

Update Event & nearmap Solar



Update Event and nearmap Solar

Paul Peterson
Senior VP Product & Engineering

Current Clear Change

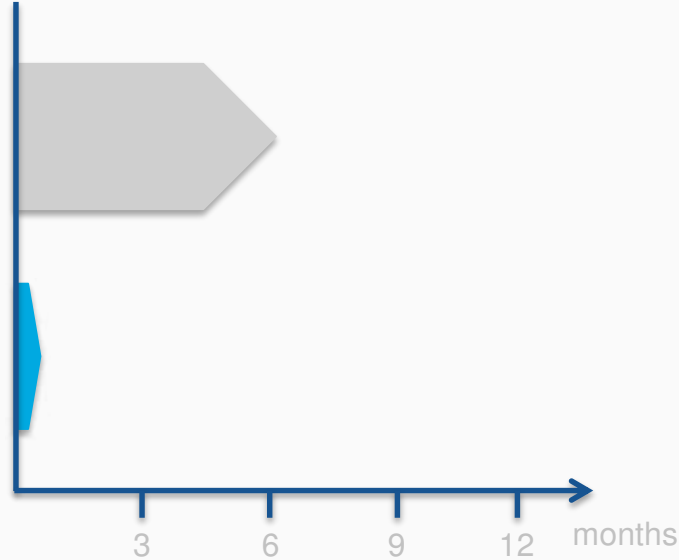
- Current
 - What's on the ground now
- Clear
 - Unrivalled clarity
- Change
 - Monitor change over time

Current Clear Change

- Imagery in days

Traditional

nearmap
current : clear : change





Wagga Wagga floods

Current **Clear** Change

- High resolution























Current **Clear** Change

- Accurate digital measurements reduce site visits



Measure Circle

Radius

22.49

mi

Area

1,691.2 km²

mi²

Measure areas

Measure lengths

Measure radius

Distance
between objects

Radius: 72.62 m
Area: 15,967.34 m²

Current Clear Change

- High resolution enables
 - close inspection
 - accurate digital measurements
- Combined with currency
 - Reliable decisions

Current Clear Change

- Track changes over time with nearmap's Timeline



Survey date
selected

Historic survey
markers

Currently selected
survey

Timeline: rich archive

Current Clear Change

- Visually analyse the impact of environmental events







Blue Mountains – pre bush fire Aug 2013



Blue Mountains – post bush fire Nov 2013



Sydney Wet & Wild Construction



Sydney Wet & Wild Construction



Sydney Wet & Wild Construction



Sydney Wet & Wild Construction



Sydney Wet & Wild Construction



Sydney Wet & Wild Construction

Views

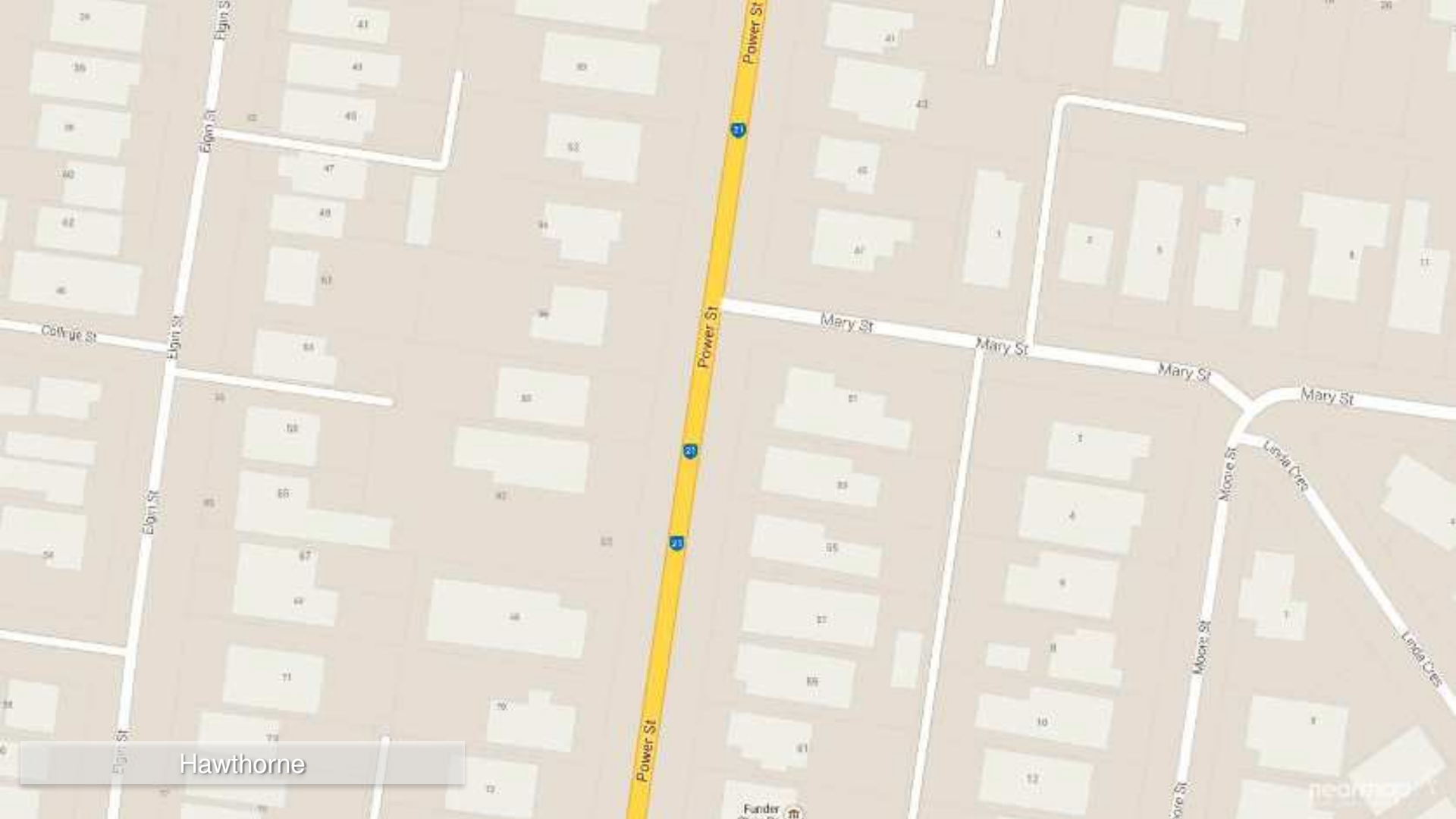
- Orthogonal, oblique, terrain and roadmap
- Integrated street view
- Overlay street maps and property boundaries



