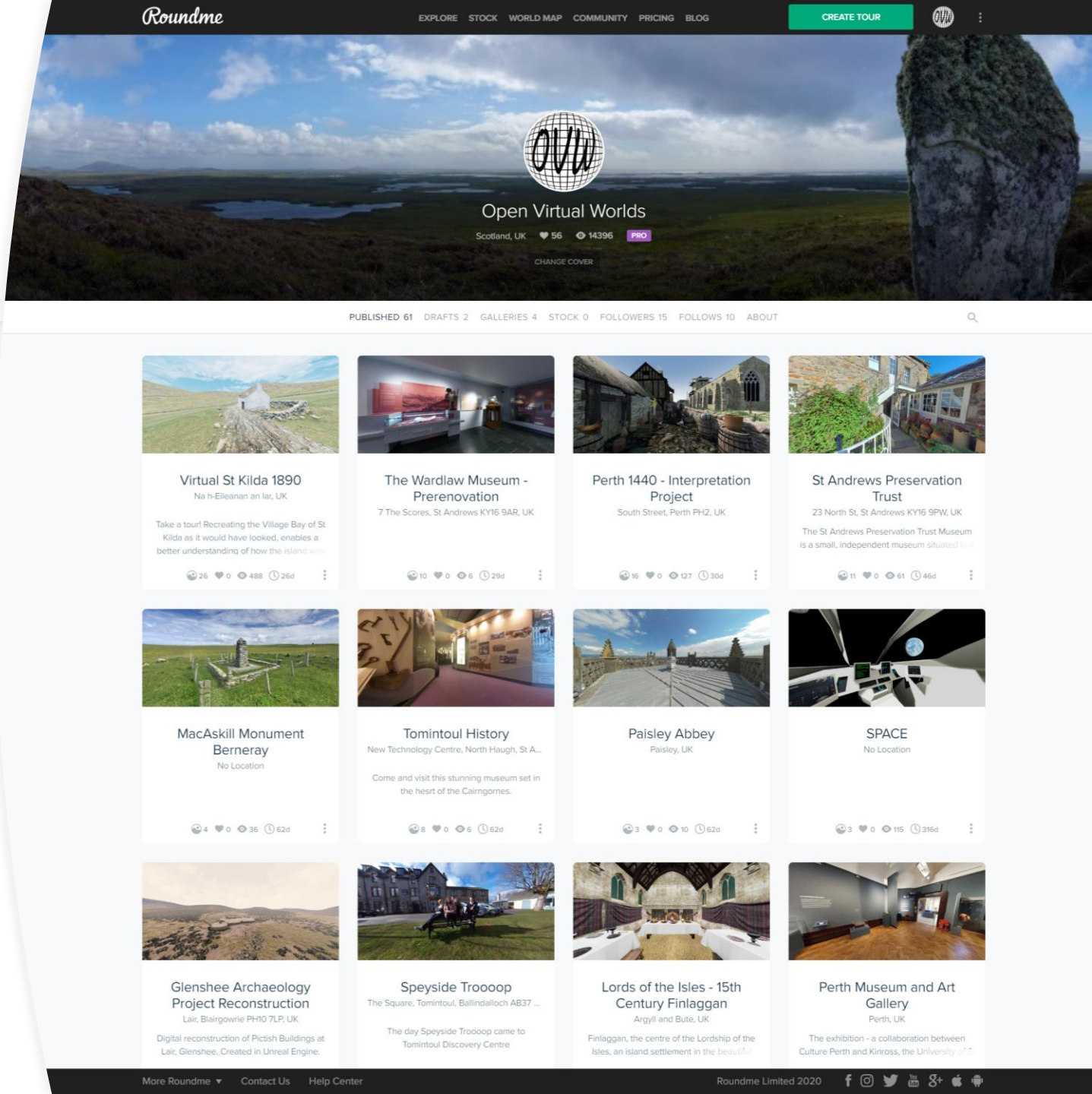
Working with spherical media

INE see the past imagine the future
Northern Periphery and Arctic Programme 2014–2020
EUROPEAN UNION
Investing in your future
European Regional Development Fund

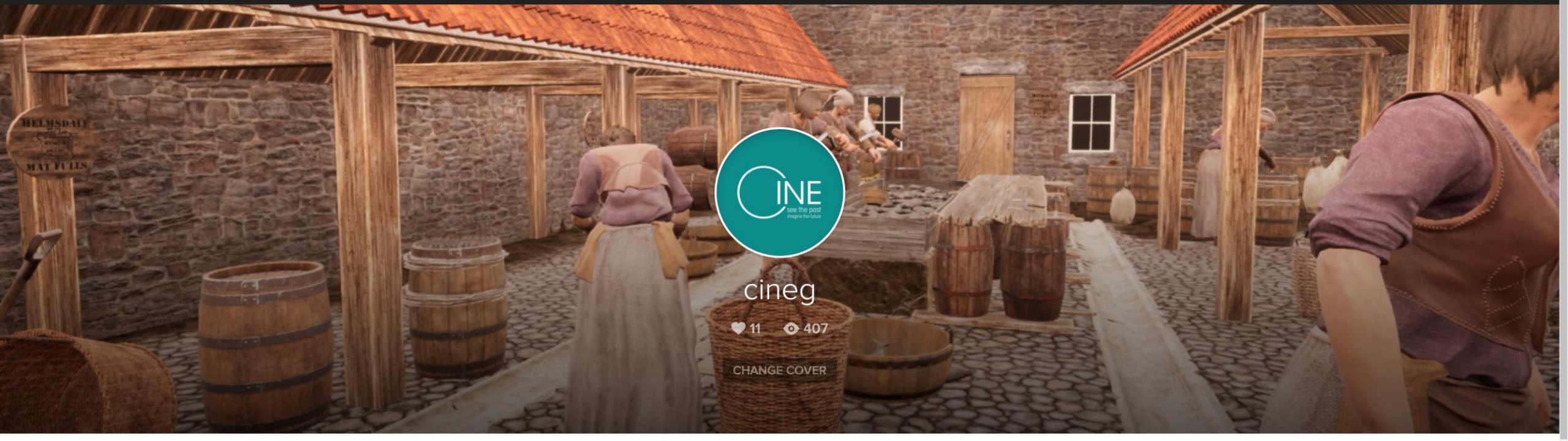
Introduction and overview

- **Motivation and history**
- What is a photosphere
- Workflow and overview
- How to shoot a photosphere
- How to make a tour
- How to share a tour
- What about video?
- Sources and resources



Long View of London from Bankside, a panorama of London by Wenceslaus Hollar, 1647, notable for being rendered all from one viewpoint.

History



cineg

11 407

CHANGE COVER

Helmsdale Curing Yard

Helmsdale, UK

Longhouse Farming Settlement

Highland Council, UK

Iron Age Roundhouse

Highland Council, UK

Skriðuklaustur Medieval Augustinian Settlement

Eastern Region, Iceland

North Uist 360

20x 360° panoramas from 6x archaeological sites around the island of North Uist, produced by a collaboration between Taigh Chearsabhagh Museum & Art Gallery and the University of St Andrews.

Learn more about the project here.

Barpa nam Feannag

Ahmor is home to the Barpa Nam Feannag chambered cairn. Situated in the north of the island on a rocky hillock 400 yards from Gaireann Mill Loch, it appears as an irregular mound of loose stones 160 ft in length, 45 ft in width at its east end, tapering to 15 ft at the west.

Barpa Langais

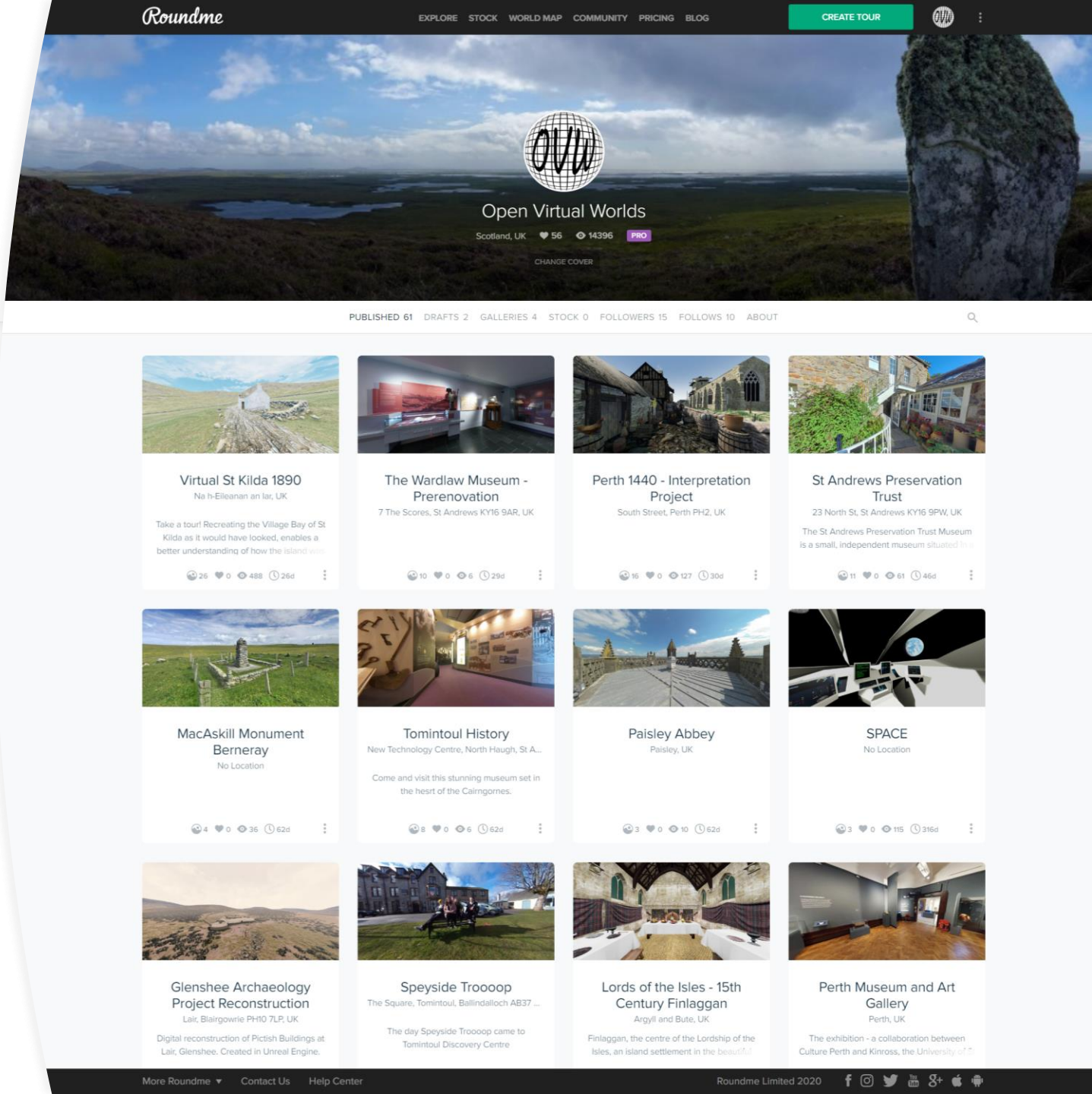
Langass is home to the Barpa Langass burial cairn, which sits atop Beinn Langais with its entrance facing south east, and the Pobull Fhinn stone circle, situated on a plateau on the southern slope of the hill.

Udal

In the Udal, the archaeologist Iain Crawford and his team excavated a site that was visible in the landscape and identified in historical documents and oral tradition. The site lies among four large sand dunes, some 40ft high.

Introduction and overview

- Motivation and history
- **What is a photosphere**
- Workflow and overview
- How to shoot a photosphere
- How to make a tour
- How to share a tour
- What about video?
- Sources and resources



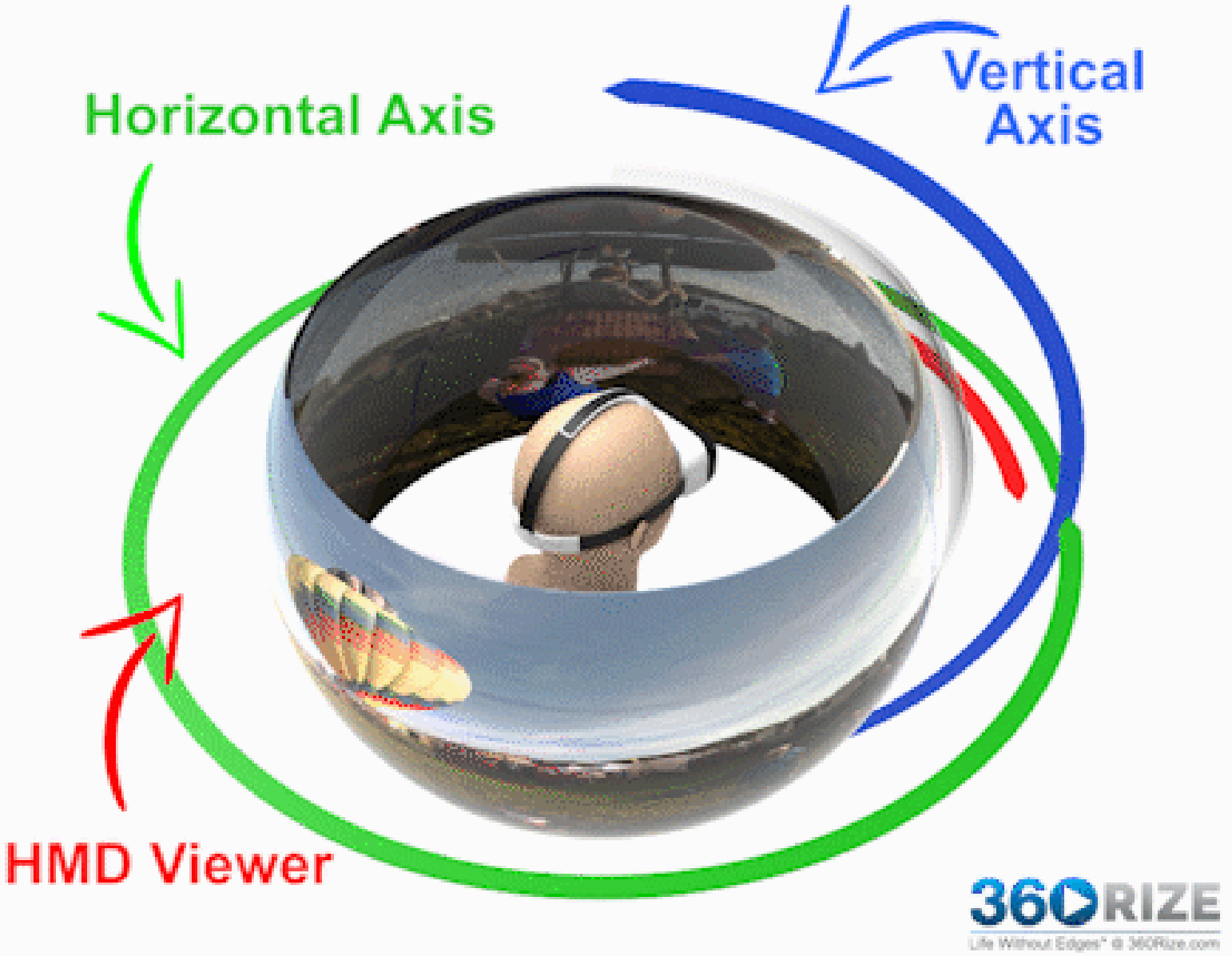
What makes a photosphere

- Spherical media
- Partial view
- Aspect ratio
- Equirectangular projection

Shoot all the way round

- Spherical media - 3 dimensions
- Immersive experience
  - Static – images
  - Moving - video

