groups Related Agreements Actions Open Actions Closed Roles Discussions Audit

There are 4 conditions in the list.

Alt	Number	Condition type	Condition Description	Condition Value	Condition Unit	Actions
<input type="checkbox"/>	3.0.1 (a)	Area of Interest	All land maintained by active pipeline licenses			0
<input type="checkbox"/>	1.12	Buyback Right		100,000,000.00	AUD	0
<input type="checkbox"/>	15.2 (a)	Royalty		0.010	%	0
<input type="checkbox"/>	11.2 (b)	Gas Sale	Sale to Company XYZ when capacity reaches 1 million cubic meters	1,000,000.00	Australian Dollar	0

Show Indirect Conditions

- Upgrade to Landfolio 6.0 planned for Q1 2017
- New functionality Condition (Clause) Number field



# Land Cadastre – St. Kitts and Nevis Govt.

# Nevis Island Authority (NIA) and Landfolio

- Project involves the modernization of the land administration for the NIA including the implementation of Landfolio for *land registration, cadastre, and public access*





# Island of Nevis



THE WORLD WORKS

# NIA Project Deliverables

- Trimble UX5 – aerial imaging system
- Computer hardware – server, laptops, scanners etc.
- Conversion and capture of buildings from new airborne imagery
- Scanning and indexing of 20,000 + certificates of title and common records
- Implement Landfolio
- Data migration – cadastre, registry, documents, imagery
- Extensive training and user support
- Deploy public access portal

# Integrated Land Cadastre System

File Edit View Favorites Tools Help

Trimble landfolio QA Site Nevis Island Administration - QA Site (5.5.1) Landfolio ADMIN (sign) New Search

Search Developments > Search

Code: \_\_\_\_\_ Jurisdiction: \_\_\_\_\_ Status Group: \_\_\_\_\_  
Name: \_\_\_\_\_ Type Group: Buildings Status: \_\_\_\_\_  
Party: \_\_\_\_\_ X Q Type: \_\_\_\_\_

SEARCH

more...

Search returned 1000 of more than 1000 results(full list)

1 2 3 4 5 6 7

All	Map	Code	Name	Jurisdiction	Type	Status	Application Completion Date	Stop Notice Date	Area	Map Reference
<input type="checkbox"/>		019-16	UAT Test	Nevis Physical Planning and Development	General Building Development				1,265.0000 ft <sup>2</sup>	Nevis, 3100, Saint George Gingerland
<input type="checkbox"/>		NEV3100-0001-11	UAT Test	Nevis Physical Planning and Development	Industrial				5,689.0000 ft <sup>2</sup>	Nevis, 3100, Saint George Gingerland
<input type="checkbox"/>		NEV3100-0002-0	gem cake	Nevis Physical Planning and Development	Residential: Multi-Family Dwelling Addition		2016/01/24		2.0000 ac	Nevis, 3195, Saint Thomas Lowland
<input type="checkbox"/>		NEV3100-0002-0[unit 1]	condo unit	Nevis Physical Planning and Development	Condominium Unit	Approved	2017/01/26	2017/01/27		
<input type="checkbox"/>		NEV3100-0002-0[unit 2]	condo unit	Nevis Physical Planning and Development	Condominium Unit	Approved	2017/01/26	2017/01/27		
<input type="checkbox"/>		NEV3193-0003-0	Joseph Blake	Nevis Physical Planning and Development	Residential: Single Family Dwelling	Application			2,000.0000 ft <sup>2</sup>	Nevis, 3700, Saint James Windward
<input type="checkbox"/>		NEV3193-0003-01		Nevis Physical Planning and Development	General Building Development	Active			67.8678 ft <sup>2</sup>	3193

Change of Use  
Commercial  
Condominium Unit  
Demolition  
General Building Development  
Hotel and Tourism  
Industrial  
Institutional  
Mining Operation  
Removal  
Re-Occupation Approval  
Residential: Multi-Family Dwelling  
Residential: Multi-Family Dwelling Addition  
Residential: Single Family Dwelling  
Residential: Single Family Dwelling Addition  
Swimming Pool

Home  
Developments  
Assessment  
Buildings  
Infrastructure  
Notices  
Parcels  
Registry  
Certificate of Title  
Common Record  
Title File  
General Admin  
Actions  
Maps  
Reports  
Documents  
Companies  
People  
My Settings  
Admin Tools  
Help

TR

imble.