Grand Hyatt March 2014



Grand Hyatt March 2014



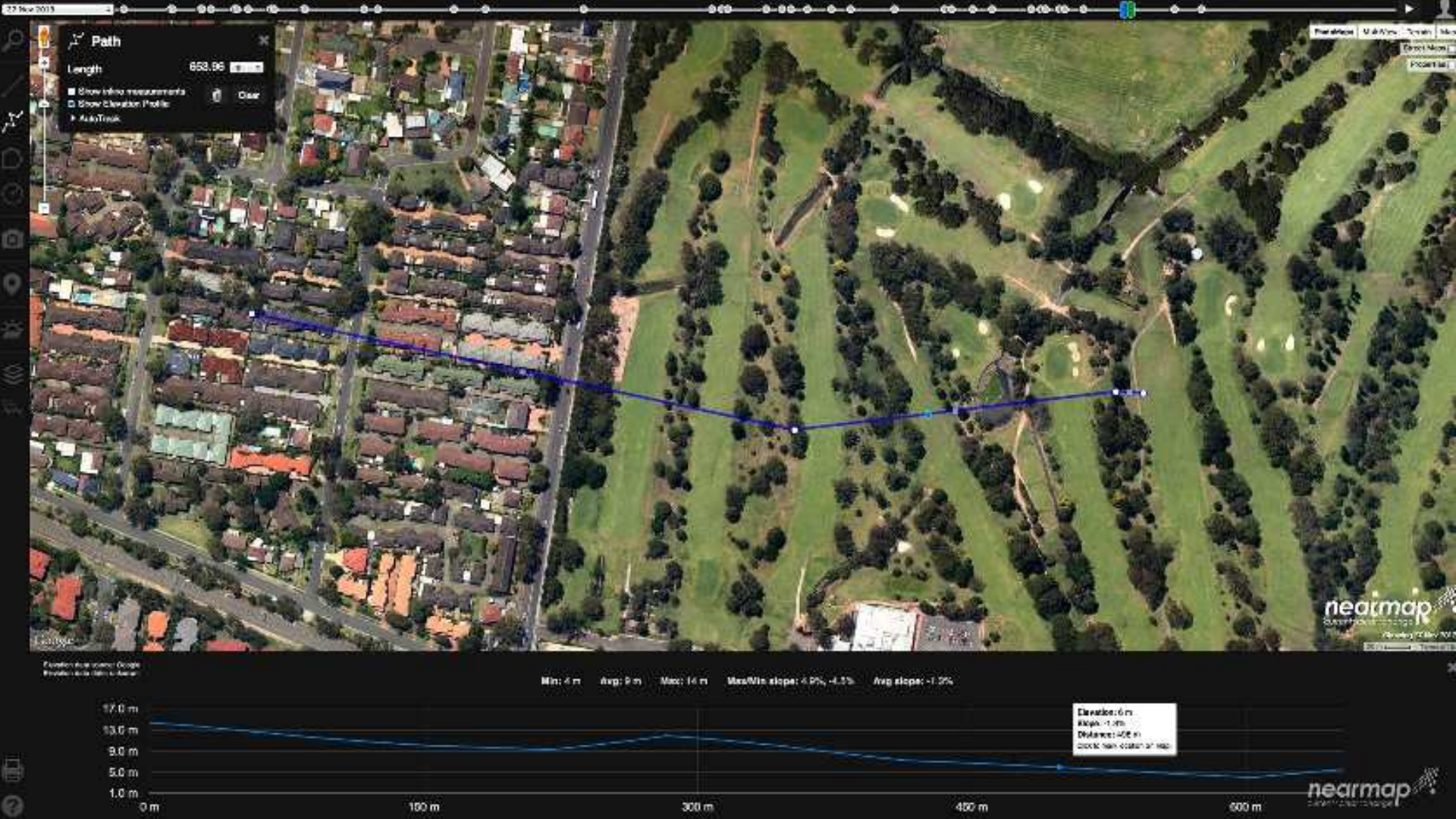
Hawthorne



Hawthorne March 2014

Measurement Tools

- Line, Path & Area
 - Elevation Profile
 - AutoTrack
- Radius





Path

Length 308.71

☐ Show inline measurements
☐ Show Elevation Profile

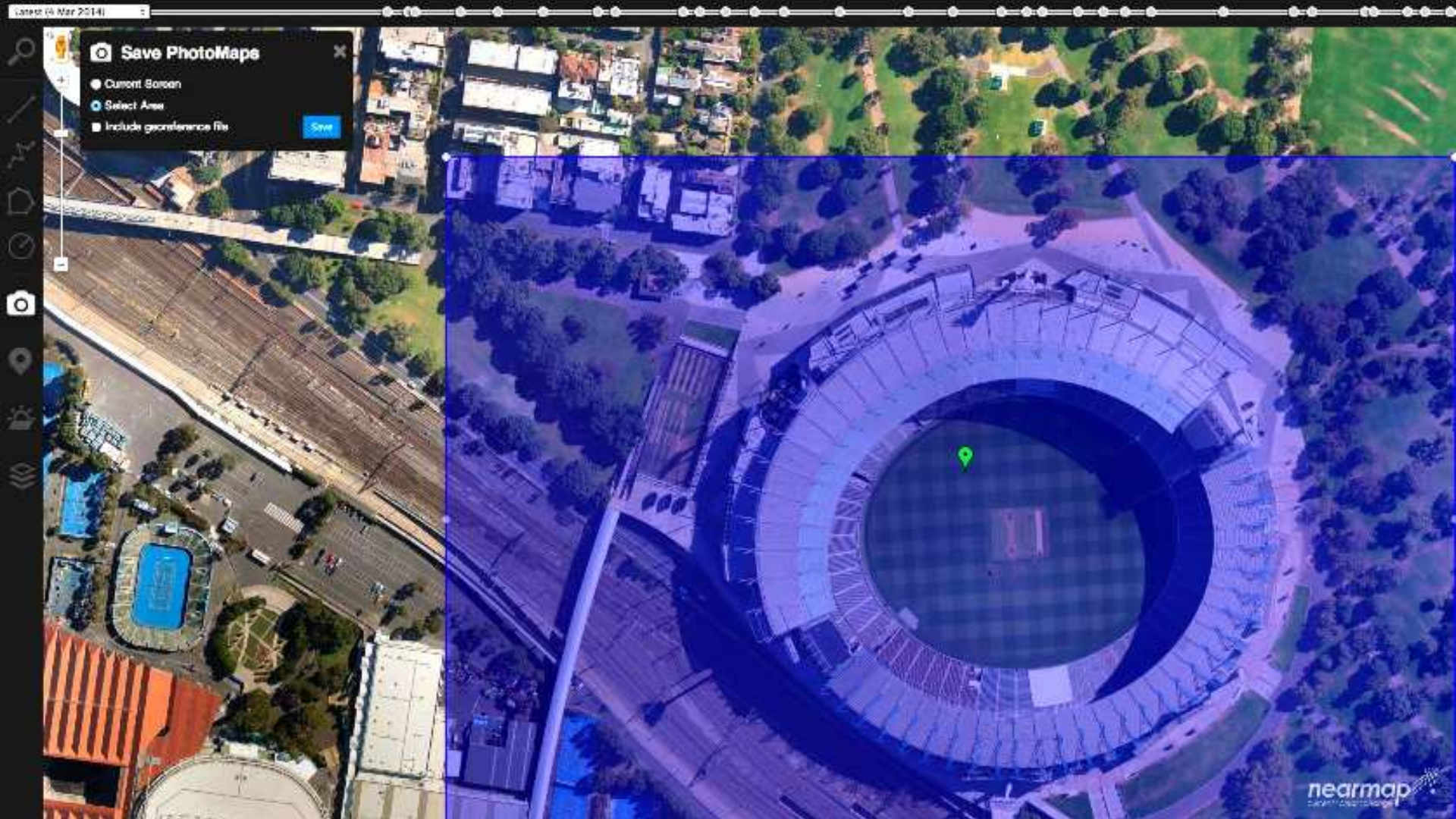
▼ AutoTrack

Speed	Direction
☐ Fast	☐ Forward
☐ Slow	☐ Reverse



Save Image

- Save screen view
- Save region
 - High Resolution
 - Georeferenced



Save PhotoMaps

- ☒ Current Screen
- ☒ Select Area
- ☒ Include geotagging file

Save

Location Information

- Reverse address lookup
- Lat/Long
- Share link



Location

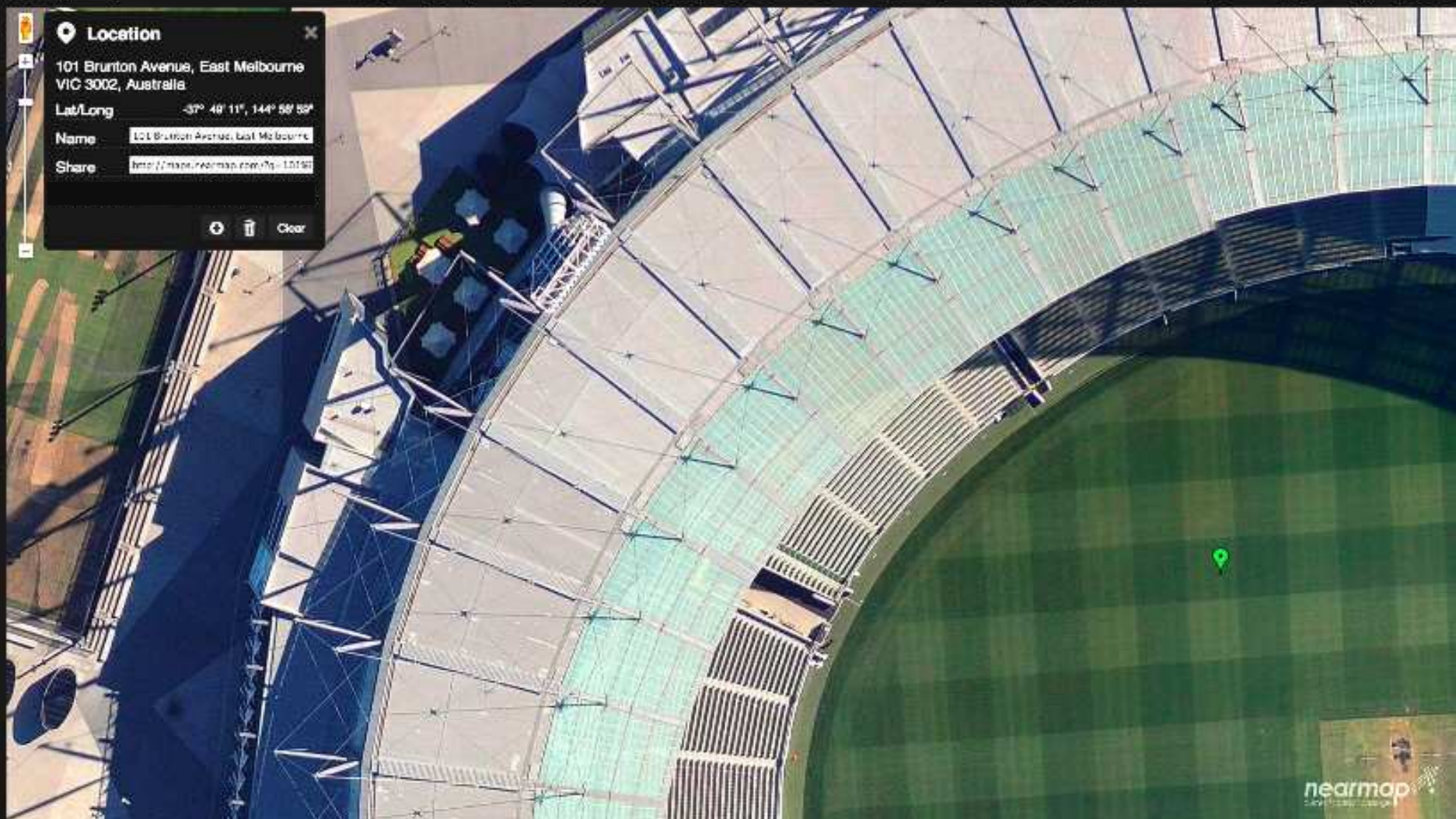
101 Brunton Avenue, East Melbourne
VIC 3002, Australia

Lat/Long -37° 48' 11", 144° 58' 59"

Name

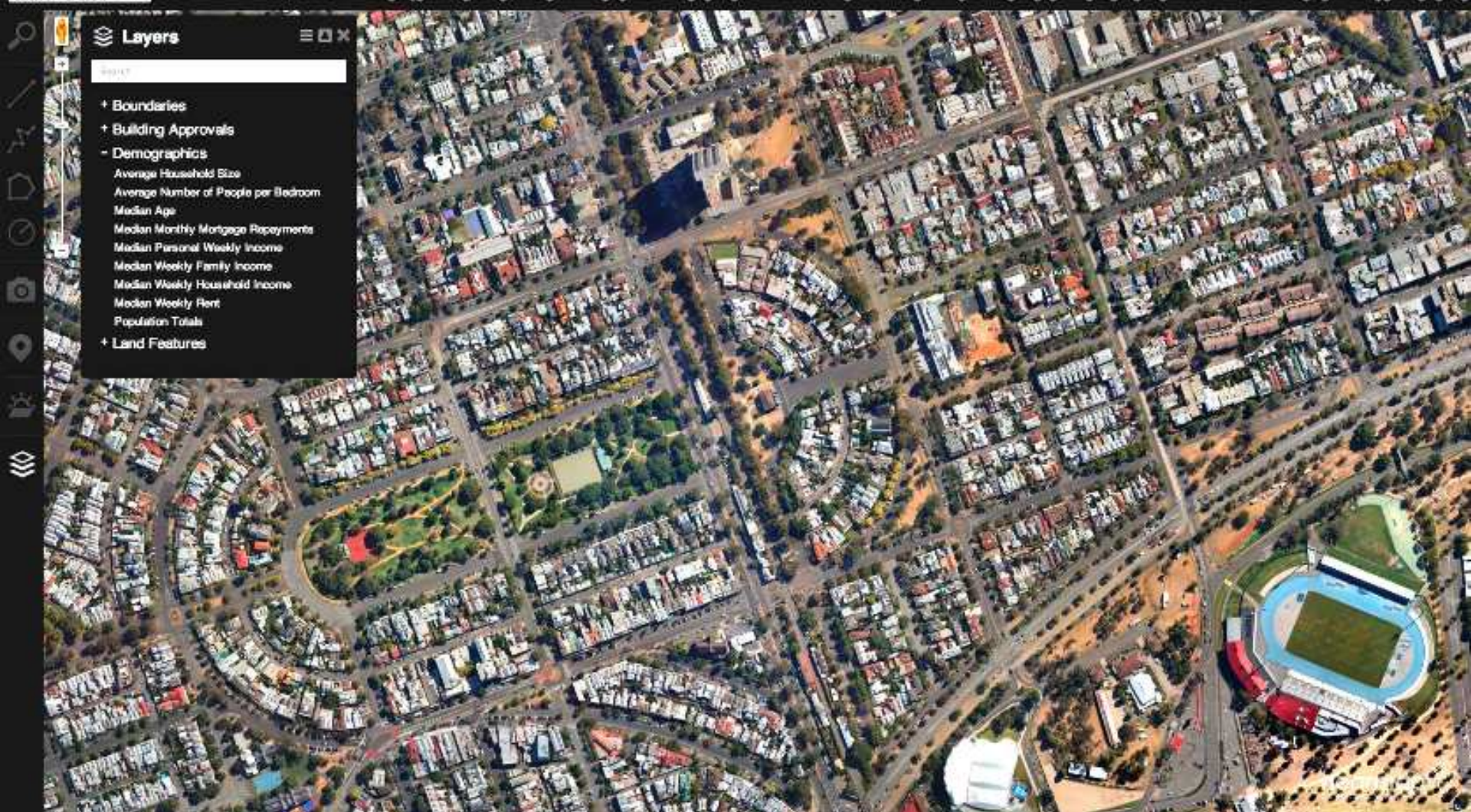
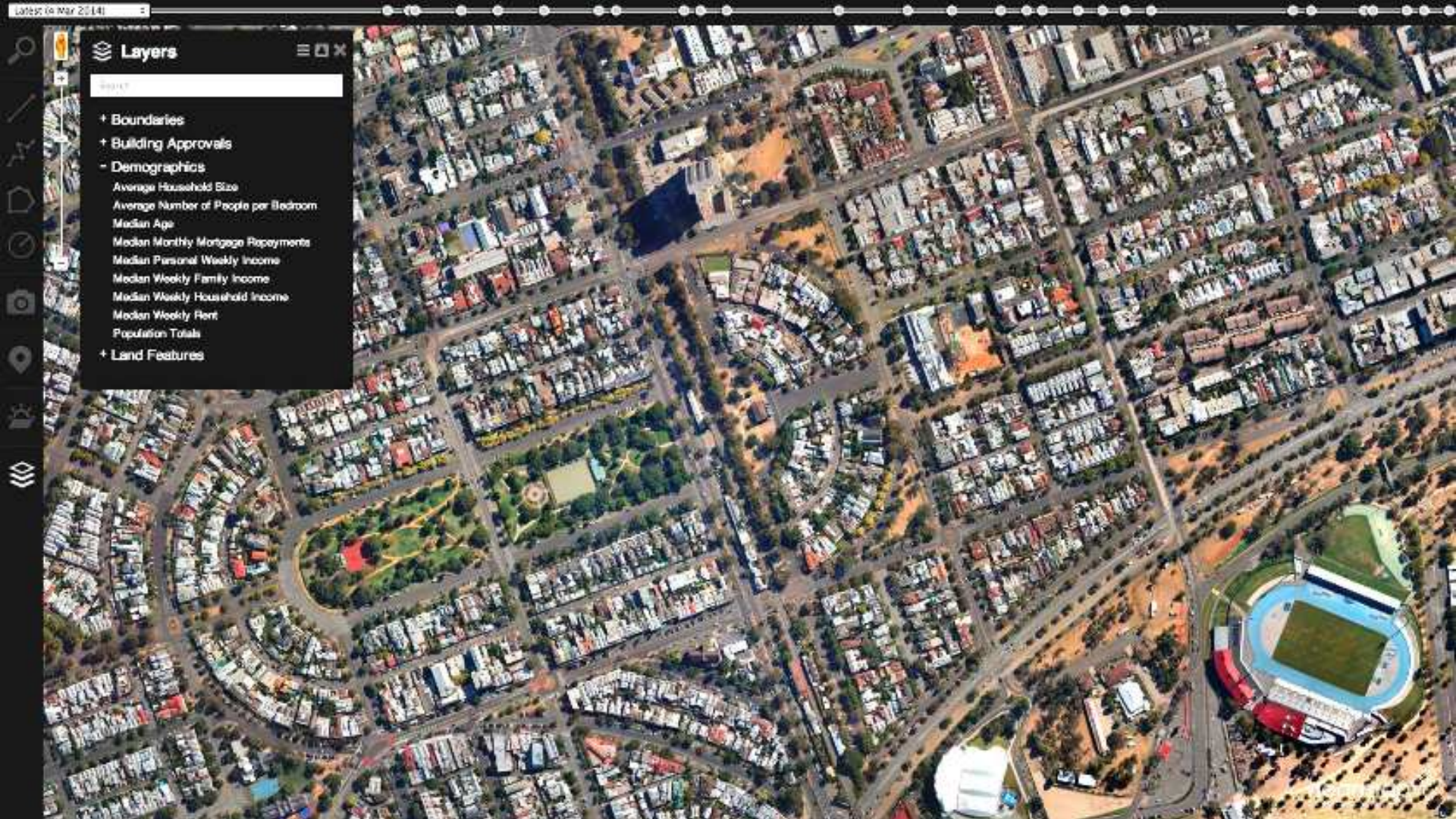
Share