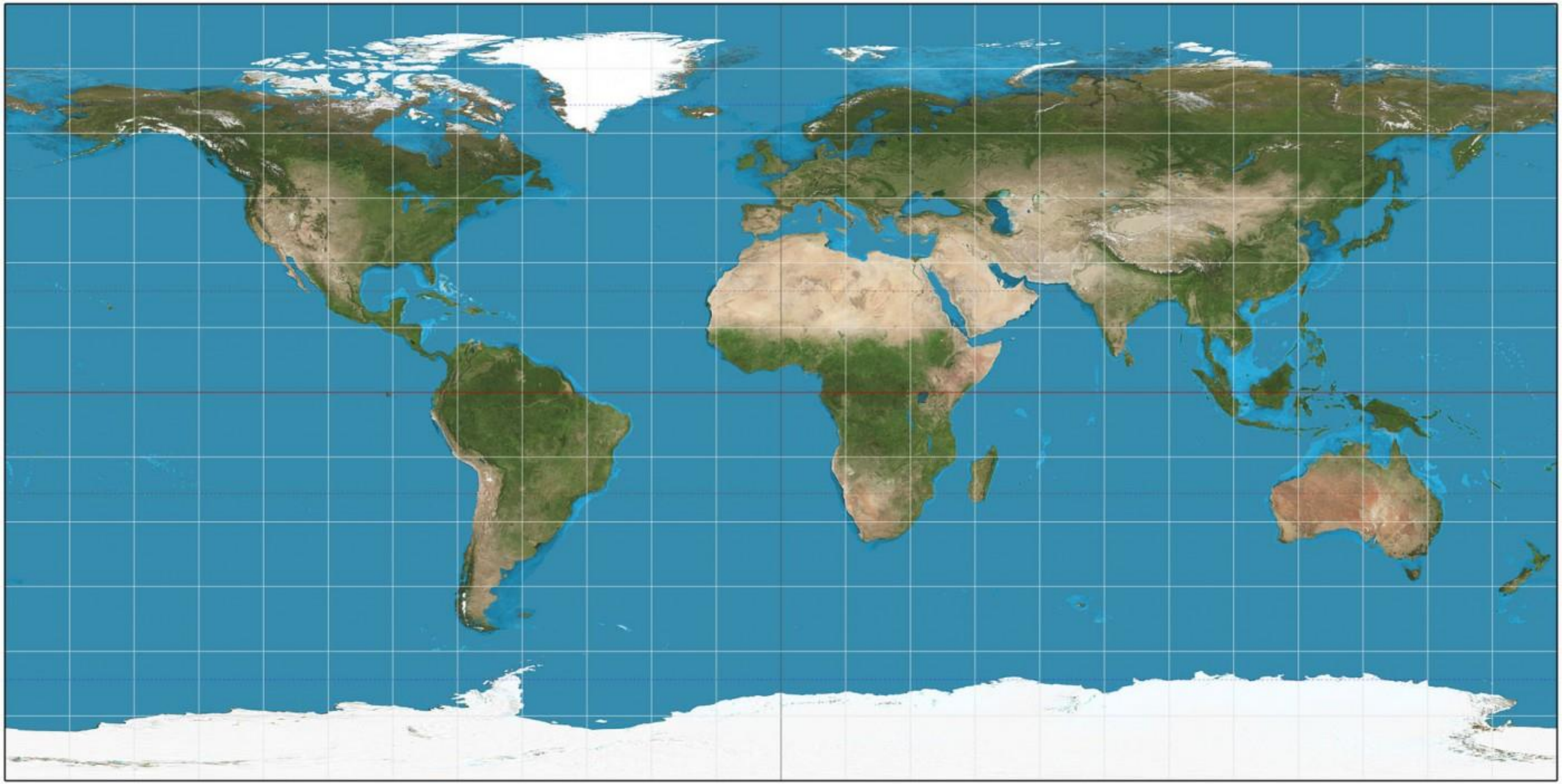
Why 360 Video Output Resolution Matters		
Horizontal Axis	Vertical Axis	HMD Viewer
2,000	1,000	500
4,000	2,000	1,000
6,000	3,000	1,500
8,000	4,000	2,000
10,000	5,000	2,500
12,000	6,000	3,000
14,000	7,000	3,500
16,000	8,000	4,000
360Rize 360 Video Gear starts at 2,000 pixels and goes as high as 16,000 x 8,000 pixels which can provide true 4K HMD viewing		

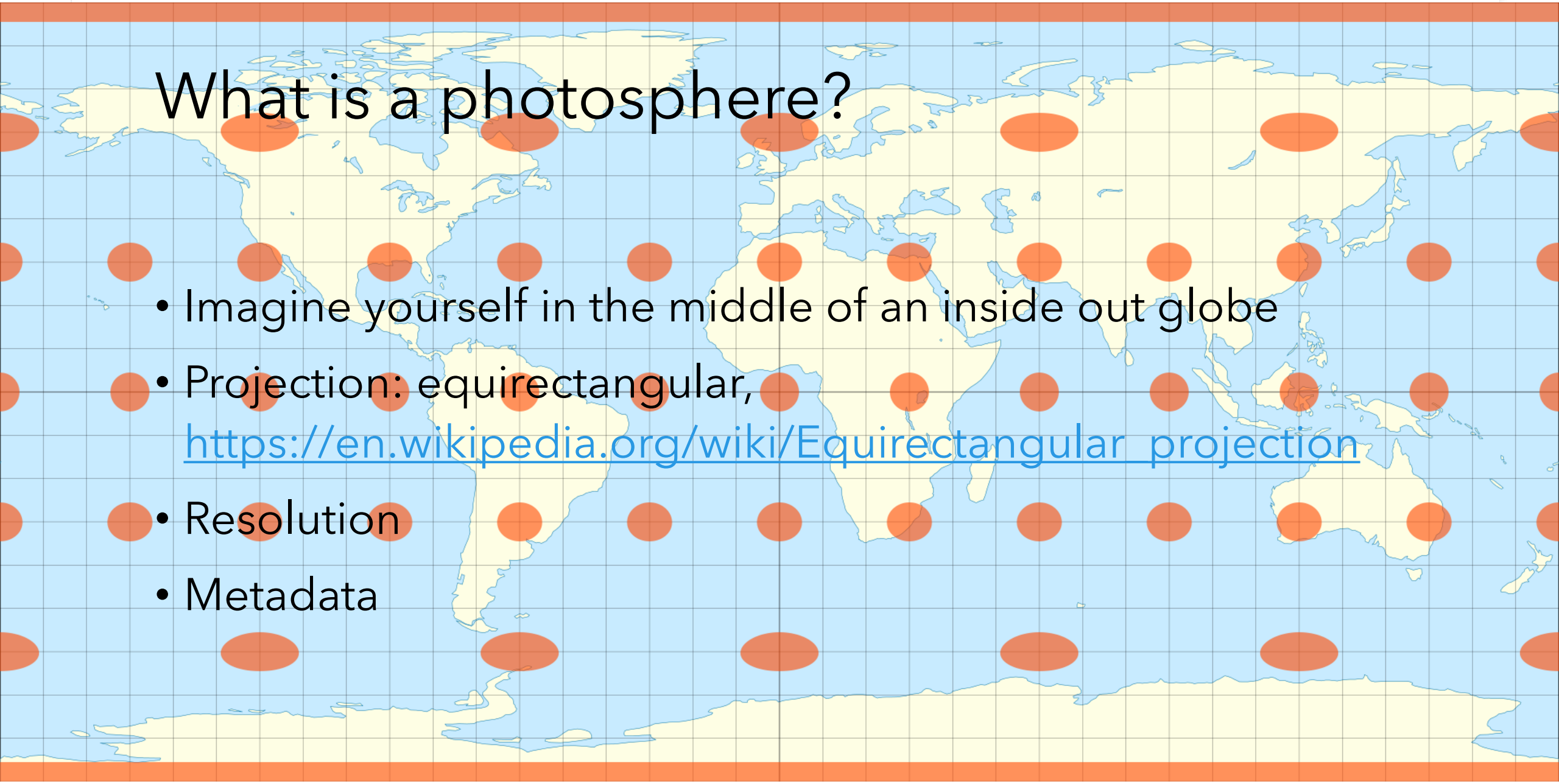


https://www.360rize.com/2020/05/5-things-you-should-know-about-360-video-resolution/

Aspect ratio

An “old-school” screen is typically a 4:3 ratio.
An HD screen is a 16:9 ratio.
Modern movie theaters display in a 21:9 ratio.
360 video, is “Equirectangular ratio of 2:1”



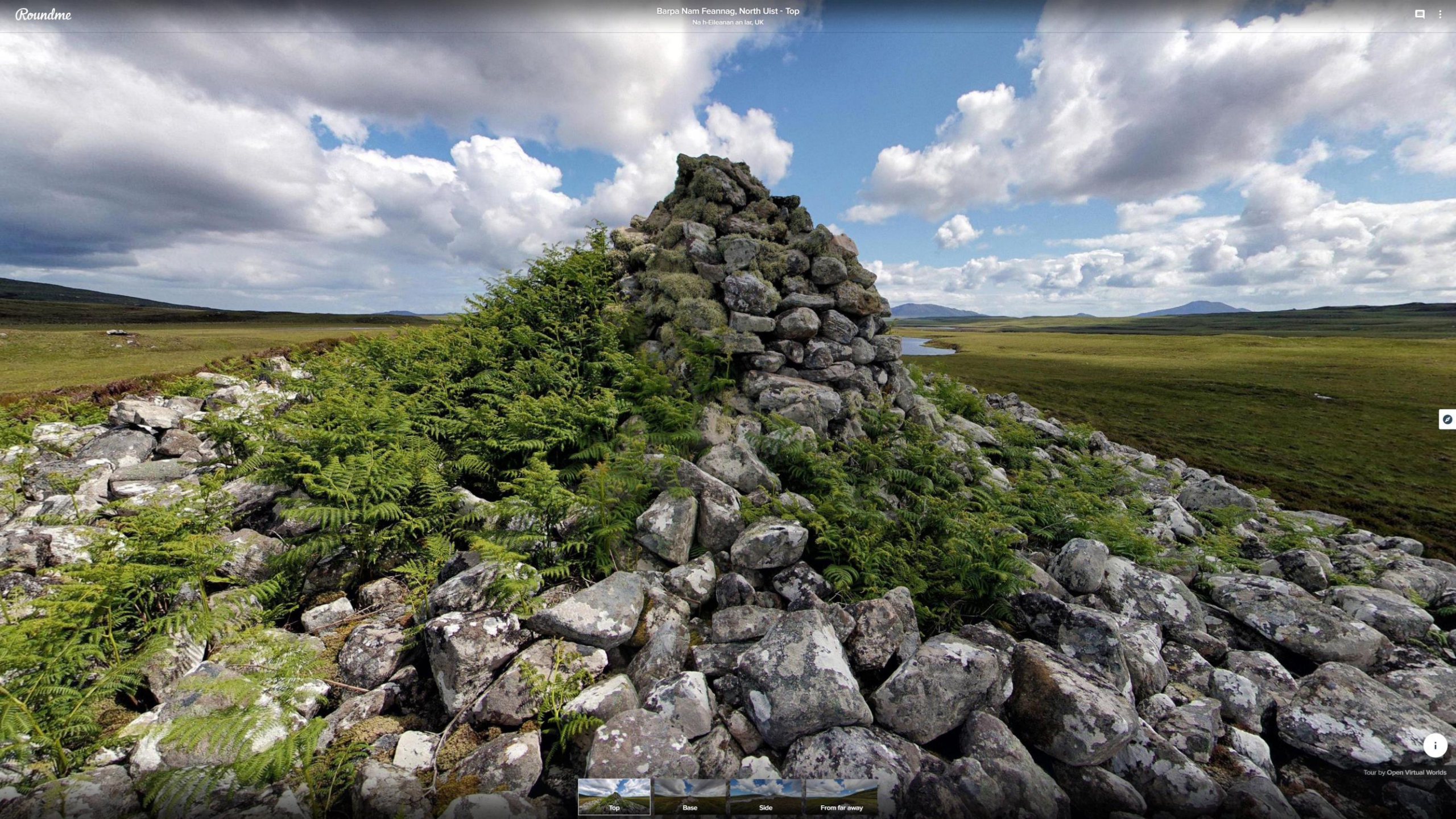


What is a photosphere?

- Imagine yourself in the middle of an inside out globe
- Projection: equirectangular, https://en.wikipedia.org/wiki/Equirectangular_projection
- Resolution
- Metadata