# Land Parcels – Legal Boundary Description

Search

Development > Details

Home

Developments

Assessment

Buildings

Infrastructure

Notices

Parcels

Registry

Certificate of Title

Common Record

Title File

General Admin

Actions

Maps

Reports

Documents

Companies

People

My Settings

Admin Tools

Help

## NEV3193-0003

Development Type: Parcel

Application Completion Date:

Application Number:

Shape Official Area: 22,210.7396 ft<sup>2</sup>

Construction Completion Date:

Development Parties:

Status: Active

Stop Notice Date:

- General
  - Parties
  - Address
  - Shape
  - Map References (4)
  - Documents
  - Registry (3)
  - Related Developments (17)
  - Actions Open
  - Actions Closed (1)
- Roles (6) Discussions Audit



**Coordinate System:** PCS\_St\_Kitts\_1955\_British\_West\_Indies\_Grid  
**Official Area:** 22,210.7396 Square Feet  
**Calculated Area:** 22,214.0455 ft<sup>2</sup>

**Legal Description:**

**Parts:**

Part 1

Viewing Coordinates of: Part 1

	East (x)	North (y)
1	332936.94	1893592.58
2	332872.21	1893583.6
3	332872.63	1893599.44
4	332873.65	1893617.21
5	332889	1893619.18

# Land Developments and Parcels

Search

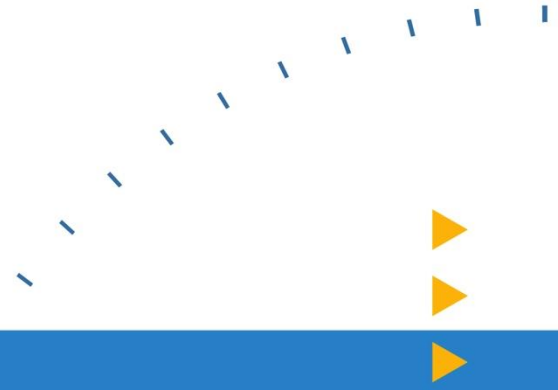
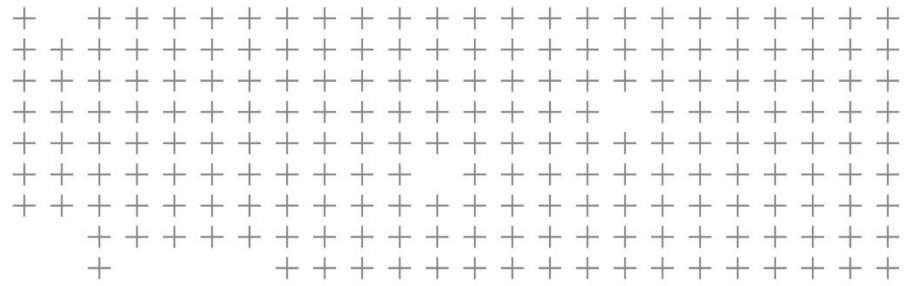
- Home
- Developments
- Assessment
- Buildings
- Infrastructure
- Notices
- Parcels
- Registry
  - Certificate of Title
  - Common Record
  - Title File
- General Admin
- Actions
- Maps
- Reports
- Documents
- Companies
- People
- My Settings
- Admin Tools
- Help



- Legend
- Developments
  - Notices
    - Complaints
    - Enforcement Notices
    - Stop Notices
  - Assessments
    - Environmental Impact Assessment
    - Terms of Reference
    - Proposals
  - Demolitions & Removals
    - Demolition
    - Removal
  - Re-Occupation Approvals
  - Infrastructure
    - Advertisements
    - Fencing
    - Road Connection
  - Buildings
    - Change of Use
    - Commercial
    - Condominium Unit
    - General Building Development
    - Hotel and Tourism

# Benefits of Landfolio for Nevis

- Modern land administration system
  - Rapid retrieval of land records
  - Complete land record history
  - Centralised database
  - Improved security
  - System backups
- More efficient land administration
  - Integration between separate government agencies
  - Reduction in conflicting property claims
- Correct calculation of property taxes
  - Improved revenues
  - Protests from over-charging some residents