Clear



Information Overlays

- Overlay ABS and other publicly available datasets



Layers

SEARCH

- + Boundaries
- + Building Approvals
- Demographics
 - Average Household Size
 - Average Number of People per Bedroom
 - Median Age
 - Median Monthly Mortgage Repayments
 - Median Personal Weekly Income
 - Median Weekly Family Income
 - Median Weekly Household Income
 - Median Weekly Rent
 - Population Totals
- + Land Features



Layers

Population Totals

Age:

Gender:

☒ 0 - 299

☐ 300 - 357

☐ 358 - 433

☐ 434 - 514

☐ 515 - 6433

Transparency:



Layers

Population Totals

Age: 20-24

Gender: Male

0 - 8

9 - 12

13 - 15

16 - 21

22 - 360

Transparency:

Coverage

- 85% of Australia's population now covered

Reliable & Fast

- World-class uptime
- World-class performance

Every Day

- More businesses
- More uses

Our Job

- Understand uses
- Deliver capabilities
- Make customers more profitable



Considering Solar?

- What's the ROI?

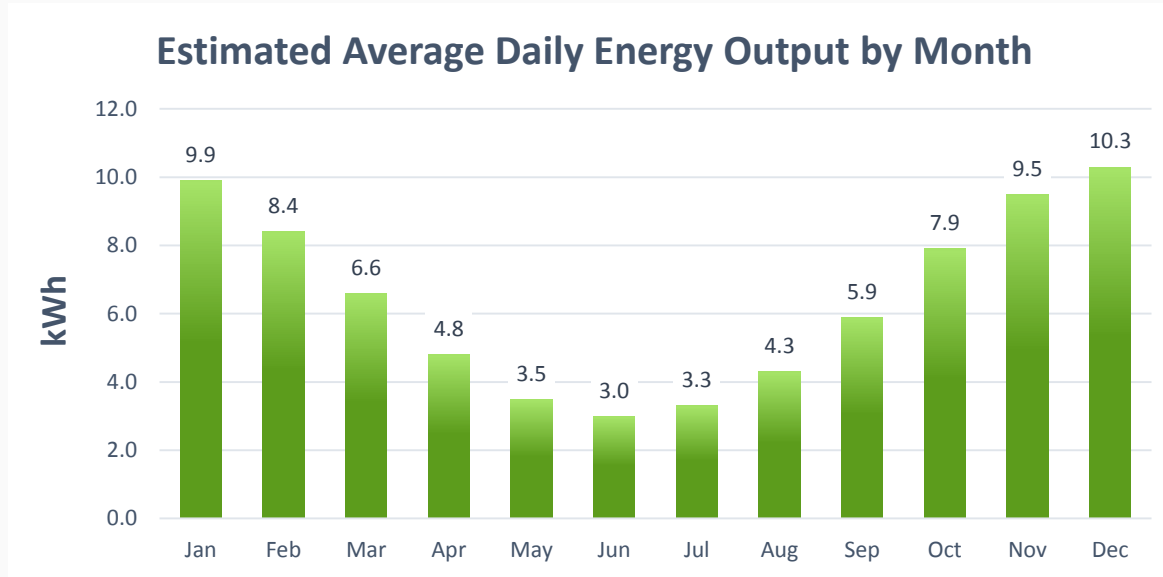
Complicated



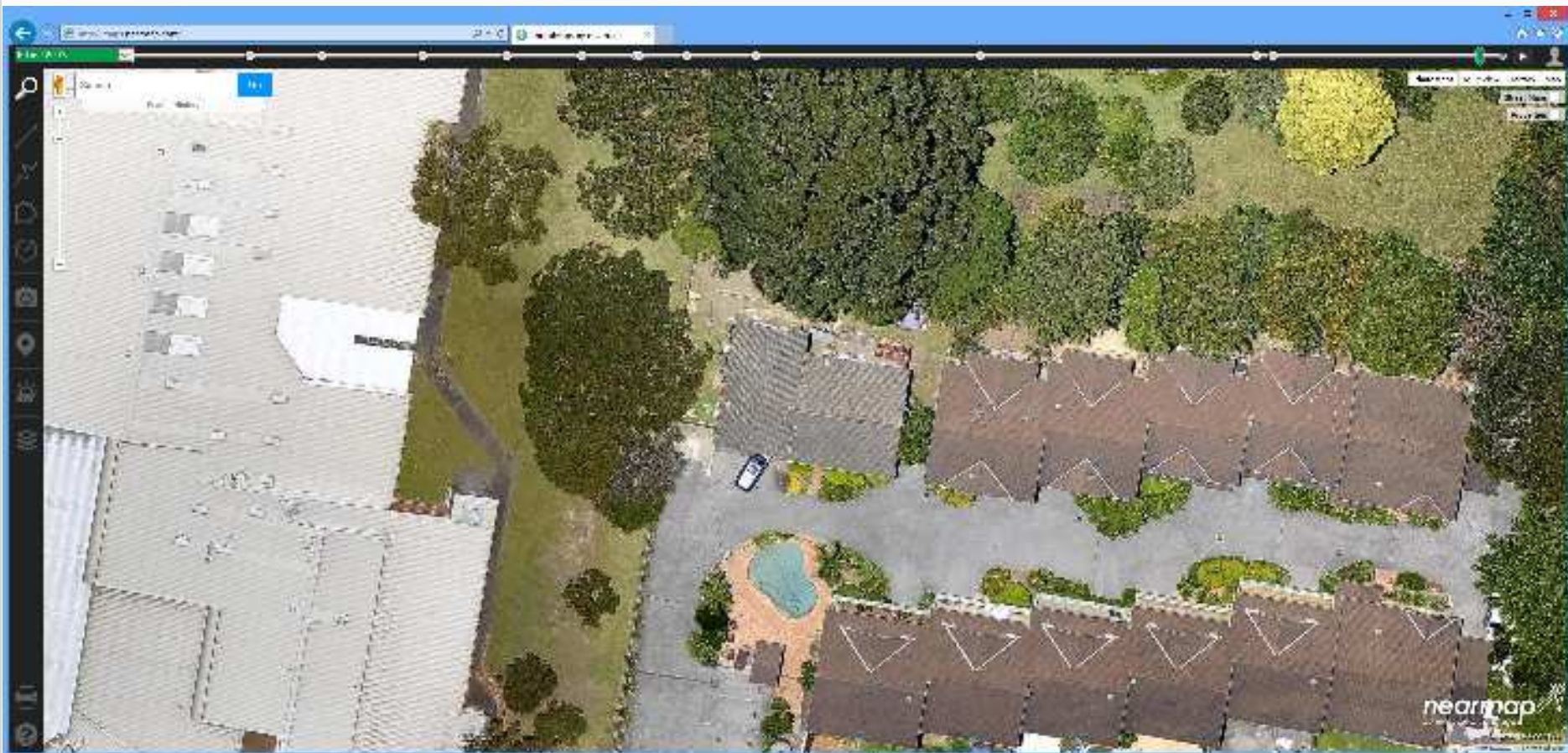
- Location?
- Shade?
- Number of panels?
- System power?
- Consumed or exported?