Barpa Nam Feannag, North Uist - Top

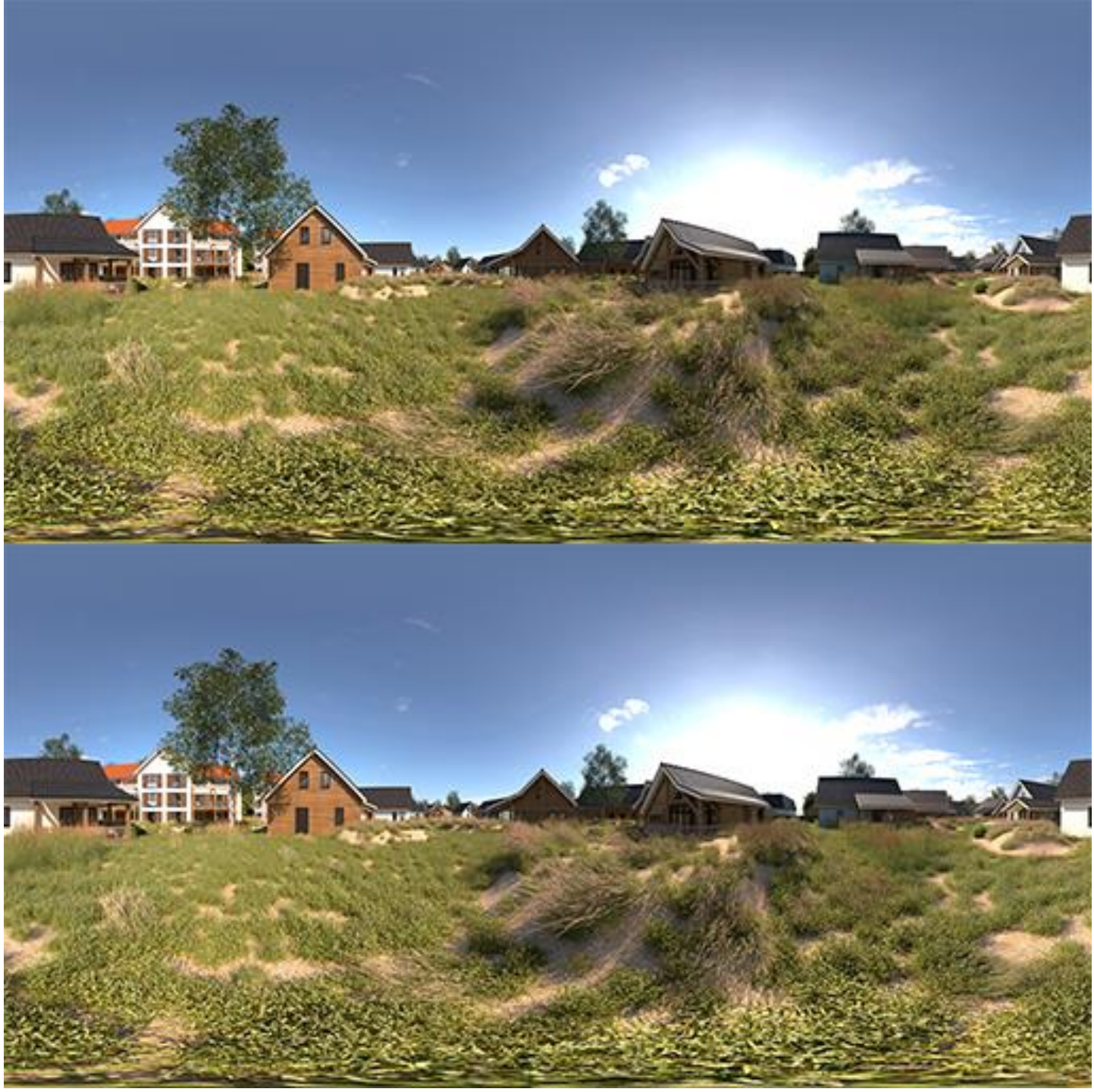
Na h-Eileanan an Iar, UK



Tour by Open Virtual Worlds

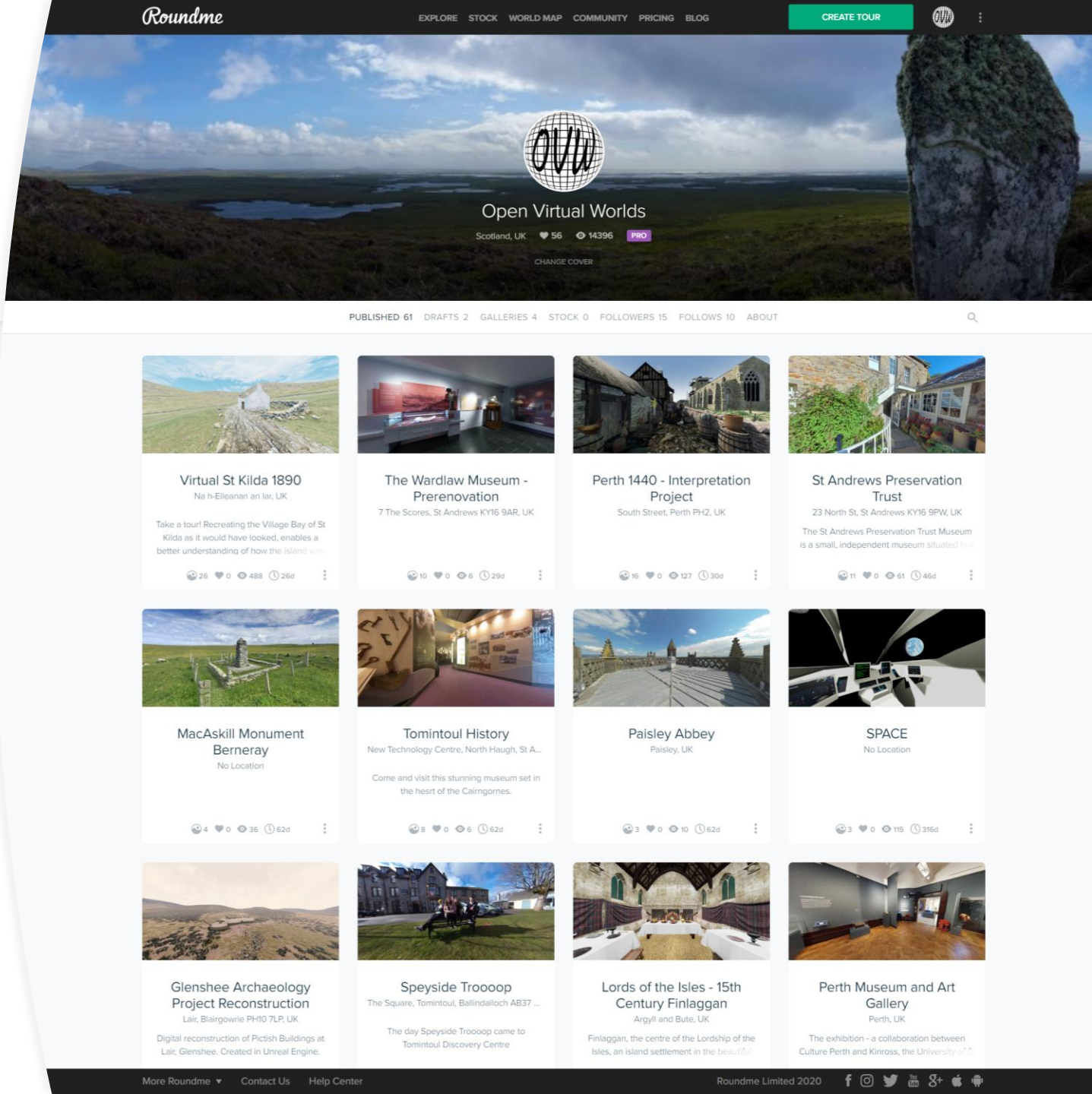
Spherical video

3D spherical media



Introduction and overview

- Motivation and history
- What is a photosphere
- **Workflow and overview**
- How to shoot a photosphere
- How to make a tour
- How to share a tour
- What about video?
- Sources and resources



What are the goals?

- Who is the virtual tour aimed at?
- What do you want to communicate?
- How long should the tour take to complete?
- Is there a call to action?

Workflow

- Subject and narrative
- Choose platform
- Choose locations
- Select hotspots
  - Image, audio, video
- Shoot photographs
- Create Equirectangular projections
- Assemble tour

How to make a tour

- Scene selections
- Plan hotspots and interactives
- What equipment and software
- Shoot and process photographs
- Assemble Tour

Scene selection

- Main choice is where to put the camera
  - Think in three dimensions
  - What is the subject?
  - What is the context?
- Lighting: even natural light is best
- Avoid reflective surfaces where possible

- Whats the subject
- Think in 360
- Choose subject and context,
- Multiple subjects are possible
- Even(ish) natural light helps
- Avoid reflective surfaces

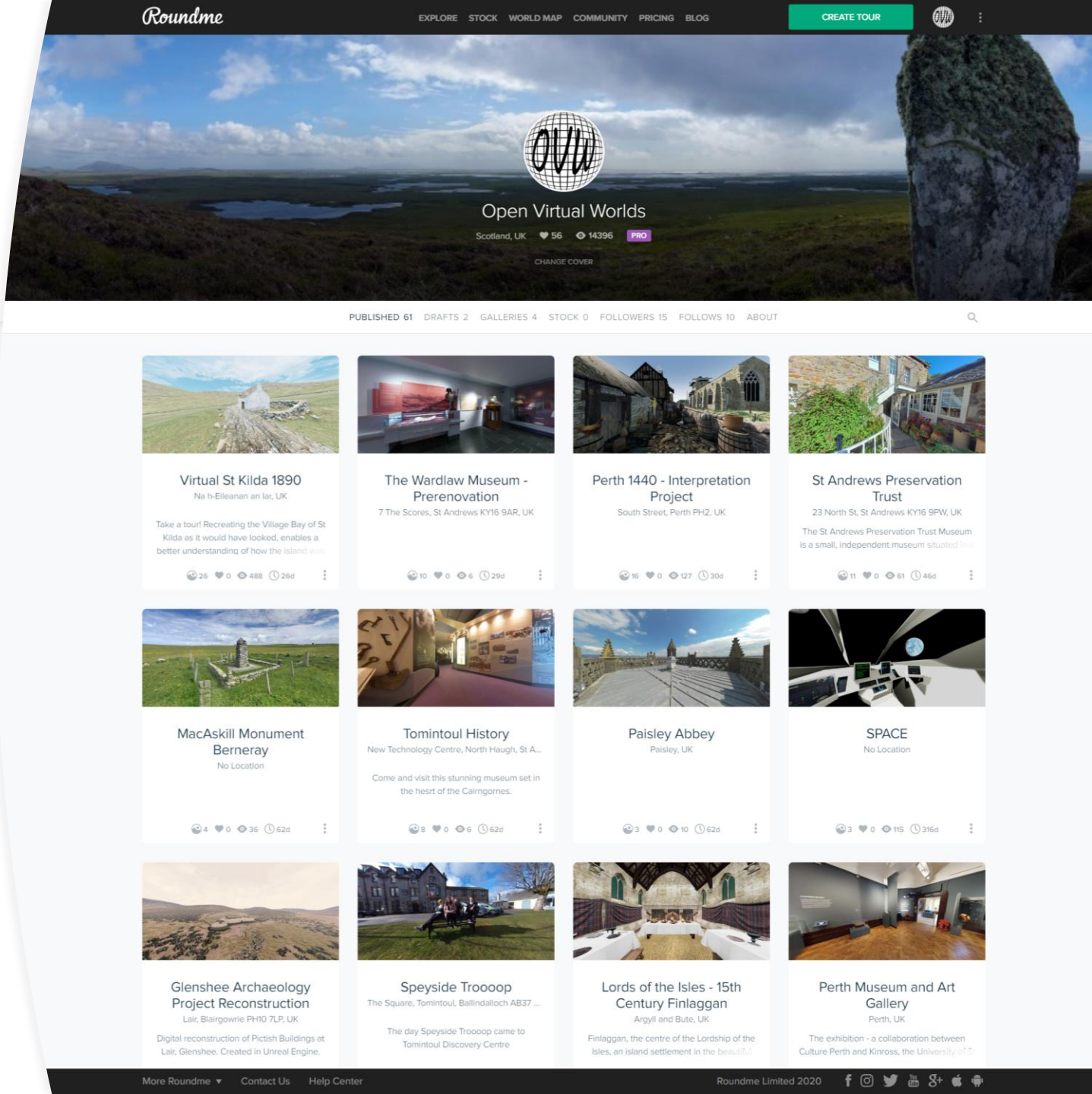
Scene Selection

Narrative, hotspots, and interactions

- Depending on the platform
- Title and name for the photosphere
  - Description and meta data associated
- Audio commentary
- Visual hot spots
- Audio hotspots

Introduction and overview

- Motivation and history
- What is a photosphere
- Workflow and overview
- **How to shoot a photosphere**
- How to make a tour
- How to share a tour
- What about video?
- Sources and resources



Equipment and software

- Mobile phone, piece of string or stick
- 360 camera, tripod or monopod
- Camera, clicker, tripod, panoramic head
- Google street view
- Hugin
- Roundme
- CUPIDO

Shooting a photosphere

- With a mobile phone
- With a 360 camera and monopod
- With a camera and panoramic head

Cameras

Camaras: familiar with Ricoh Theta, Insta 360 x

- **Download the mobile app**
- **Automatic and manual controls**
- **Configure ISO to 100**
- **Resolution around 6000*3000**
- **Optional HDR**
- **About £400**

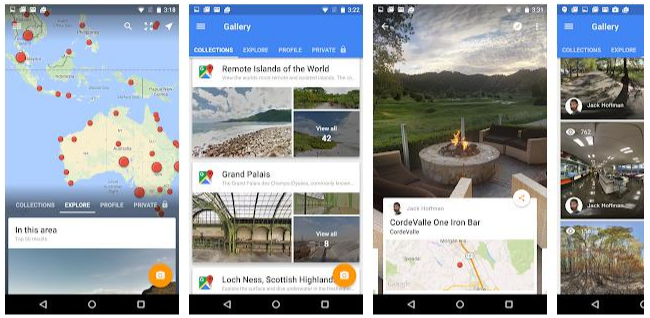
Google Street View

Google LLC Travel & Local

★★★★☆ 2,252,997

PEGI 3

Add to wishlist Install



Try the new 'Video Mode' where you can connect a Ricoh Theta V or Theta Z1 camera and create Street View as you walk, cycle or drive. This new mode records video from your camera and converts it into connected Street View images when you publish to Google Maps. Now you can add new streets and trails where Street View cars have never driven before!
Explore world landmarks, discover natural wonders and step inside locations such as museums, arenas, restaurants and small businesses with Google Street View.

READ MORE

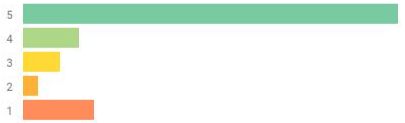
REVIEWS

Review Policy

4.1

★★★★☆

2,252,997 total



Stef van Vuuren

★★☆☆☆ 16 August 2020

16

You would think with all the brains at Google they can create a working app for using with a 360 camera! The app keeps stopping, sometimes you can't take photos, other times you can't upload photos, most of the times it can't connect to the camera! Please fix your app!
On the Apple tablet it doesn't

Full Review

Mbiata Inyang

★☆☆☆☆ 22 July 2020

Similar

See more

Live Earth Map 2
8th Genration Apps -Glob
Let's explore the world using your phone while sitting at home by using
★★★★☆

GPS Offline Map
JVSTUDIOS
Live traffic updates, GPS navigation, explore location weather & transit
★★★★½

Live Street View
Global Apps Inc - Live Sat
Live street view-earth map satellite, GPS map to view earth 360 street view live
★★★★½

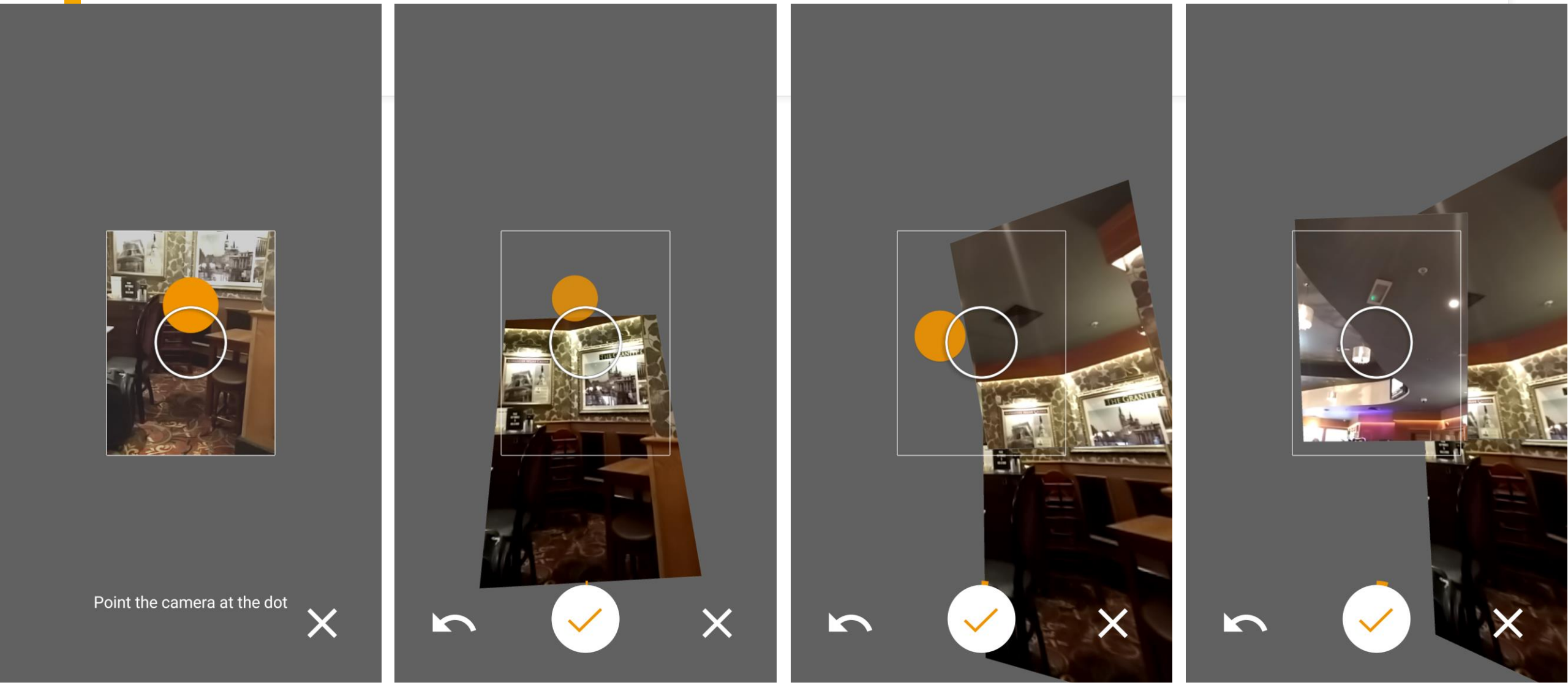
Street View - Ear
Street View Live, GPS Nav
Explore the world with 3D live Street Viewer Panorama & Live GPS
★★★★½