# Penmap – Trimble Land Administration

# What is Penmap?

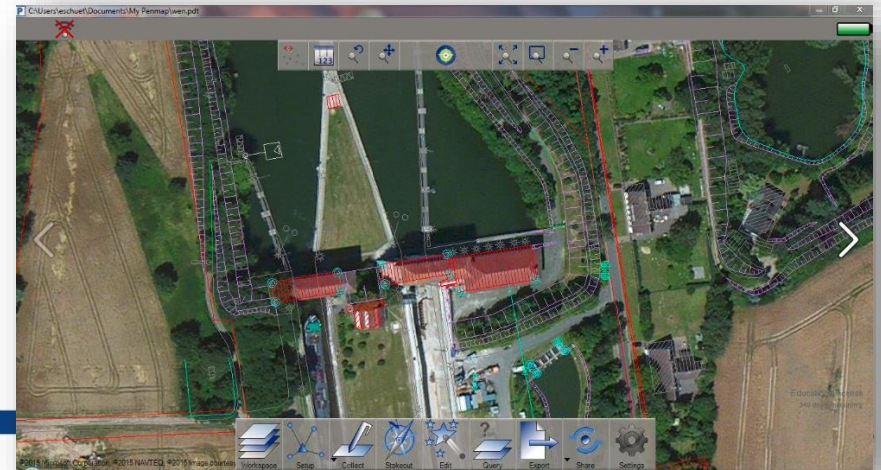
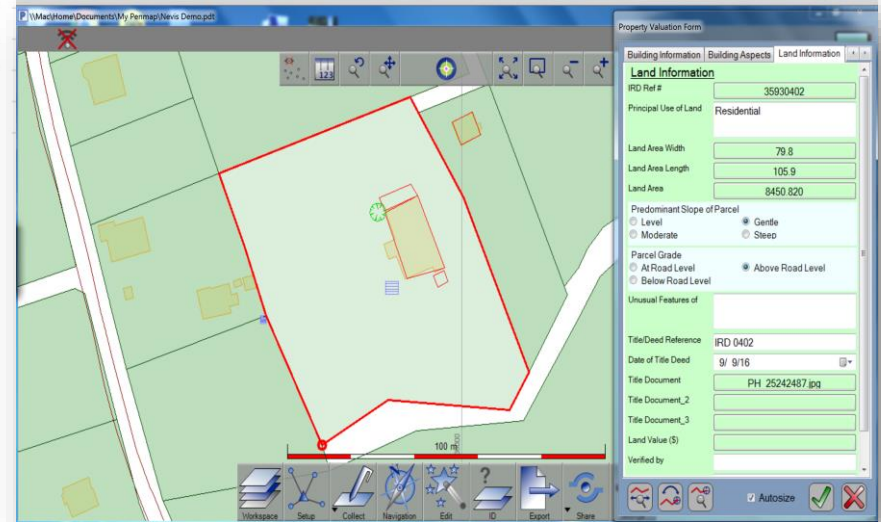
- Penmap is a premium mobile data collection software designed for Cadastral Surveying, Mapping, and Land registration applications.
- Multi-platform flexibility – not just Trimble handsets
- ***Ideal solution to accompany Landfolio*** project teams where field data collection or verification is required.





# Penmap Benefits

- Large, user friendly interface
- Visual and gesture-based workflows
- Ability to customize GIS attribute system to match paper-based forms
- Sketch and drawing capability for geometric attributes (point, line, area)
- ***No prior surveying experience required*** to learn how to collect data



# Why use Penmap?

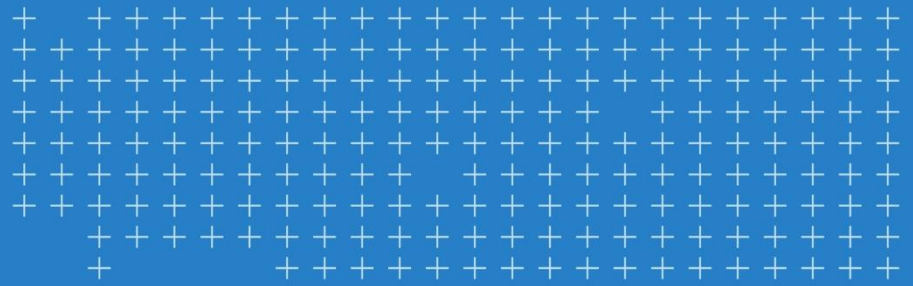
- Field data collection for mapping and surveys
- Property tax and valuation surveys
- Field verification of spatial information for:
  - land parcels
  - mining claims
  - damaged property
  - community surveys



# Penmap Results

- Real time and digital data collection reduces office post-processing and verification time by 80%
- Consistency and repeatability of results and procedures
- 50% reduction in time spent by field staff per parcel





 **Thank you!**