Offer

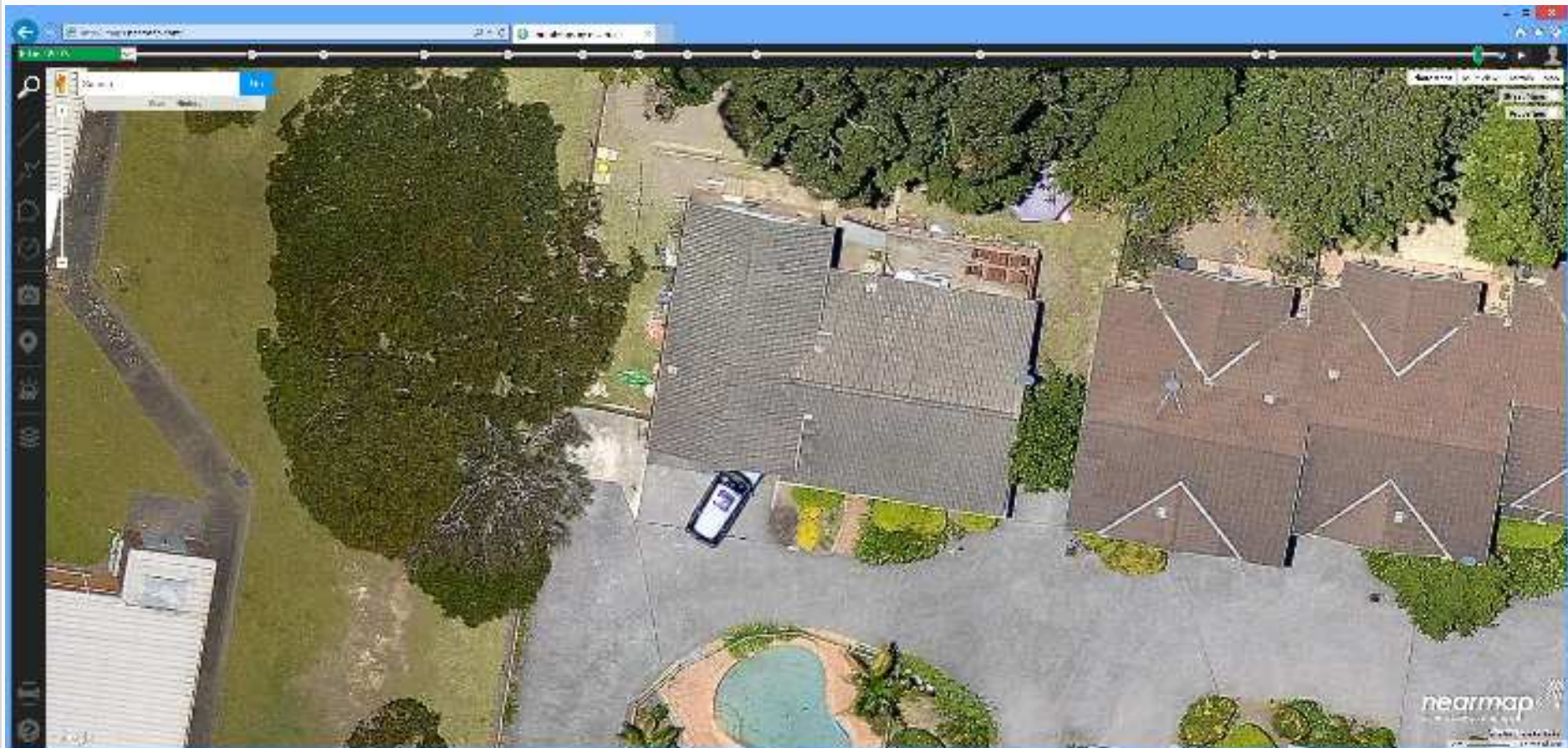
- Must be easy to understand



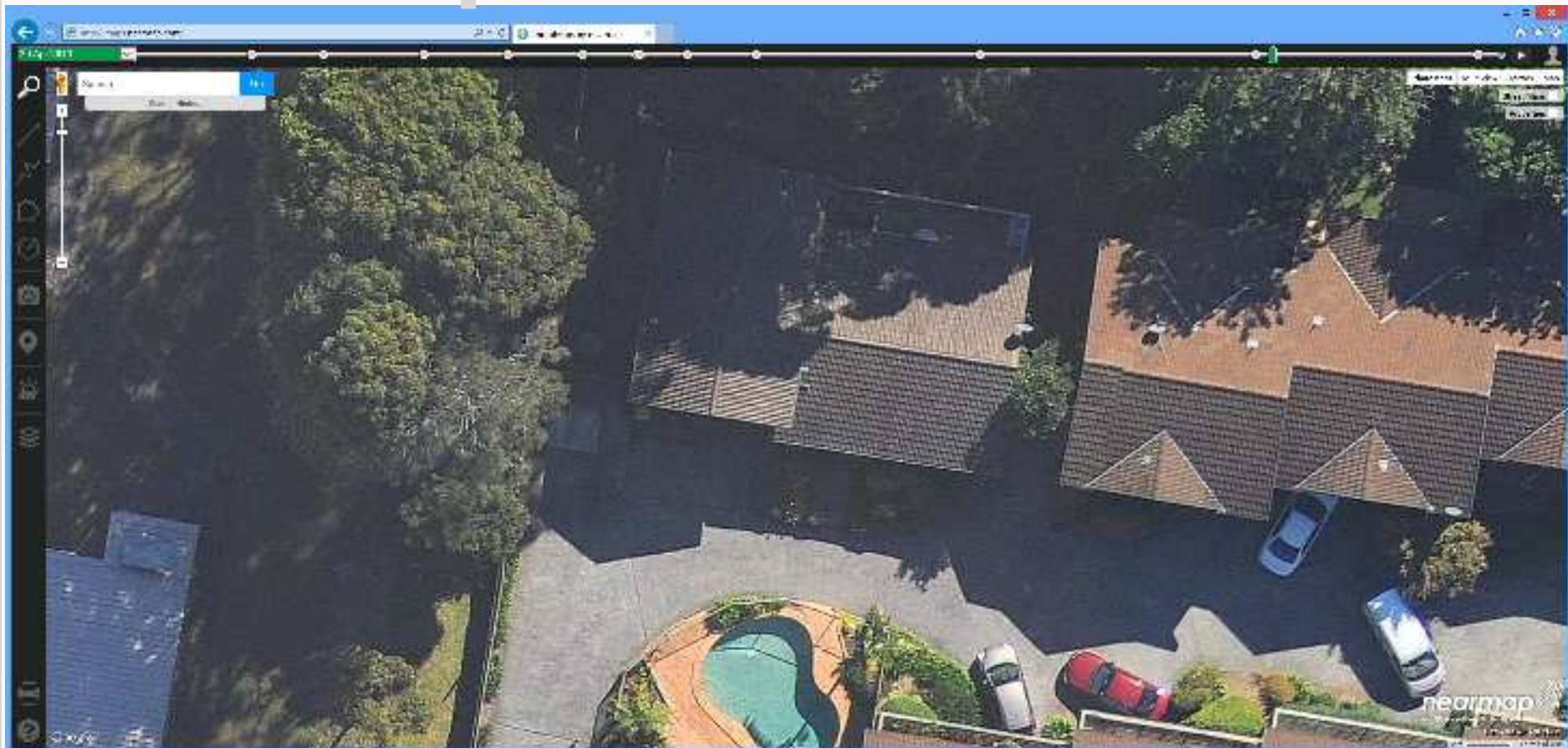
Shade Analysis



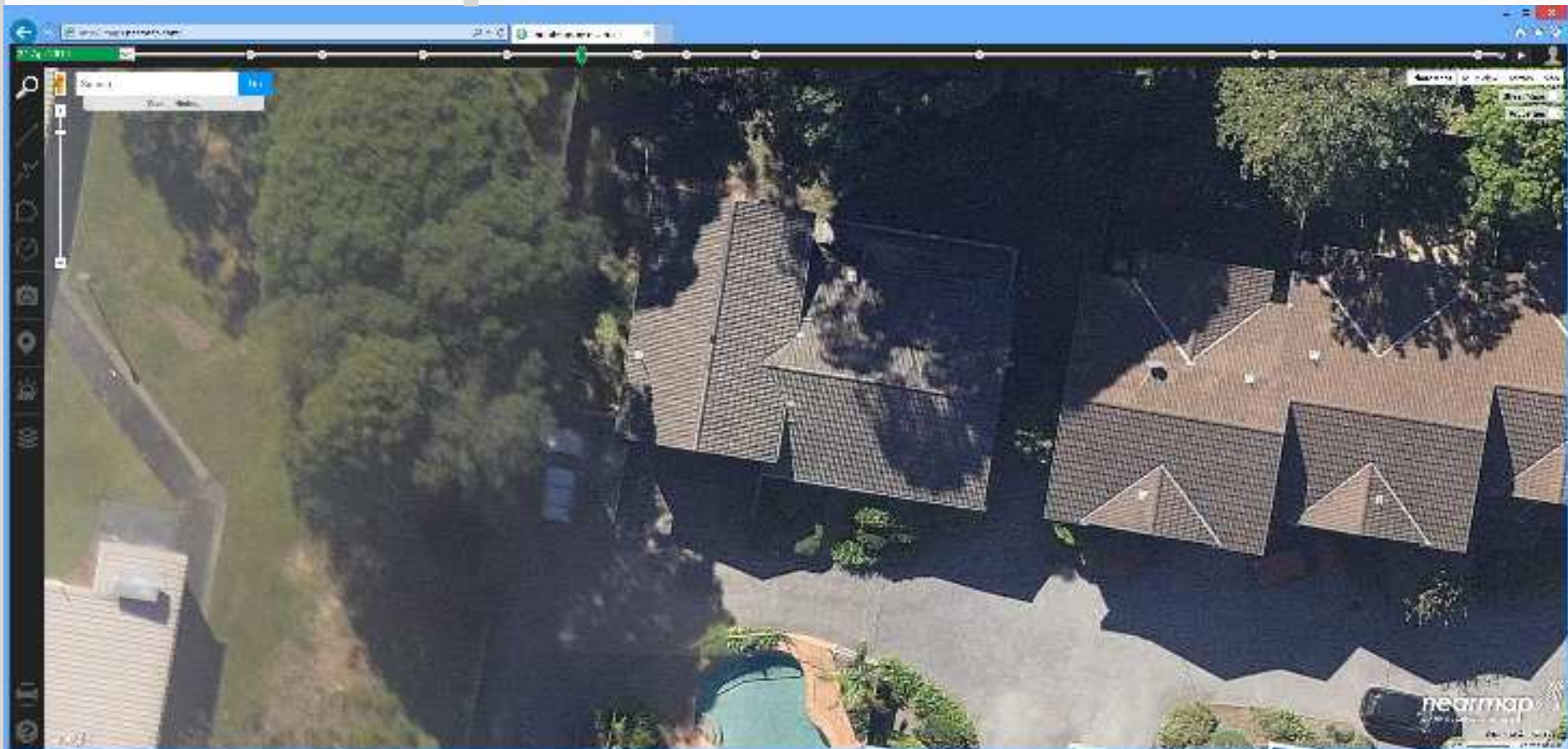
06 December 2013 12:09 PM



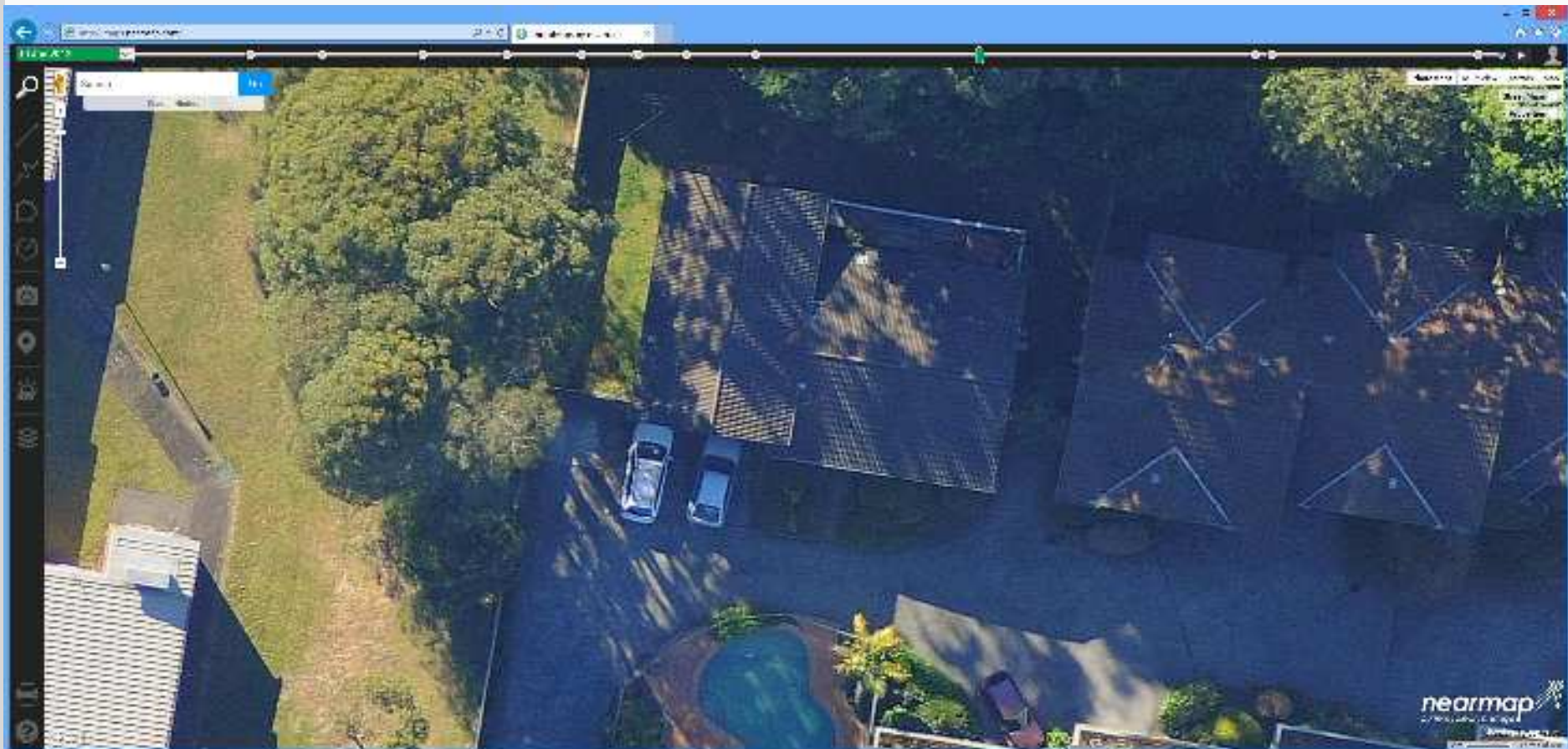
29 April 2013 9:54 AM



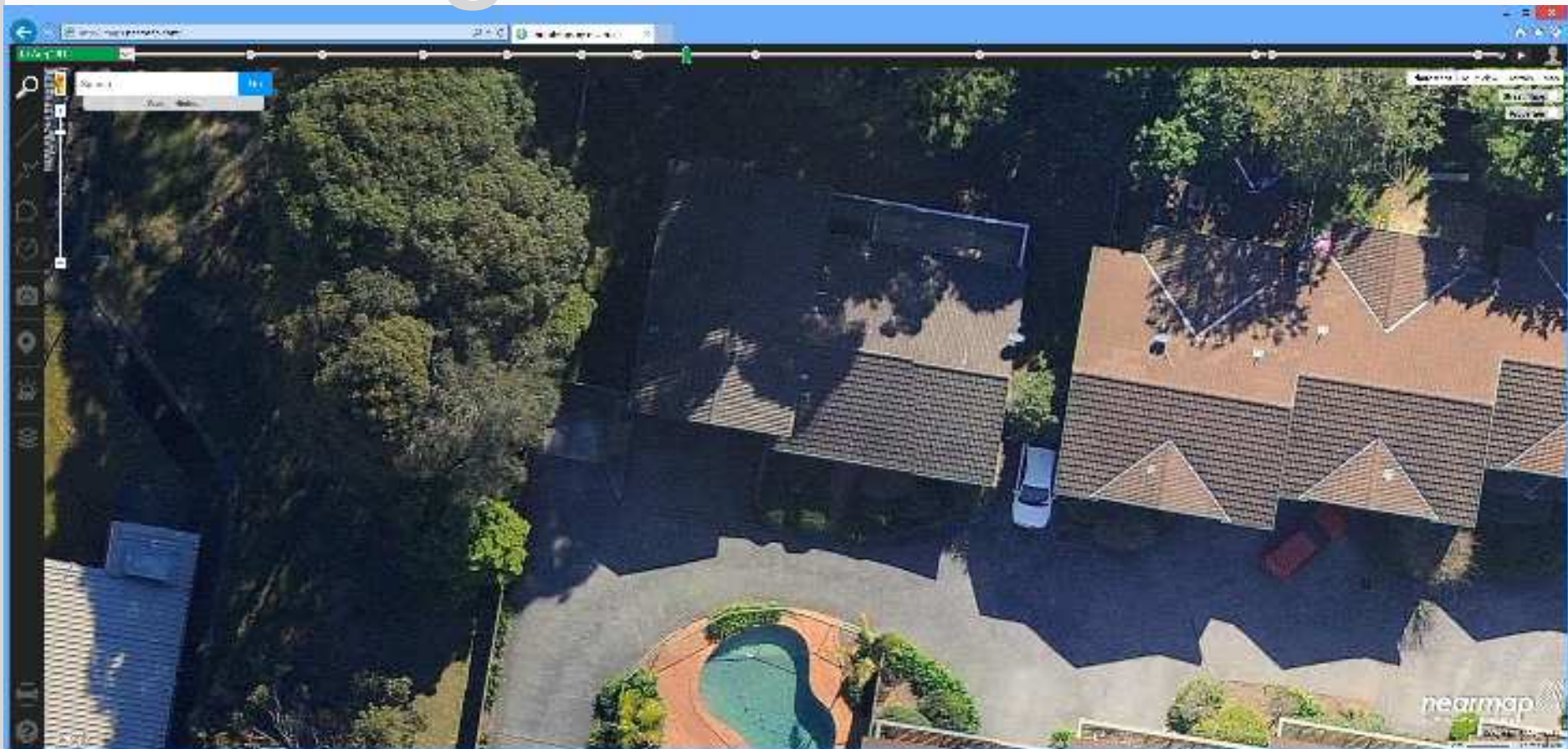
21 April 2011 1:13 PM



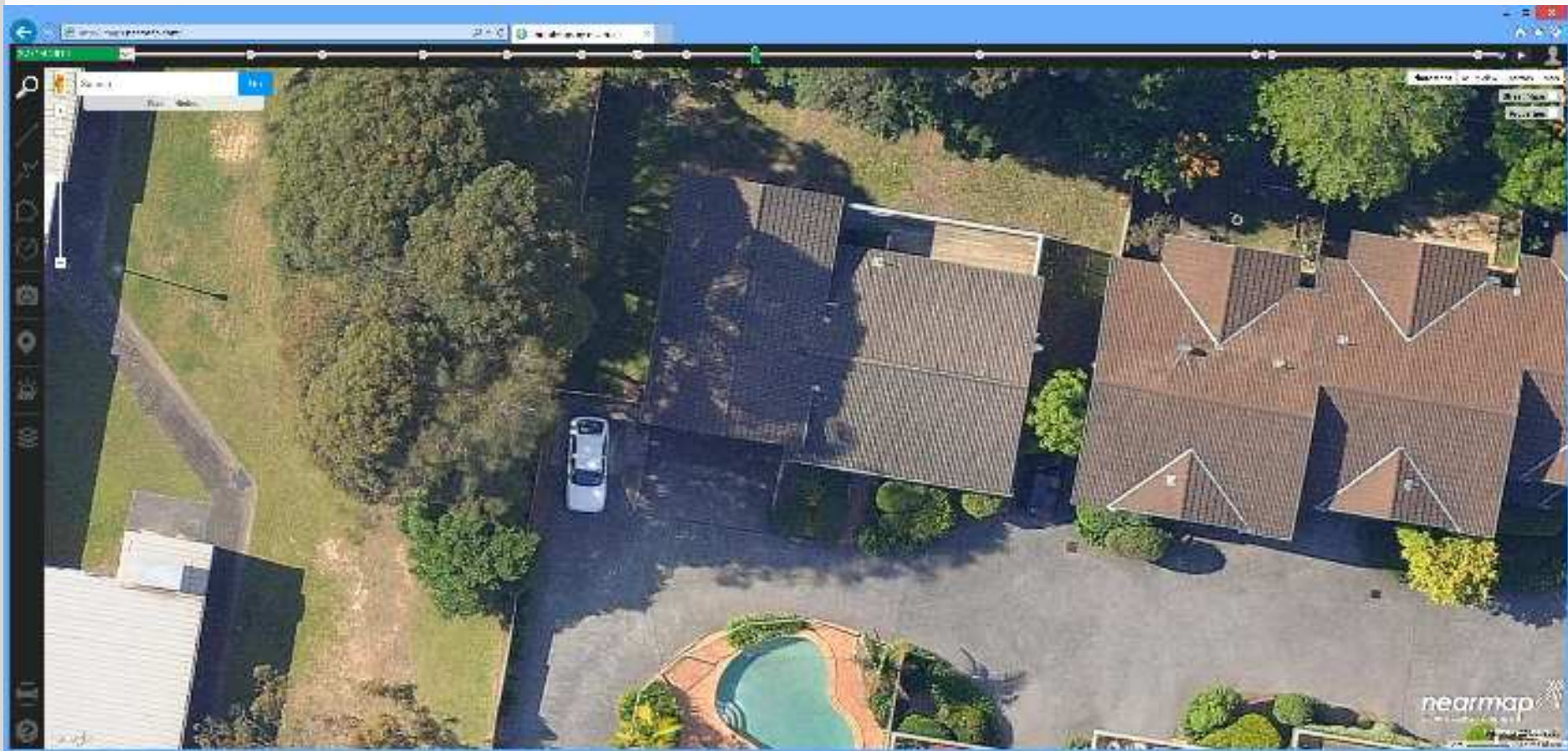