GPS, Maps, Voic
AppStar Studios
Find Driving Directions using GPS, Maps, Voice Navigation & Directions
★★★★☆

- Use Google Street View App
- Keep phone in same location
- Keep phone at same height
- Rotate and tilt around the lens
- Follow the phones guide points
- Shoot down, centre, up then rotate round
- Unst Boat Haven
  - On roundme
  - On google maps

Mobile Phone or Tablet

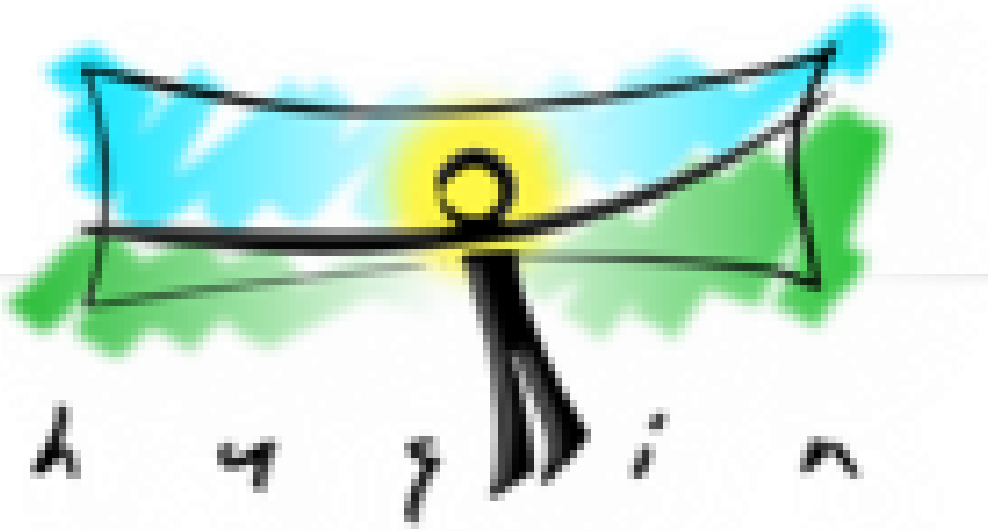
Mobile and Tablet



Panoramic Tripod Head

- Configure camera using manual settings
- Use a tripod and panoramic head
- Make sure the set up is level
- Configure so the camera rotates horizontally where the light converges in the lens
- Configure so the camera rotates vertically around the point where the light converges
- Check that there is no parralax
- Ensure each photo overlaps
- Use HDR if there is wide variation in light

Hugin Overview



- Collect your images
- Check Camera properties
- Tie your control points
- Run the optimiser
  - Equirectangular projection
- Run the stitcher

- http://hugin.sourceforge.net/tutorials/index.shtml

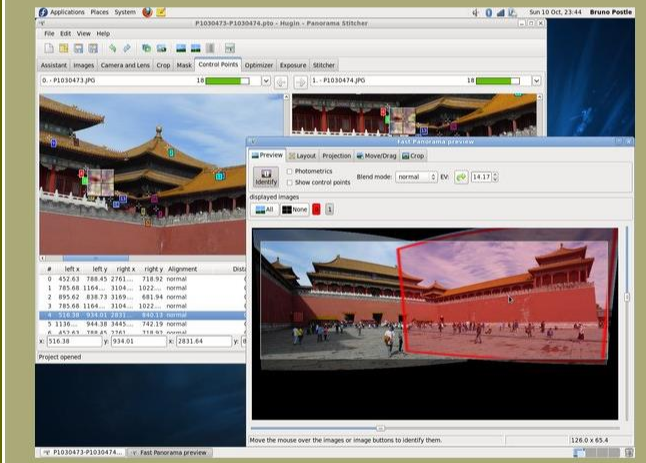
Hugin - Panorama photo stitcher

Hugin 2019.2.0 released! 2019-12-30

Release notes...

Goal: an easy to use cross-platform panoramic imaging toolchain based on Panorama Tools.

With Hugin you can assemble a mosaic of photographs into a complete immersive panorama, stitch any series of overlapping pictures and much more.



http://hugin.sourceforge.net/

Status

Hugin has now reached a *stable* state: the software is recommended for general use.

Download locations for stable binaries releases are listed by platform here.

Hugin is in constant development. From time to time somebody is kind enough to publish binaries of development versions.

Hugin has been localised with Brazilian Portuguese, Bulgarian, Catalan, Chinese Simplified, Chinese Traditional, Czech, Dutch, Danish, English, French, German, Hungarian, Italian, Japanese, Korean, Polish, Russian, Slovakian, Slovenian, Spanish, Swedish and Ukranian translations.

News

Hugin-2019.2.0 released 2019-12-30
Hugin is more than just a panorama stitcher

Hugin-2019.0.0 released 2019-04-06
Hugin is more than just a panorama stitcher

Hugin-2018.0.0 released 2018-02-03

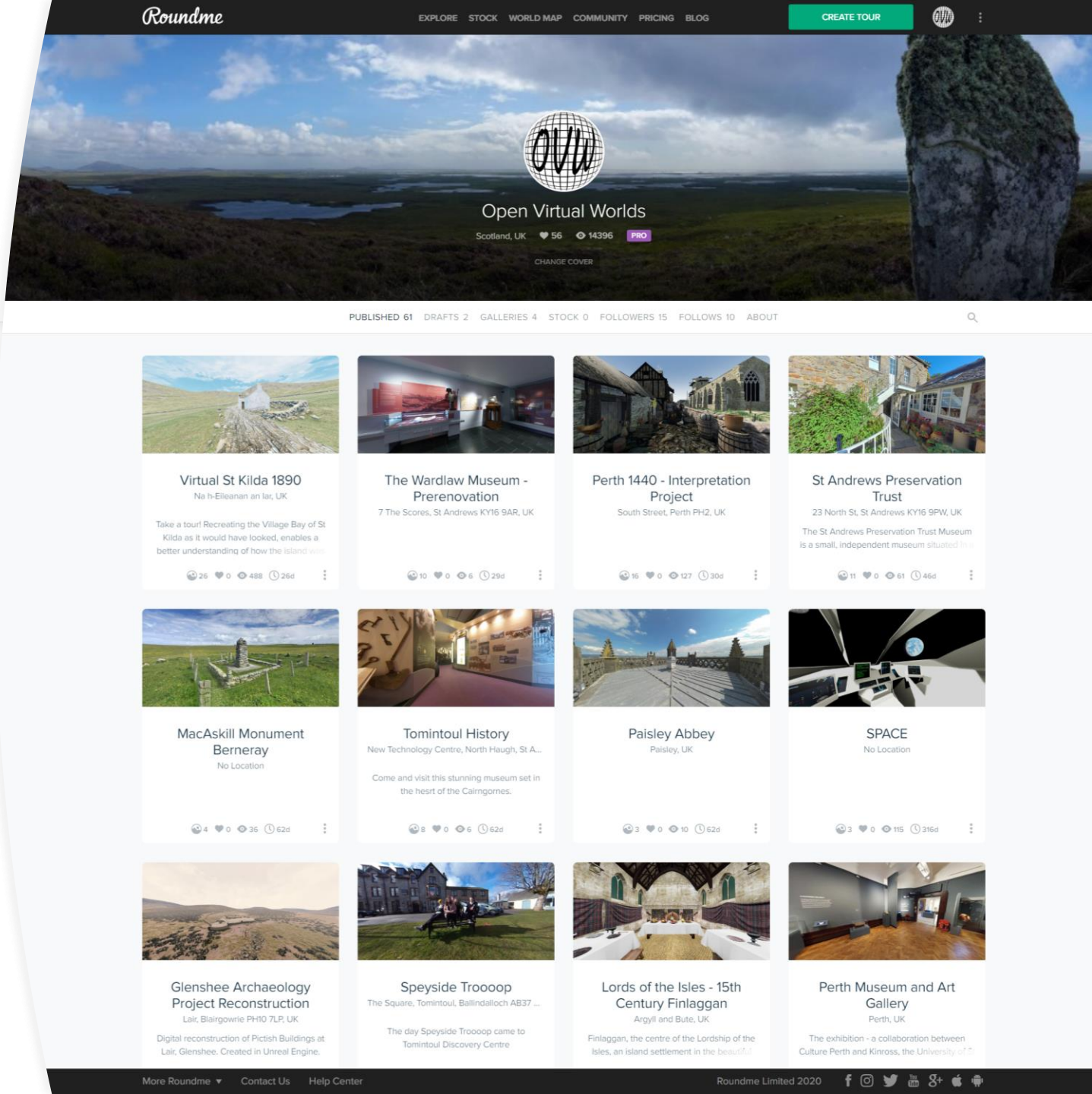
ΑΙΕΝ
ΑΡΙΣΤΕΥΕΙΝ

Compare the three methods

- Mobile App: High quality and resolution possible.
- 360 Camera: Quick to take a photo, action shots and video possible.
- Camera: highest quality and resolution possible. More complex process and time consuming process.

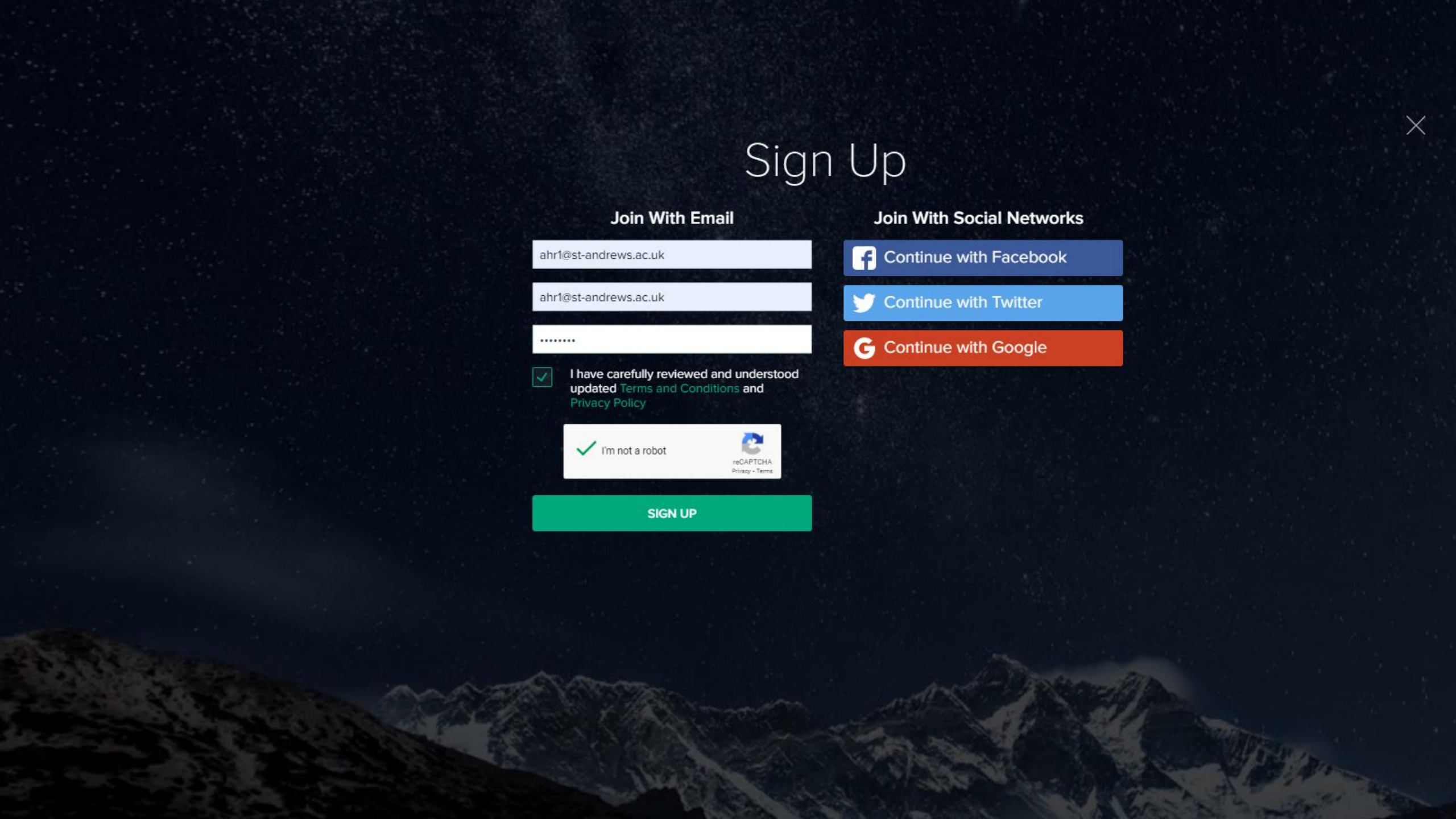
Introduction and overview

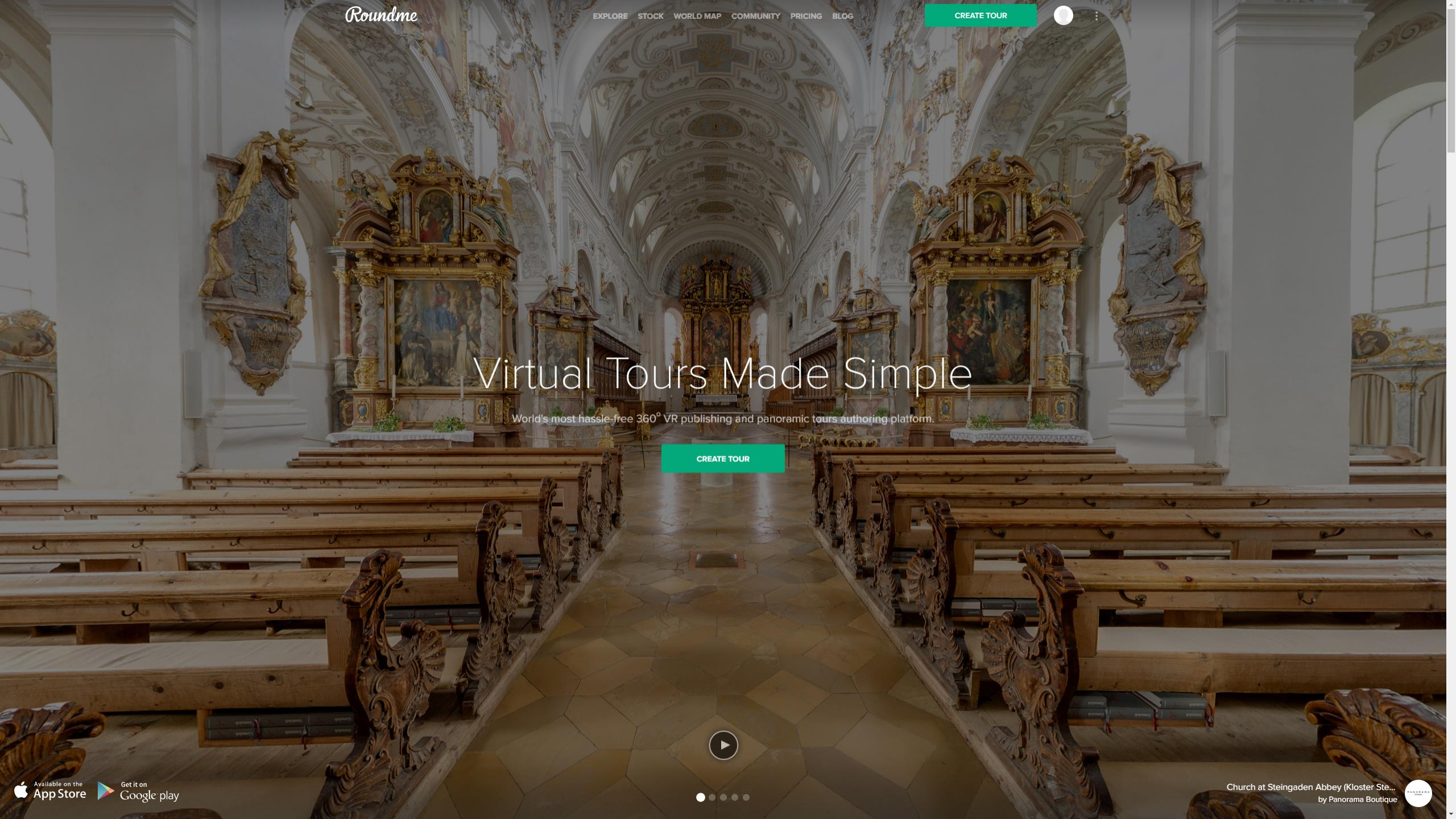
- Motivation and history
- What is a photosphere
- Workflow and overview
- How to shoot a photosphere
- **How to make a tour**
- How to share a tour
- What about video?
- Sources and resources



Creating the tour

- Roundme
- International Image Interoperability Framework
- Web page embed


Sign Up
Join With Email
ahr1@st-andrews.ac.uk
ahr1@st-andrews.ac.uk
I have carefully reviewed and understood updated Terms and Conditions and Privacy Policy
I'm not a robot
reCAPTCHA
Privacy - Terms
SIGN UP
Join With Social Networks
Continue with Facebook
Continue with Twitter
Continue with Google


Roundme
EXPLORE
STOCK
WORLD MAP
COMMUNITY
PRICING
BLOG
CREATE TOUR
Virtual Tours Made Simple
World's most hassle-free 360° VR publishing and panoramic tours authoring platform.
CREATE TOUR
Available on the App Store
Get it on Google play
Church at Steingaden Abbey (Kloster Ste...
by Panorama Boutique

Drag & Drop

your panoramas anywhere, or browse

Roundme supports only full spherical panoramas in equirectangular projection, 8 bit JPEG or TIFF.
Maximum panorama size: 10,000 x 5,000 px.
Maximum stereoscopic panorama size: 10,000 x 10,000 px.