19 June 2012 2:00 PM



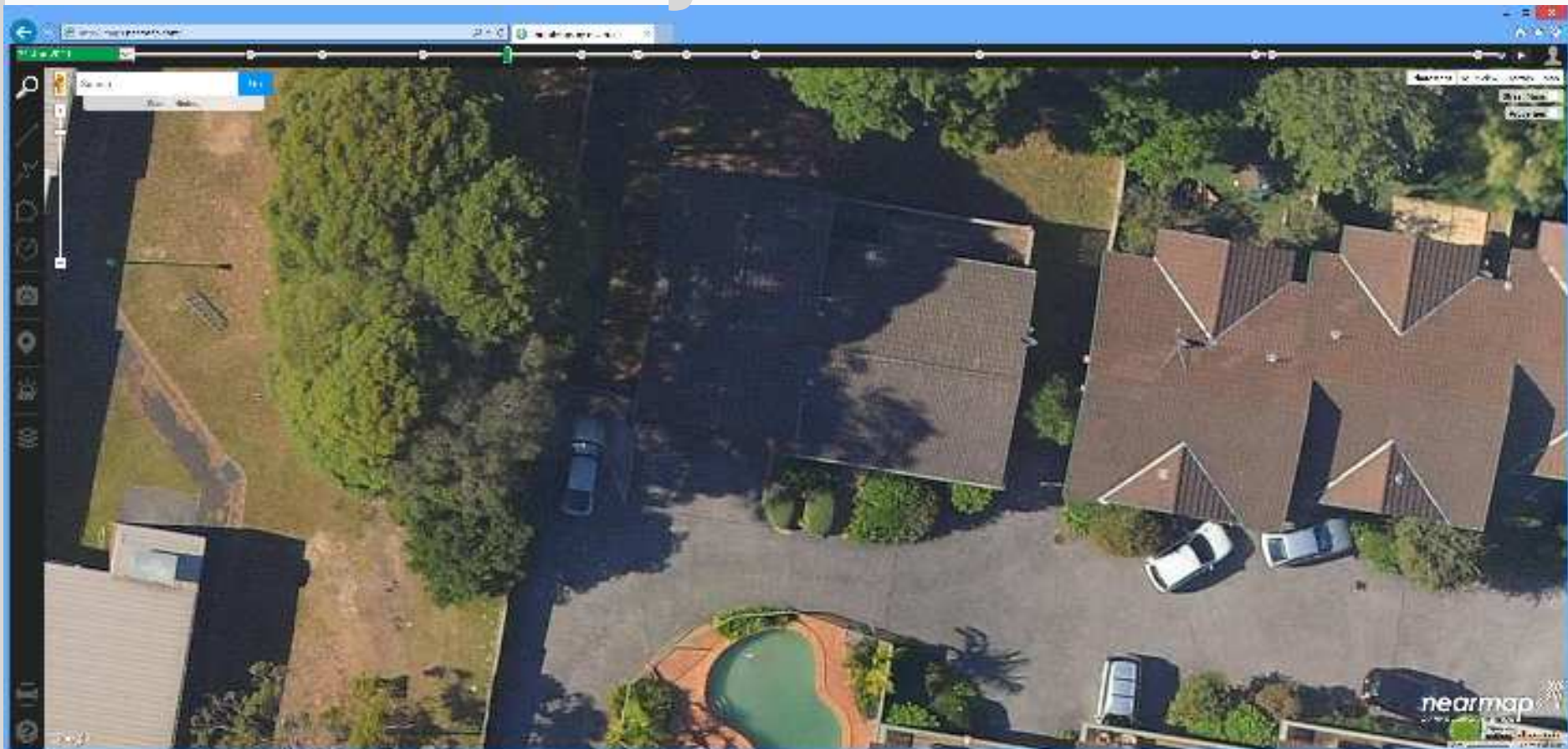
10 August 2011 10:26 AM



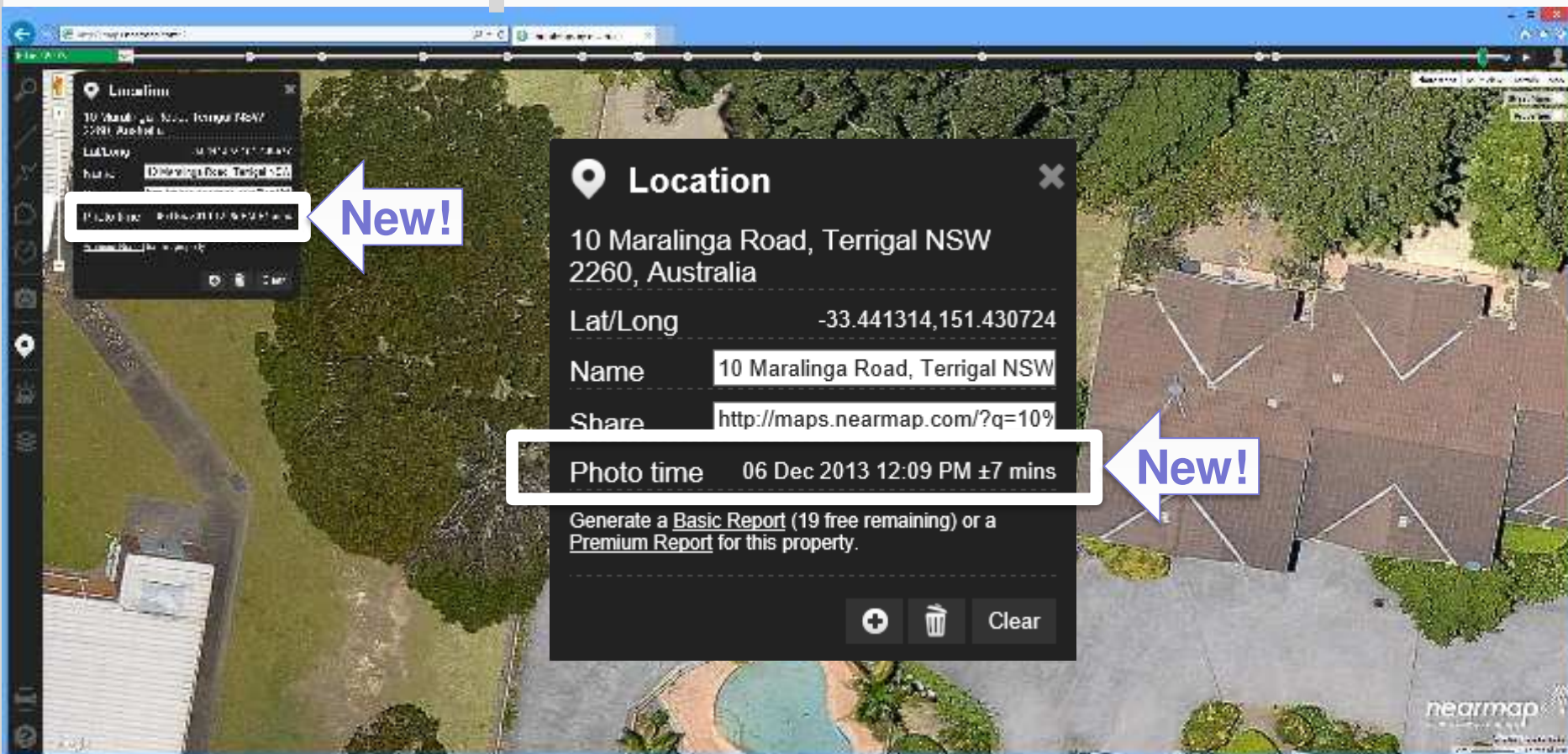
22 October 2011 2:52 PM



31 January 2011 3:53 PM



#1 Requested Feature



Shade

- **Critical** to a solar system
- TimeLine shows the amount and direction of shade at different months of the year
- Photo Time (new!) shows the amount and direction of shade at different times of the day

Roof Pitch



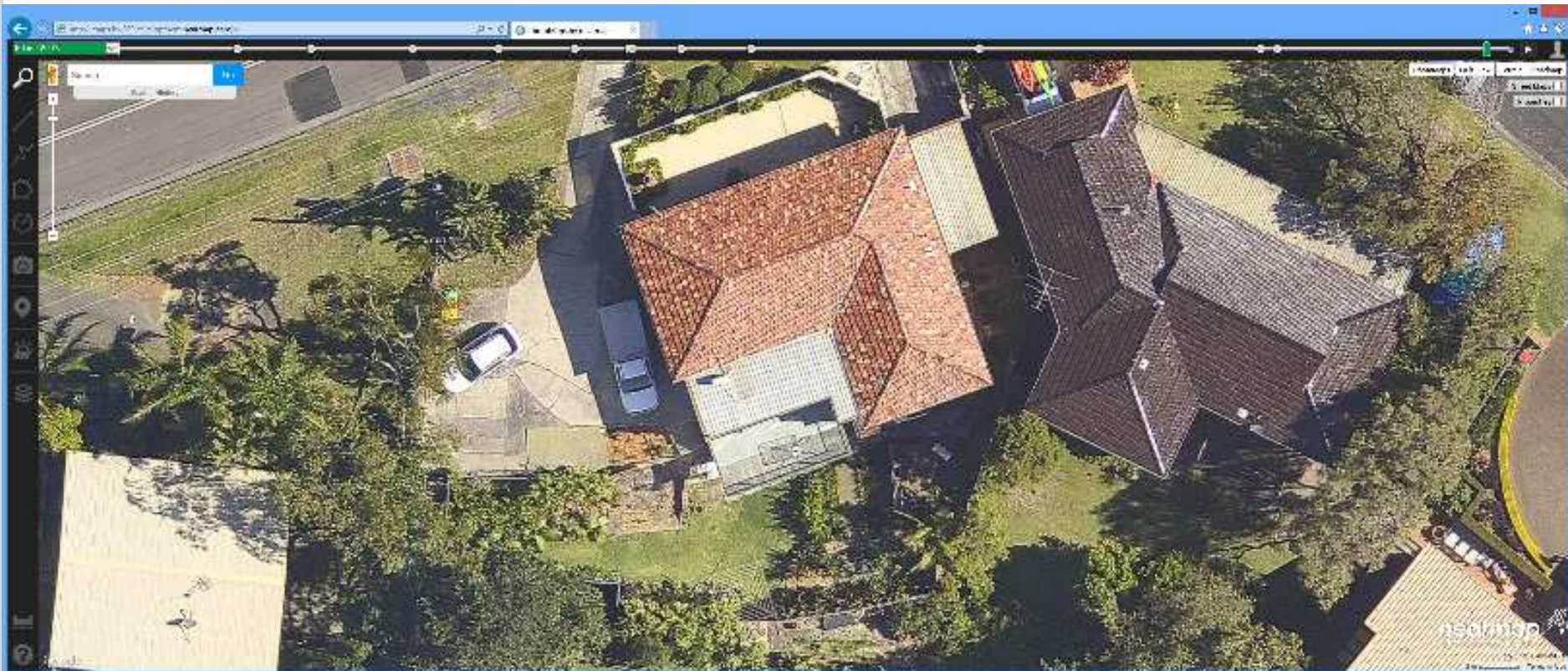


Panels

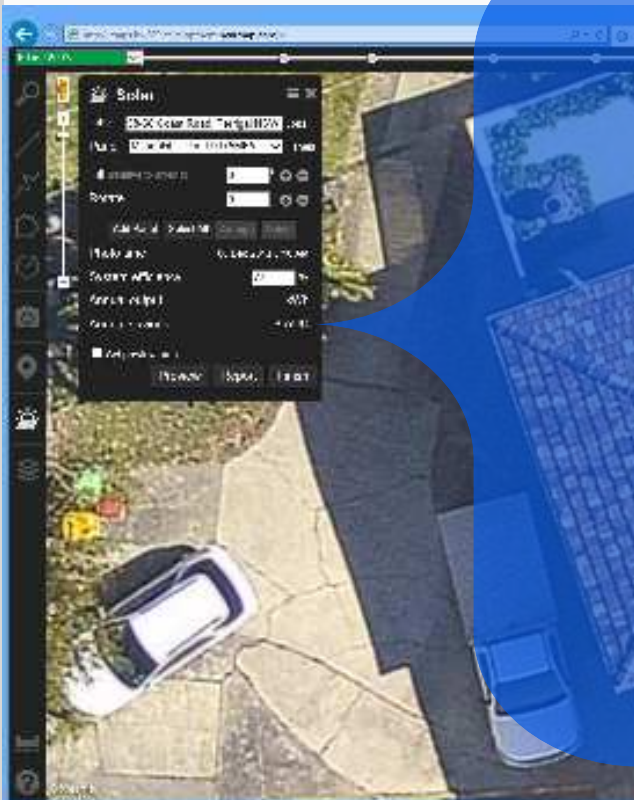
- Introducing a better way!











 **Solar**  

Title

58-60 Coast Road, Terrigal NSW 2

[Jobs](#)

Panel

Mitsubishi - PV-TD175MF5

[Panels](#)

Tilt (relative to ground)