You have 15 uploads remaining until Sep 15, 2020
Want more? Become a **PRO**

Tour Cover

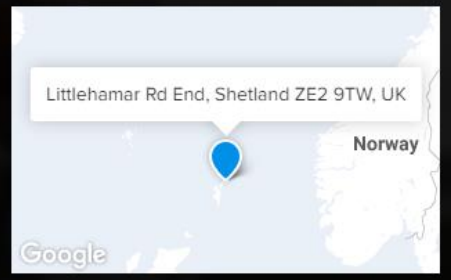
Tour Title

Bobby's Bus Stop: Shetland

Tour description

"The Unst Bus Shelter, also known as Bobby's Bus Shelter, is a bus shelter and bus stop near the village of Baltasound, on the isle of Unst, Shetland, Scotland.
https://en.wikipedia.org/wiki/Unst_Bus_Shelter

Tour Location



Tour Categories

Add few keywords to improve the discoverability of your panorama

Sightseeing | Nature | Vehicles

Settings

- [x] Show previews
- [x] Allow comments
- [ ] Share Camera info
- [ ] Unlisted

Camera Info

Panorama ID 1968909

RICOH RICOH THETA S
1.31mm / 1/6400s / ƒ2.0 / ISO 100

Panorama ID 1968910

RICOH RICOH THETA S
1.31mm / 1/3200s / ƒ2.0 / ISO 100

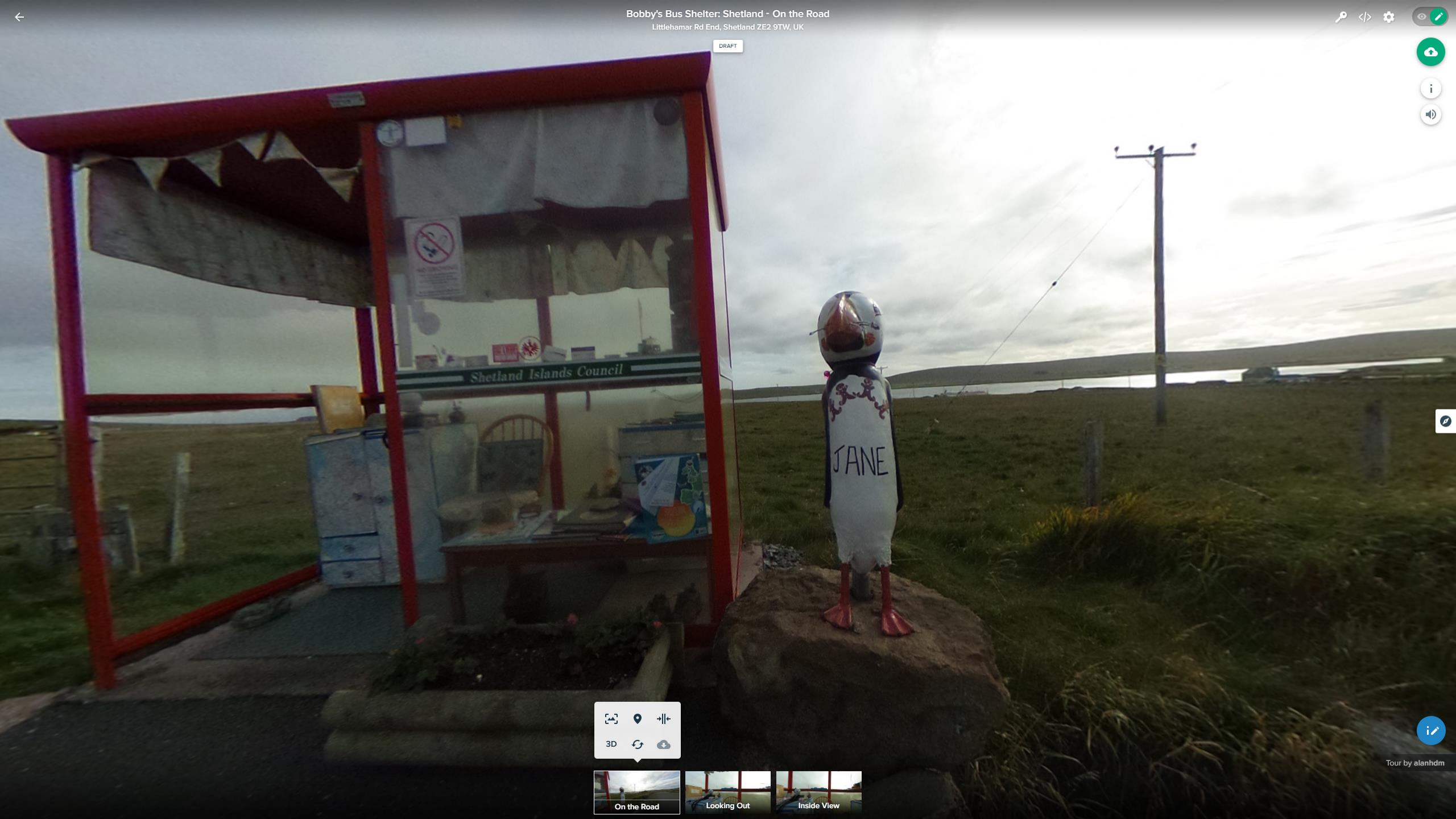
Panorama ID 1968911

RICOH RICOH THETA S
1.31mm / 1/4000s / ƒ2.0 / ISO 100

OFF Published

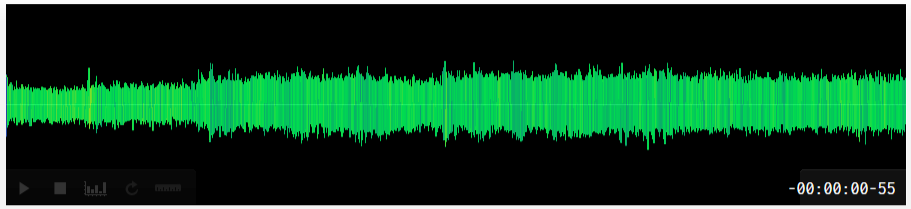
CLOSE

SAVE


Bobby's Bus Shelter: Shetland - On the Road
Littlehamar Rd End, Shetland ZE2 9TW, UK
DRAFT
Shetland Islands Council
JANE
3D
On the Road
Looking Out
Inside View
Tour by alanhdm

On the Road
SAVE PORTAL
ON
Custom view direction
CANCEL
NO SMOKING
S.I.C. Environmental Services
KIER
LT&C
3D
On the Road
Looking Out
Inside View

Bus sound design » 01 bus ORIGINAL .wav



firb
December 9th, 2015

★★★★★ (10)

Downloaded **1870** times

Download

Recording from inside of a bus standing still and driving. Vibrations, motor. Recorded by night with a Zoom H1 V2 in a journey from Embrun to L'Argentière-la-Bessée in France.

ambient motor vibrations inside bus field-recording

creative commons This work is licensed under the Attribution License.

Comments

DvOr 1 month, 2 weeks ago
aaa just what I needed, thank you! You'll hear it in one of the future eps of my podcast, Dos: After You!
Report spam/offensive

sly34 3 months, 1 week ago
MERCI trop cool
Report spam/offensive

elasticida 11 months, 1 week ago
thx
Report spam/offensive

varseop 1 year, 7 months ago
thank you
Report spam/offensive

ValentinaDA 1 year, 8 months ago
Aaaah thank you!!!!!!!
Report spam/offensive

previous next 1 2 3 | 11 commentss

Type	Wave (.wav)
Duration	01:46:144
Filesize	53.6 MB
Samplerate	88200.0 Hz
Bitdepth	24 bit
Channels	Stereo

Pack: Bus sound design
Geotag
Similar sounds
Bookmark this sound
Follow this user

Sound illegal or offensive? **Flag it!**

Share url: https://freesound.org/s/330680/

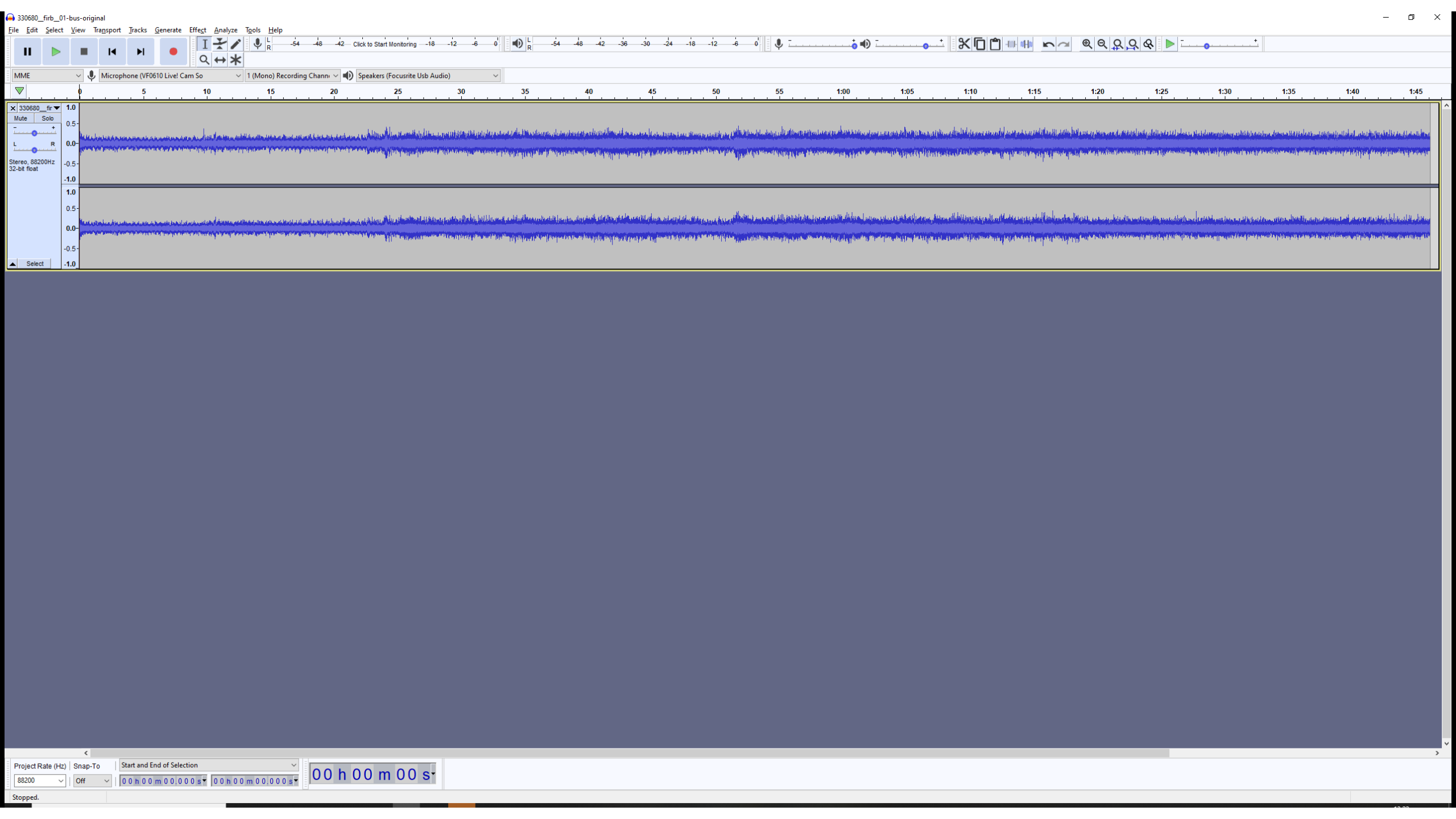
Like 0 Tweet tumblr. Embed

Leave a comment:

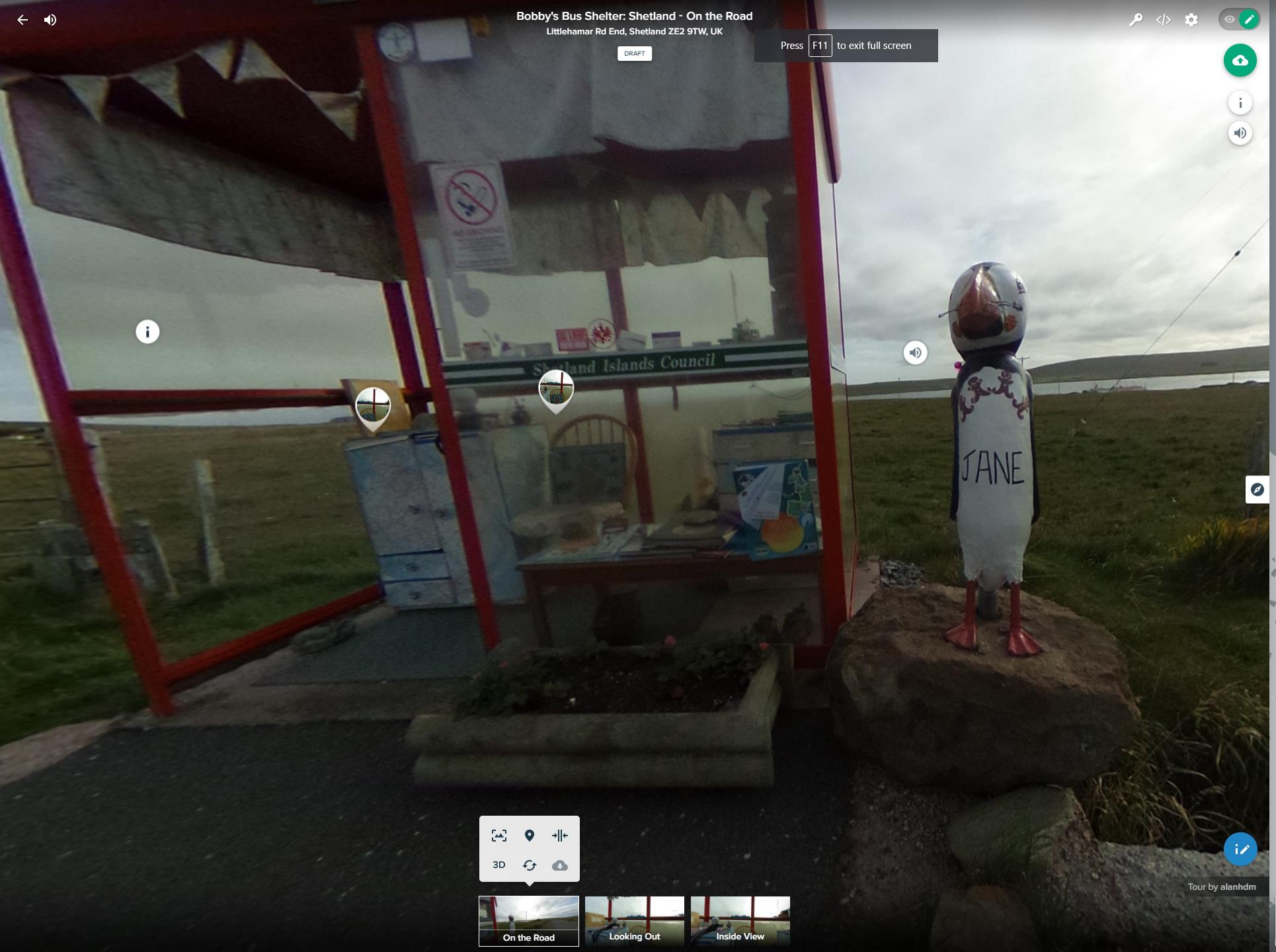
Comment:

Post comment

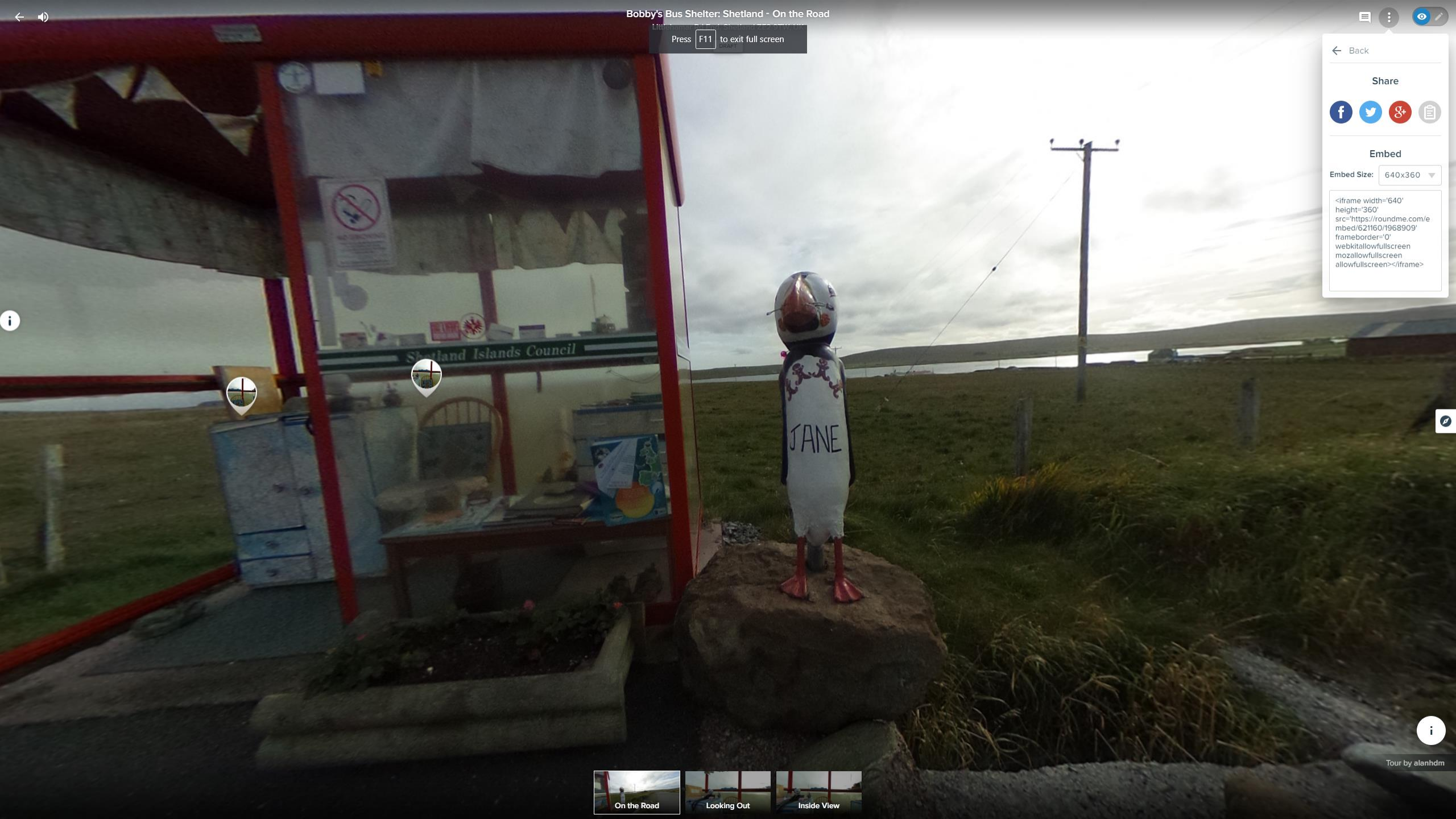
We use cookies to ensure you get the best experience on our website. By browsing our site you agree to our use of cookies.
For more information check out our cookies policy.
Ok


330680__firb__01-bus-original
File Edit Select View Transport Tracks Generate Effect Analyze Tools Help
Click to Start Monitoring
MME
Microphone (VF0610 Live! Cam So
1 (Mono) Recording Chann
Speakers (Focusrite Usb Audio)
330680__fir
Mute Solo
Stereo, 88200Hz
32-bit float
Select
Project Rate (Hz) Snap-To
Start and End of Selection
88200
Off
00 h 00 m 00 s
Stopped.

330680__firb__01-bus-original.mp
Reach: 30°
Repeat
Loop
Delay
0 s
CANCEL
SAVE
JANE
3D
On the Road
Looking Out
Inside View

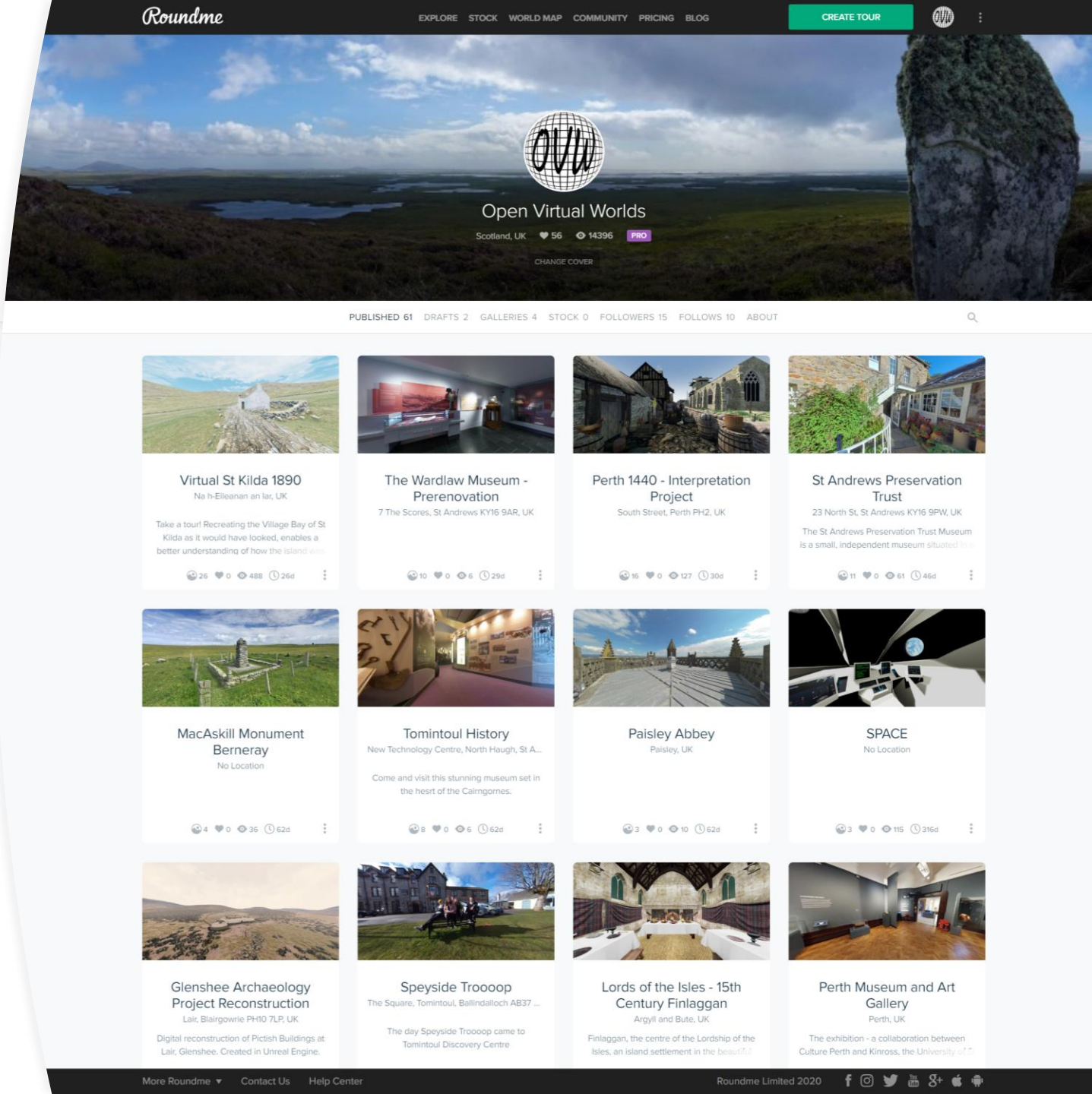

Bobby's Bus Shelter: Shetland - On the Road
Littlehamar Rd End, Shetland ZE2 9TW, UK
DRAFT
Press F11 to exit full screen
Shetland Islands Council
JANE
3D
Tour by alanhdm
On the Road
Looking Out
Inside View
Skaw
Norwick
Burrafirth
Quoys
Baliasta
Baltasound
Gloup
Underhoull
Cullivoe
Belmont
Uyeasound
Gutcher
Basta
Mid Yell
Houbie
Funzie
Aywick
Otterswick
Map
Earth

Bobby's Bus Shelter: Shetland - On the Road
Littlehamar Rd End, Shetland ZE2 9TW, UK
DRAFT
WebVR mode
Fullscreen
Share & Embed
Projections
QTVR Navigation
Autorotation On
Autofollow On
Slideshow
Help
Feedback
Shetland Islands Council
JANE
On the Road
Looking Out
Inside View
Tour by alanhdm


Bobby's Bus Shelter: Shetland - On the Road
Press F11 to exit full screen
Back
Share
Embed
Embed Size:
640x360
<iframe width='640' height='360' src='https://roundme.com/embed/621160/1968909' frameborder='0' webkitallowfullscreen mozallowfullscreen allowfullscreen></iframe>
Shetland Islands Council
JANE
On the Road
Looking Out
Inside View
Tour by alanhdm

Introduction and overview

- Motivation and history
- What is a photosphere
- Anatomy of a tour
- How to make a tour
- **How to share a tour**
- What about video?
- Sources and resources



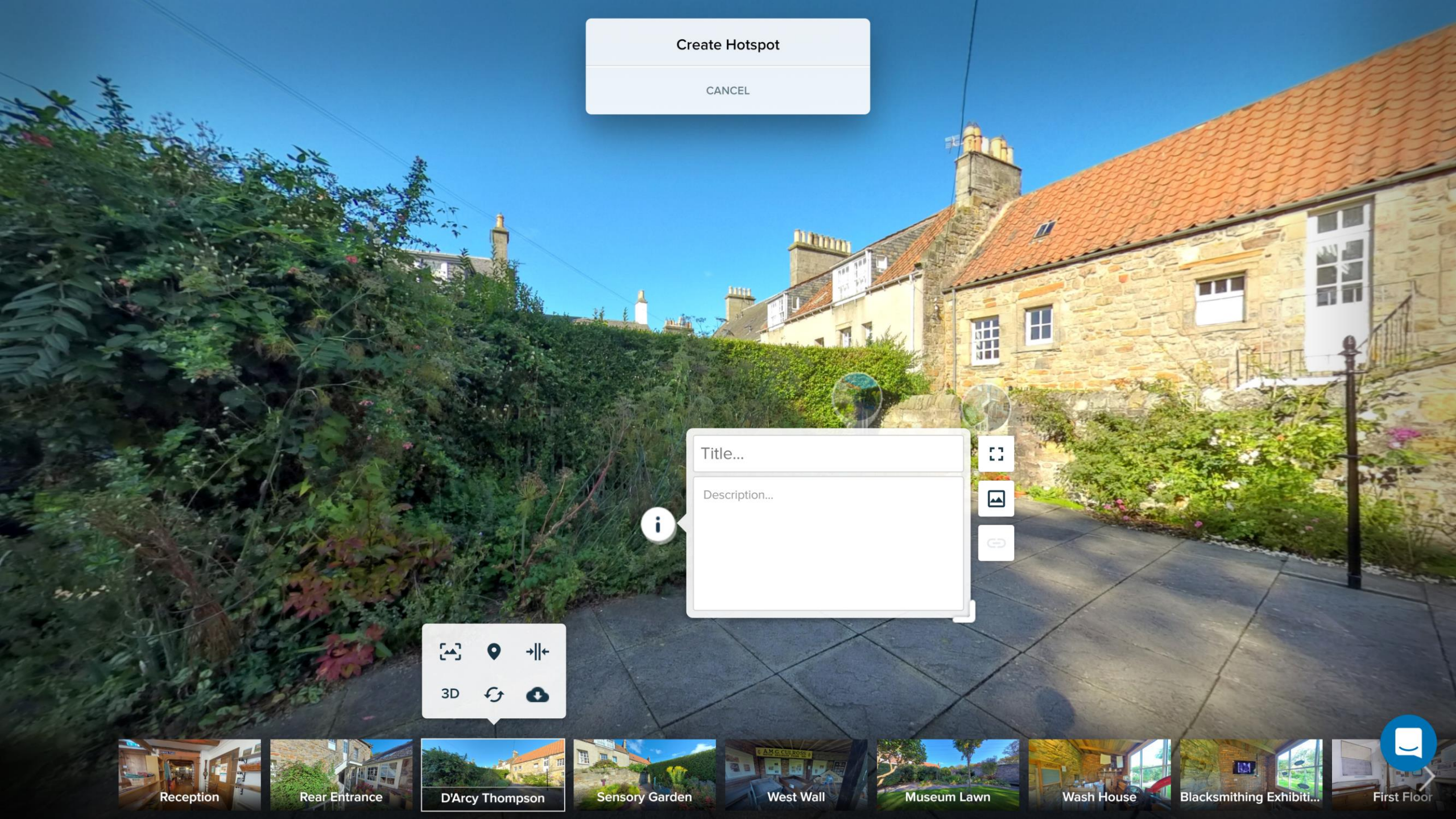
How to share a tour

- Interactive Map: Openstreet maps, Google Streetview
- Social Archive: roundme
- Embed in a web page
- Virtual Reality Installation
- Virtual Reality App
- Social Media: Facebook, Youtube, Instagram

St Andrews Preservation Trust

Welcome to the tour of St Andrews Preservation Trust musuem. Here you will be able to explore the museum, enjoy reconstructions of past life in St Andrews and relax in its gardens!