Rotate

Add Panel

Select All

Arrange

Delete

Photo time

08 Dec 2013 8:10 AM

System efficiency

%

Annual output

2330 kWh

Annual savings

\$ 652 AUD

☐ Set preview area

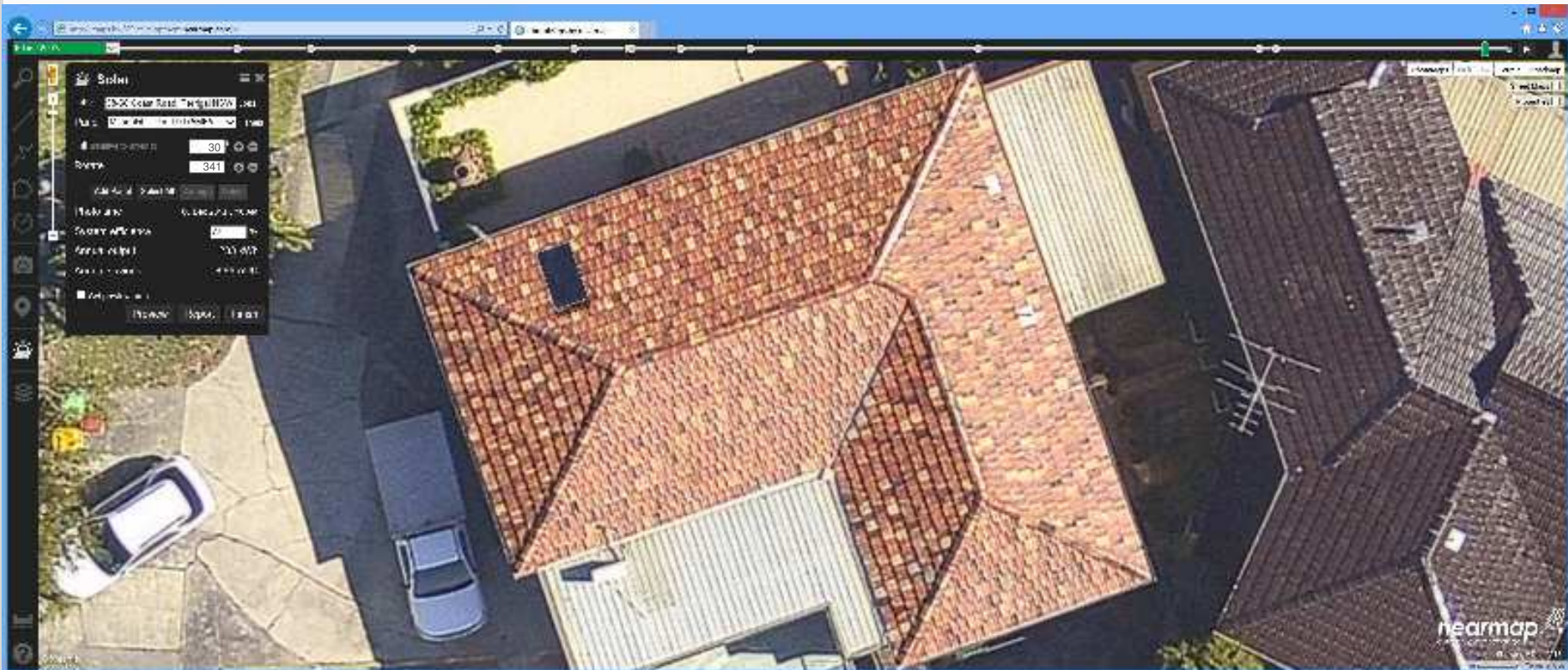
Preview

Report

Finish

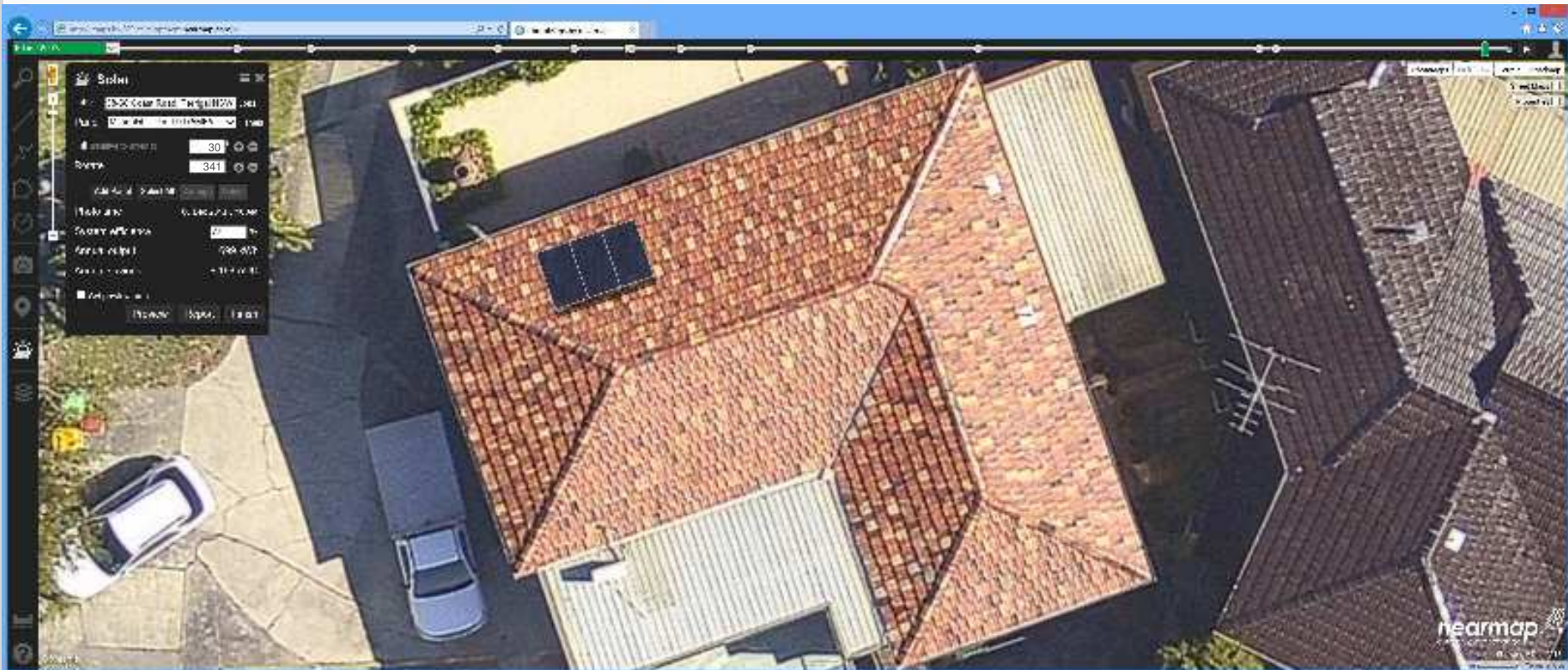






Solar Panel Power Output Variables

- Latitude of the location
- Angle and direction of the panel
- Type of panel
- Time of year
- Time of day
- Cloud cover
- Shadow
- Temperature

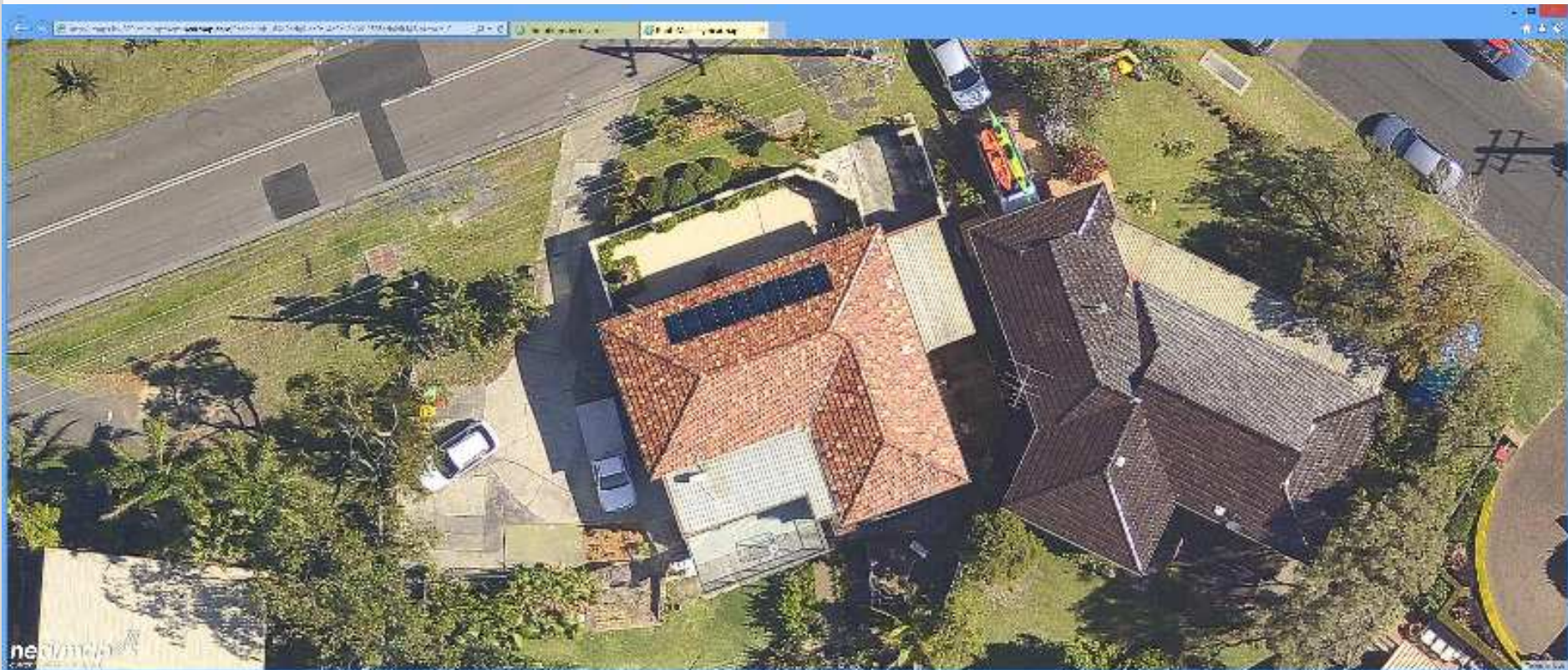














Advanced View

Shading loss per month



 **Solar**  

Title [Jobs](#)

Panel [Panels](#)

Tilt (relative to ground) °  

Rotate °  

[Add Panel](#) [Select All](#) [Arrange](#) [Delete](#)

Photo time 29 Apr 2013 10:06 AM ±2 mins

 **Advanced**

System efficiency %

Shading Loss %

Jan	Feb	Mar	Apr	May	Jun
Jul	Aug	Sep	Oct	Nov	Dec

Annual output 5956 kWh

Annual savings \$ 1668 AUD

☒ Set preview area

[Preview](#) [Report](#) [Finish](#)



Solar Report

- Location
 - Solar radiation
 - Cloud cover
 - Temperature
 - Electricity prices
- Panel
 - Type
 - Quantity
 - Tilt
 - Rotation

Solar Report

- Manually input
 - Overall efficiency
 - Shade impact / month
- Output
 - Energy
 - Greenhouse gas emission reduction
 - Electricity savings
 - MS Word format



Image Date 6 December 2013

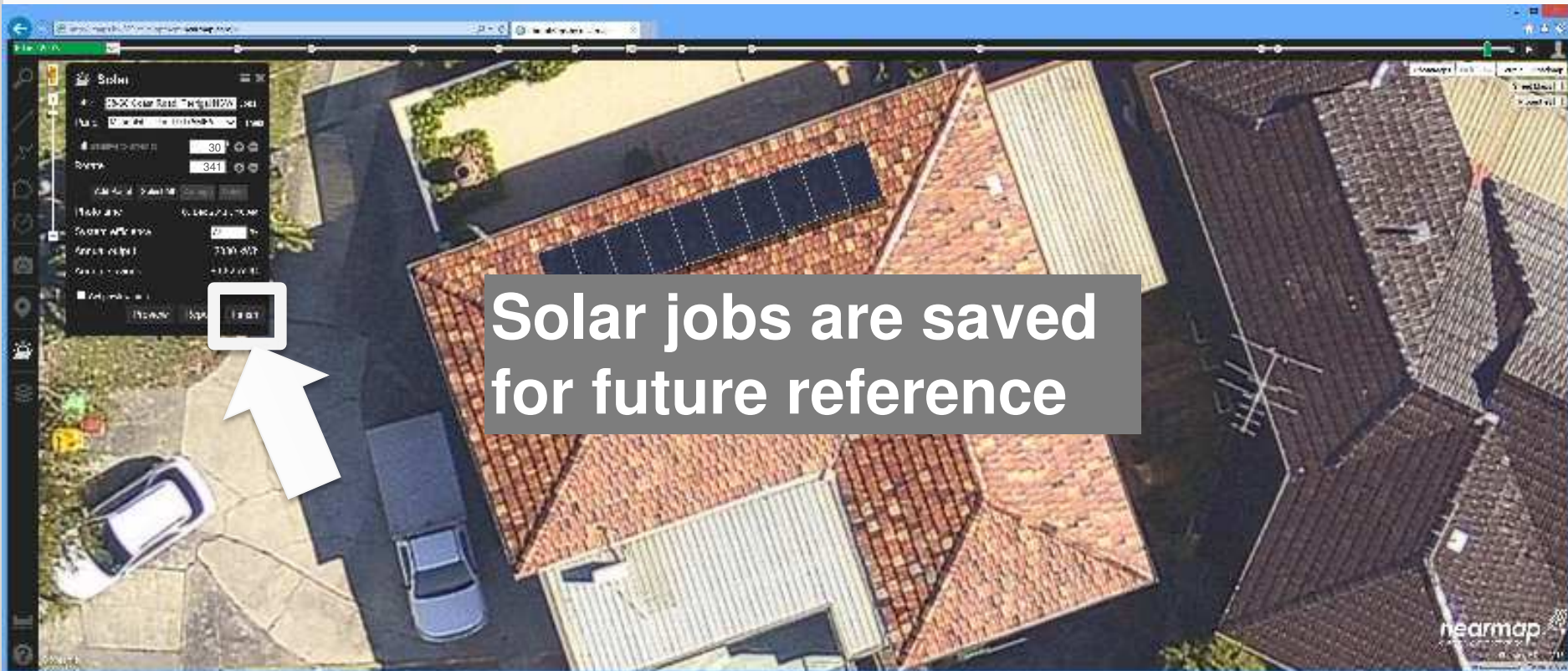
Solar Panel Report
Copyright © 2014 nearmap ltd
6 April 2014

Solar Panel Report



System Parameters

Manufacturer Power Rating for Array	1750 W
Manufacturer and Model	Mitsubishi - PV-TD175MF5
Number of Panels	10
Total Panel Area	13.8 m ²



Audit New Installations

Before



After



Zoom



Summary



- Shade analysis via TimeLine and Photo Time
- Roof pitch estimation via integrated street view
- Easy to use virtual panels
 - Over 1,000 CEC approved panels or add your own

Summary



- Instant location-aware energy calculations
 - Manually adjust for monthly shading and overall efficiency
- Photorealistic mock-up images

Summary



- Complete solar report
 - MS Word format
- Solar jobs saved for future reference
- Web page and video tutorials available

Summary

- Audit installations
- Prospecting?