START


Create Hotspot
CANCEL
Title...
Description...
3D
Reception
Rear Entrance
D'Arcy Thompson
Sensory Garden
West Wall
Museum Lawn
Wash House
Blacksmithing Exhibiti...
First Floor

St Andrews Preservation Trust - D'Arcy Thompson
23 North St, St Andrews KY16 9PW, UK
Tour by Open Virtu
Reception
Rear Entrance
D'Arcy Thompson
Sensory Garden
West Wall
Museum Lawn
Wash House
Blacksmithing Exhibiti...
First Floor

Armoural

Set into the eastern wall are two armourial stones that likely originate from the Cathedral.

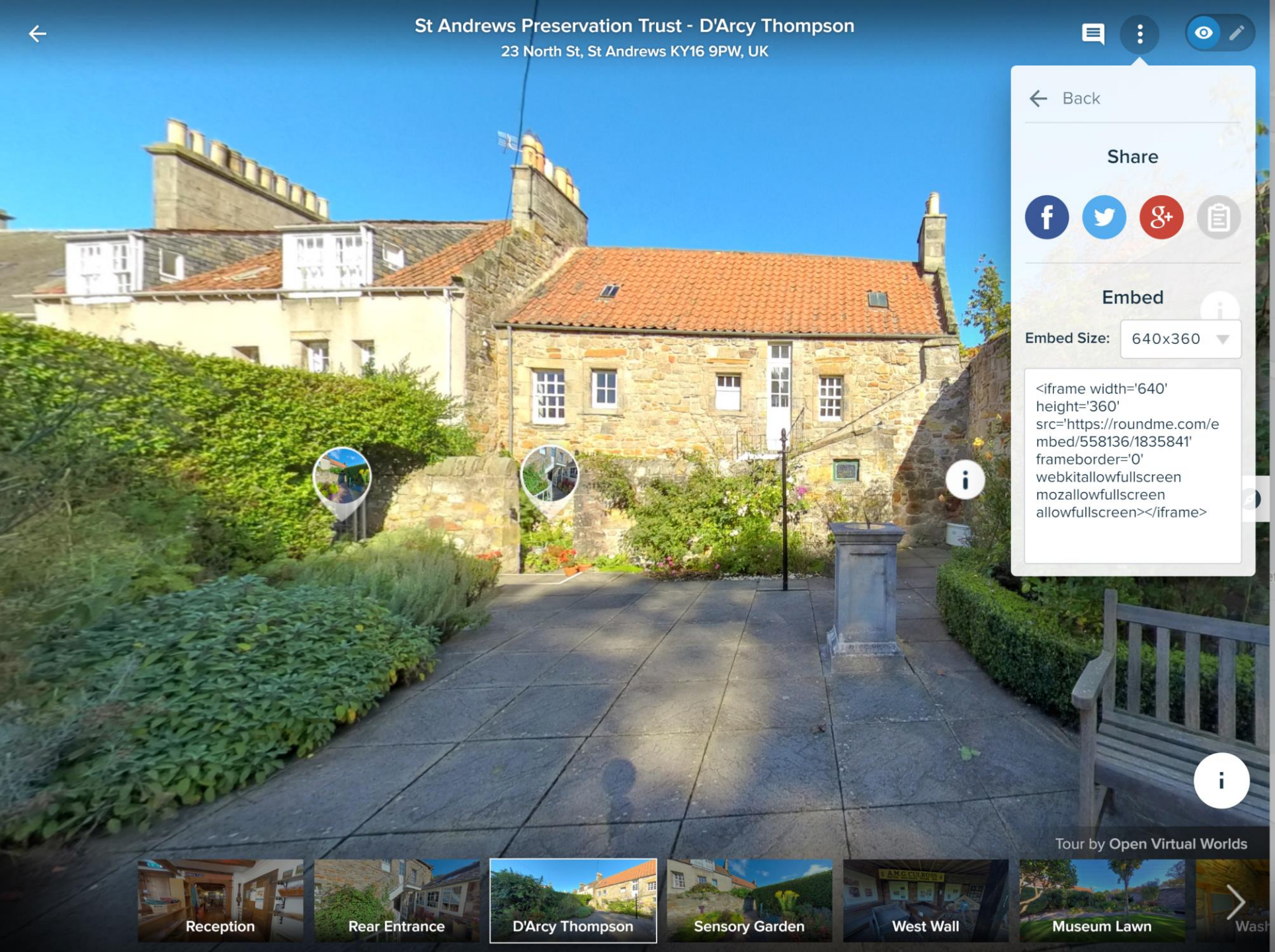
Original

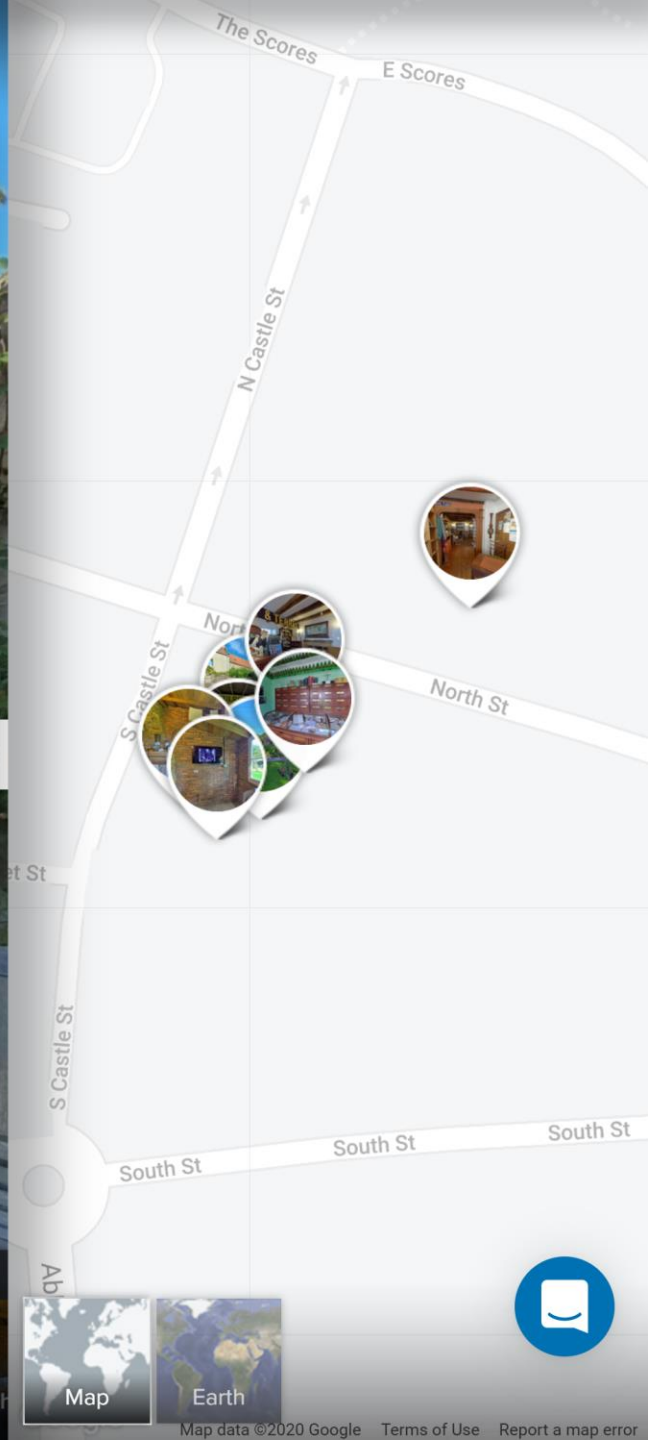
The original outside toilet for the house is located in the North-East corner of the D'Arcy Thompson garden. It is known as a 'double-seater' as it accommodates two people. This was the only form of sanitation for all four original dwellings in the house.

Herb Garden

This area of the garden also contains a herb border set against a high hedge. Within the border are Rosemary, Sage, Lavender and a variety of mints, along with Marjoram, Fennel and Lemon balm.

Tour by Open Virtu


St Andrews Preservation Trust - D'Arcy Thompson
23 North St, St Andrews KY16 9PW, UK
Back
Share
Embed
Embed Size:
640x360
<iframe width='640' height='360' src='https://roundme.com/embed/558136/1835841' frameborder='0' webkitallowfullscreen mozallowfullscreen allowfullscreen></iframe>
Tour by Open Virtual Worlds
Reception
Rear Entrance
D'Arcy Thompson
Sensory Garden
West Wall
Museum Lawn


The Scores
E Scores
N Castle St
S Castle St
North St
South St
Map
Earth
Map data ©2020 Google
Terms of Use
Report a map error

Share on Facebook

Share to News Feed or story

Alan Miller

Take a virtual tour of tour of St Andrews Preservation Trust feeling happy

ROUNDME.COM

St Andrews Preservation Trust from 23 North St, St Andrews KY16 9PW, UK

Catherine Anne Cassidy | Iain Oliver | Sarah Kennedy | CJ Davies | Bess Rh

Tag friends | Check in | Feeling/Activity

News Feed

Your Story

Cancel

Alan

Alan Miller is feeling happy with **Catherine Anne Cassidy** and **4 others** at **St Andrews Preservation Trust Museum & Garden**.

2 m · St Andrews ·

Take a virtual tour of tour of St Andrews Preservation Trust

ROUNDME.COM

St Andrews Preservation Trust from 23 North St, St Andrews KY16 9PW, UK

The St Andrews Preservation Trust Museum is a small, independent museum situated in a 17th...

Sue Johnston

Like | Comment | Share

Write a comment...

Barbados Museum & Historical Society

8 m ·

Yesterday, we asked if you could identify the shell located to the top front on the left of the display case.

If you said "King Helmet" you were correct!

Classified as Cassis tuberosa, this giant sea snail features a heavy shell, which has whorls which look similar to a crown, which lends to its name.

Sponsored

How to focus during global chaos

blog.dropbox.com

Your Fundraiser - An At Home Service Project

lionsclubs.org

Your Pages

Open Virtual Worlds

20+ Notifications

Create Promotion

Birthdays

DrishyaHolidays Delhi India and **4 others** have birthdays today

Contacts

Sara Allkins

Catherine Anne Cassidy

Kate Miller

Rosa Rice

Caroline Wickham-Jones

Jacek Dziamecki

Andy Walker

John Foley

Skotta Valgardsdottir

Hugh Miller

Marie Clarke

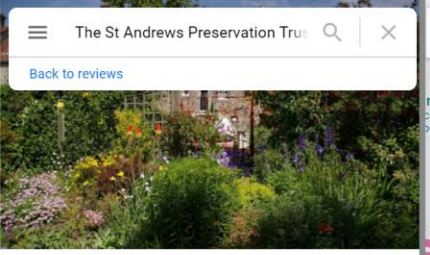
Cathy Cruickshank

Ian Allinson

Andy Wilson

The St Andrews Preservation Trus

Back to reviews



The St Andrews Preservation Trust Museum

4.5 ★★★★½ (36)

Museum

Temporarily closed

Directions | Save | Nearby | Send to your phone | Share

Cozy museum in a 17th-century home featuring art & objects relating to the region & its inhabitants.

12 North St, St Andrews KY16 9PW

86R5+5V St Andrews

standrewspreservationtrust.com

01334 477629

Temporarily closed

Add a label

Suggest an edit

Add missing information

Add hours

Photos

Add a photo

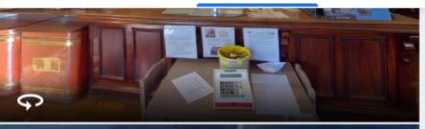
Review summary

5

4.5

The St Andrews Preservation Tru...

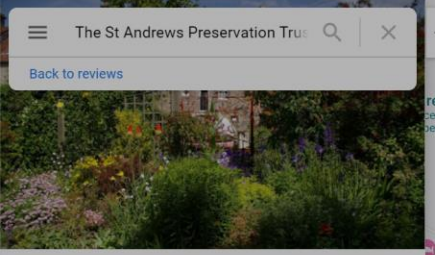
All | By owner | Street View & 360° | By you



The St Andrews Preservation Trust Museum
Open Virtual Worlds

Street View - Mar 2020

Image capture: Oct 2019 Images may be subject to copyright. Picasa United Kingdom Terms Report a problem



The St Andrews Preservation Trust

Back to reviews

The St Andrews Preservation Trust Museum

4.5 ★★★★½ (36)

Museum

Temporarily closed

Directions | Save | Nearby | Send to your phone | Share

Cozy museum in a 17th-century home featuring art & objects relating to the region & its inhabitants.

12 North St, St Andrews KY16 9PW

86R5+5V St Andrews

standrewspreservationtrust.com

01334 477629

Temporarily closed

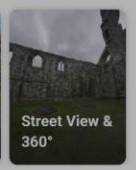
Add a label

Suggest an edit

Add missing information

Add hours

Photos



Add a photo

Review summary

5

4.5

Share

Send a link | Embed a map

The St Andrews Preservation Trust Museum
12 North St, St Andrews KY16 9PW

Link to share

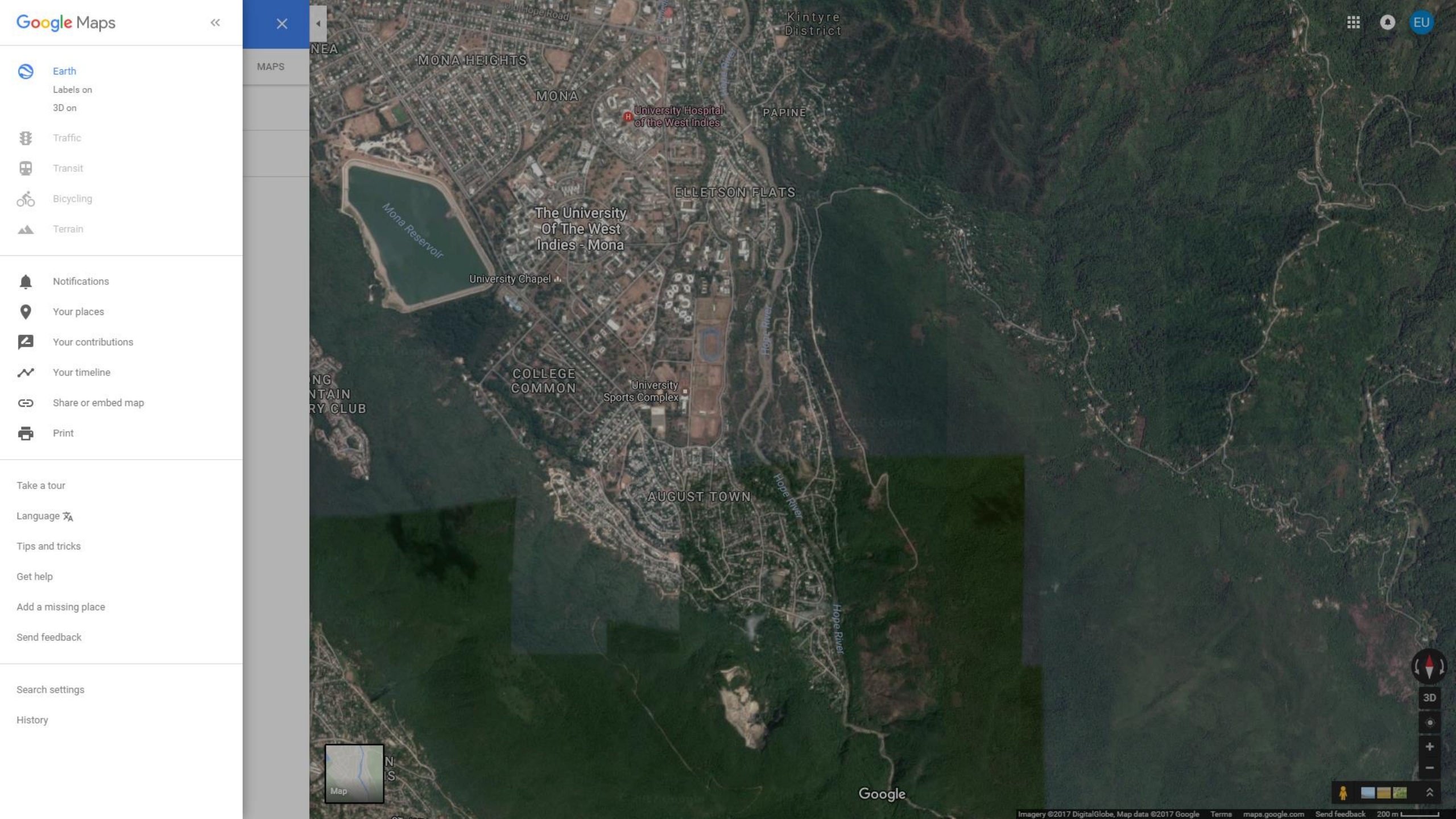
https://g.page/StAPTMuseum?share COPY LINK