“nearmap is one of the most important 3rd party solutions we use in our business. The product provides clear images, accurate measuring tools and delivers professionalism in our client proposals, resulting in increased customer engagement. **Just last week I was able to provide a nearmap Solar Report to one of my customers, which detailed panel specifications, annual yield data and an accurate mock-up image of the proposed panels on their roof. nearmap allowed them to visualise the end result and get excited about investing in solar.** I think that any business that requires up-to-date site imagery, state-of-the-art measuring capabilities or a professional edge should seriously consider incorporating nearmap into their business model.”

- James Purcell, Solar Australia

Available Now

nearmap.solar

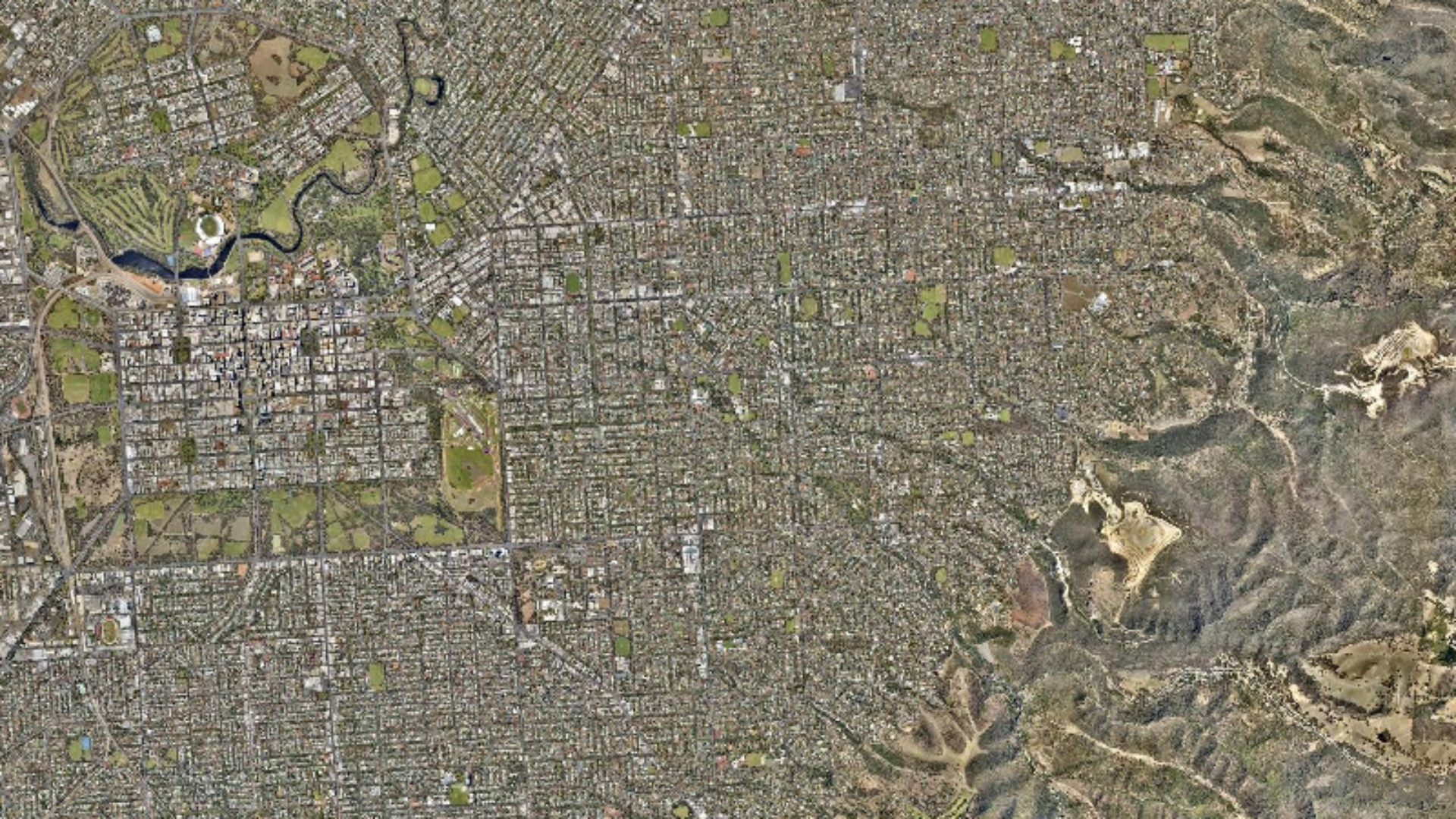
Commercial Manager

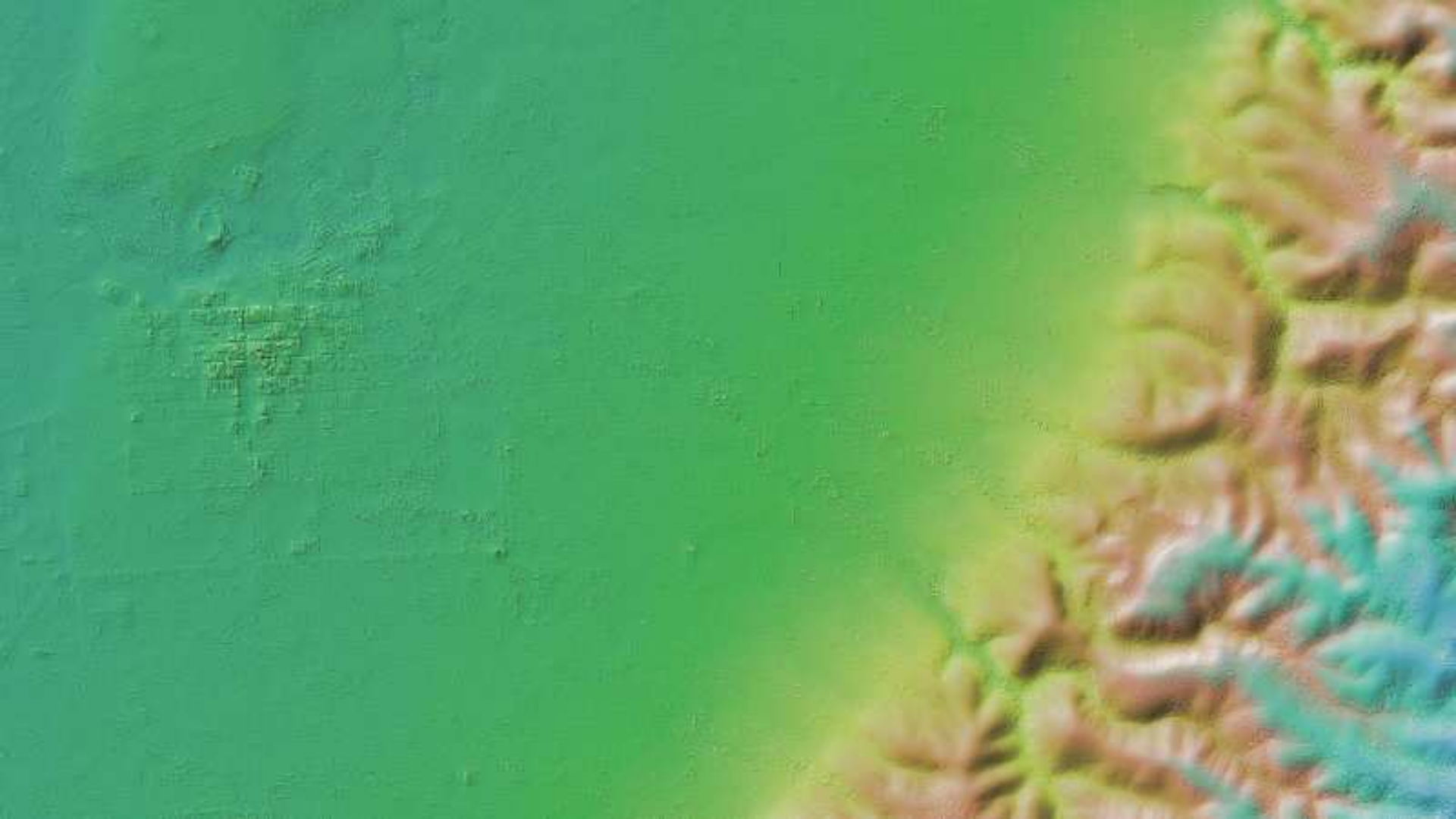
Rachel Shepheard

rachel.shepheard@nearmap.com

Future Directions

Paul Lapstun
Chief Technology Officer









Disclaimer

- The following describes research activity, with no specific schedule for product rollout

Volume Estimation

- Measure stockpiles
- Track pit expansion
- Cost excavations



Mon 06 Jan 2014

PhotoMaps

Area

Area: 1452m²

Perimeter: 743.82m

Show inline measurements

More

Calculate Volume

PUT HERE THE MAP ID, NUMBER

Search History

Volume: 5808m³ Avg. Height: 4m

Click anywhere to start drawing



Area

Area 2,787,383m²

Perimeter 8,257m

☐ Show inline measurements

More

Calc Area/Volume

Volume 836,214,900m³ Avg Depth 300m

3D Map Browsing



Change Detection

- Monitor vegetation
- Detect recent construction
- Analyse effects of disasters

Flood Modelling

- Assess flood risk
- Plan flood mitigation
- Value affected properties

Sea Level +0m



Sea Level +7m



Sea Level +8m



Sea Level +9m



Sea Level +10m



Sea Level +11m



Sea Level +13m



Shadow Analysis

- Model shadows cast by terrain, buildings and vegetation
- Visualize seasonal and time-of-day effects
- Value properties
- Predict solar panel shading loss

Predict Solar Panel Shading Loss

 **Solar**  

Title [Jobs](#)

Panel [Panels](#)

Tilt (relative to ground) °  

Rotate °  

[Add Panel](#) [Select All](#) [Arrange](#) [Delete](#)

Photo time 29 Apr 2013 10:06 AM ±2 mins

▼ **Advanced**

System efficiency %

Shading Loss %

Jan	Feb	Mar	Apr	May	Jun
Jul	Aug	Sep	Oct	Nov	Dec

Annual output 5956 kWh

Annual savings \$ 1668 AUD

☒ **Set preview area**

[Preview](#) [Report](#) [Finish](#)

Summary

- Current:Clear:Change applied to elevation data
- Volume estimation
- 3D map browsing
- Change detection
- Flood modelling
- Shadow analysis