Facebook | Twitter

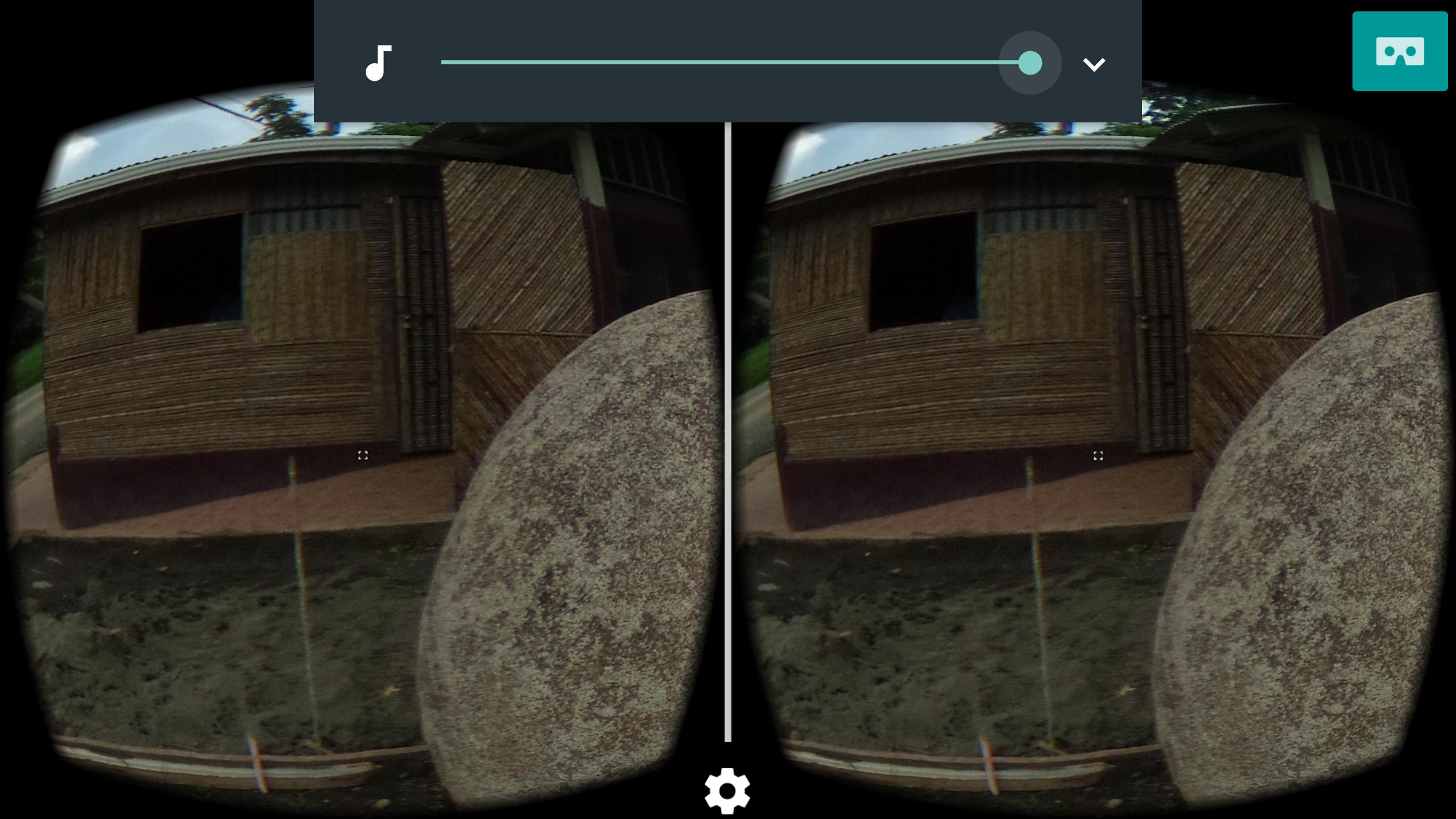
Send feedback

Wardlaw Museum
The Russell Hotel
Admissions
Ziggys Takeaway
St Andrews Brewing Co, North Street
Kinnettles Grill · ££
Taste
Swallowgate PC Classroom
University of St Andrews Library
Lower College Hall
Saint Salvator's Hall
University of St Andrews
Temporarily closed
School of Economics and Finance
Chargeplace Scotland Charging Station
St Andrews Castle
Parking St Andrews Castle
All Saints' Church
North St
The Scores
Muttoes Ln
Union St
Costa Coffee Takeaway
Boots
Sainsbury's Local
Market St
Cafe in the Square
VisitScotland St Andrews iCentre
Tailend Restaurant Seafood · ££
Fisher & Donaldson Delivery
Zizzi Temporarily closed
Holy Trinity Church Medieval church with stained glass
The Adamson
We Are Zest Café Takeaway
Bell St
Baker Ln
A918
Rule Temporarily closed
St Mary's Quad
St Andrews Town Hall
St Mary's Quadrangle
Blackfriars Chapel Remnants of a medieval monastery
Lade Braes Ln
Queen's Gardens
Westburn Ln
The Long Walk
No. 14
The Bell Pettigrew Museum Zoology museum at a university
Queen's Terrace
Greenside Pl
A917
5 Abbey Villas
Xelect
St Andrews Luxury Self Catering
St Regulus Hall
St Andrews
Monarchs House
2 Queens Terrace
The Spindle
Lade Braes Walk
Dempster Lodge
Dempster Terrace
Kinnessburn Rd
The kinnessburn duck ducks
Scholars Gate - Retirement Living...
Cosmos Community Centre
Hello Student Accommodation...
Adamson Ct
The Pends
A & M Sproson Picture Framers
The Church of St Mary on the Rocks
St Rules Tower
St Andrews Pier
Harbour Cafe
Toilet
Sheppard Swim School
The Shore
East Sands
Kinness Burn
St. Andrews Beach
East Sands Play Park
St. Andrews Sailing Club
Google
Map data ©2020 Google | United Kingdom | Terms | Send feedback | 50 m

Virtual Reality


Google Maps
Earth
Labels on
3D on
Traffic
Transit
Bicycling
Terrain
Notifications
Your places
Your contributions
Your timeline
Share or embed map
Print
Take a tour
Language
Tips and tricks
Get help
Add a missing place
Send feedback
Search settings
History
MAPS
MONA HEIGHTS
MONA
University Hospital of the West Indies
PAPINE
Kintyre District
ELLETSON FLATS
The University Of The West Indies - Mona
Mona Reservoir
University Chapel
COLLEGE COMMON
University Sports Complex
AUGUST TOWN
Hope River
Google
Map
3D
Imagery ©2017 DigitalGlobe, Map data ©2017 Google
Terms
maps.google.com
Send feedback
200 m

Café
de Piedra



New technology reveals old Edinburgh

Friday 17 March 2017

The lost townscape of sixteenth-century Edinburgh has been brought back to life by researchers at the University of St Andrews.

The new digital reconstruction is the first to be created of the period, and is based on a drawing from 1544, thought to be the earliest accurate depiction of the capital.

The virtual time travel technology – which will be released as an app in May – provides a unique window into the capital around the time of the birth of Mary Queen of Scots.

The technology is the result of a collaboration between St Andrews historians, art historians, computer scientists and University spinout company Smart History. The result is an interactive tour of the capital as it appeared in 1544, just before the city was sacked and burned by an English army led by Edward Seymour, Earl of Hertford.

Dr Bess Rhodes, an expert on sixteenth-century Scottish history who collaborated on the reconstruction, said: "For the first time visitors and residents can compare the city they know with the capital of James V and Mary Queen of Scots. It has been amazing seeing the recreation of a lost townscape. I hope this project makes the public more aware of the layers in the capital's history, and furthers understanding of the complex way in which Edinburgh evolved."

The reconstruction is inspired by a sixteenth-century drawing of Edinburgh made by Richard Lee, an English military engineer who later designed the massive artillery

Archive

Creating an Archive

- Use the best quality possible
- Include the orginal photographs
  - This enables re-use and guards against obsalesence.
- Create meta data:
  - Location, format, date
- Upload to Social Archive Site
  - For example roundme.com

Immovable Heritage Upload Form

Form Type Site

Name: Title

Media: Nothing selected

Add Media

Primary Media: Nothing selected

Refresh List

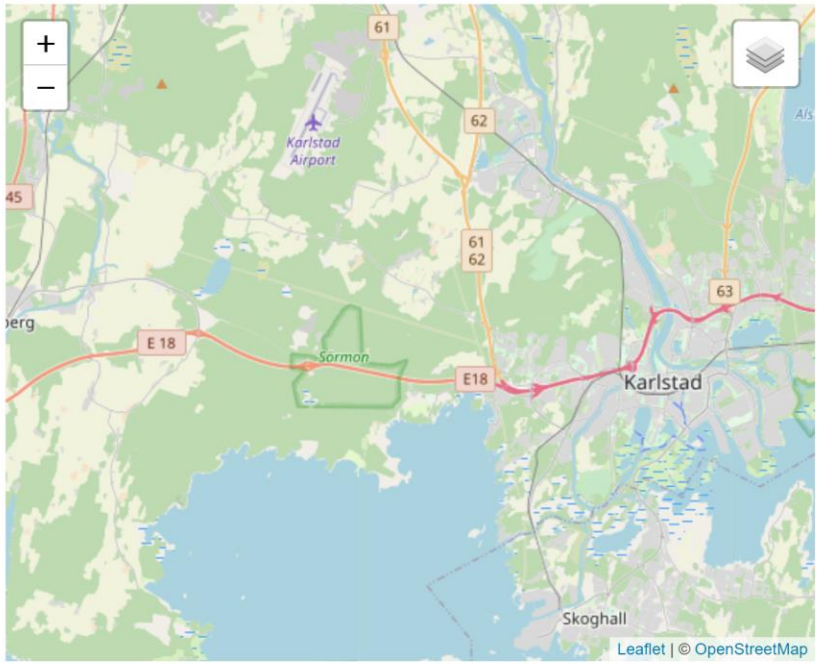
Start Date of Existence:

End Date of Existence:

Drag & drop files here …

Select files... Browse …

Location:



Language: Language

Contact: alanr@st-andrews.ac.uk

Cleared for Release:

CUPIDO only:

Coords: Latitude Longitude

Description: Description

Add Media

File:

Drag & drop files here …

Select files... Browse …

URL: Sketchfab or Roundme embed URL for objects

Reporting Period: Reporting 1

Name: Title

Type: Audio

Format: Select of Format

Layers: Nothing selected

Media Creator: Media Creator

License to End User: In Copyright (InC)

Media Creator URL: URL

License Chooser

Source:

Cancel

Description: Description

Add Media

File:

Drag & drop files here …

Select files... Browse ...

URL: Sketchfab or Roundme embed URL for objects

Name: Title

Type: Audio

Format: Select of Format

Layers: Nothing selected

Media Creator: Media Creator

License to End User: In Copyright (InC)

Media Creator:

License Chooser

Name: Title

Type: Audio

Format: Select of Format

Layers: Nothing selected

Media Creator: Media Creator

License to End User: In Copyright (InC)

Media Creator URL: URL

License Chooser

Date Created:

Source:

Organization: Select an Organization

Item: Nothing selected

Description: Description

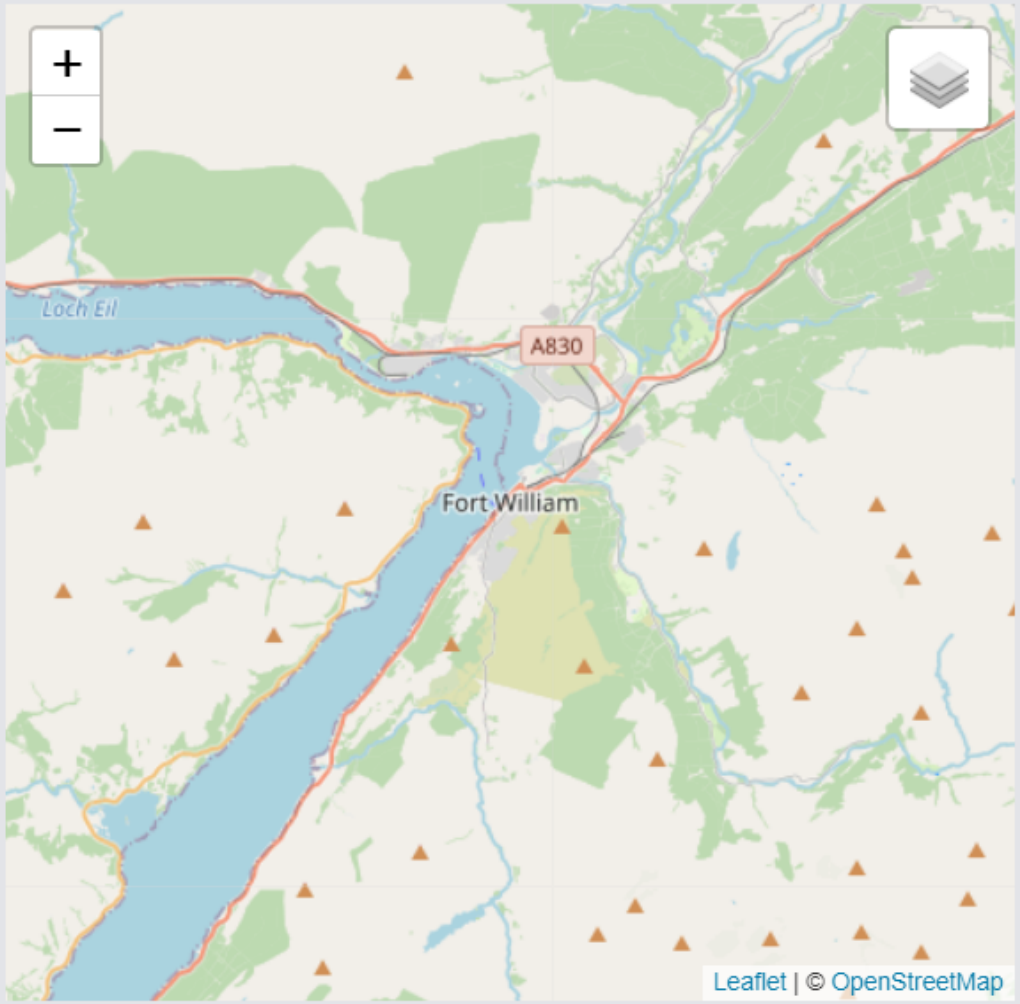
Page URL:

Subject: Nothing selected

Tags:

Tags:

Location:



Current:

Latitude

Longitude

Origin:

Latitude

Longitude

Cleared for Release:

Archive:

Social Archive:

only:

Cancel

- https://en.wikipedia.org/wiki/Unst_Bus_Shelter
- http://www.unstbusshelter.shetland.co.uk/p/home.html
- http://news.bbc.co.uk/1/hi/scotland/north_east/8239248.stm

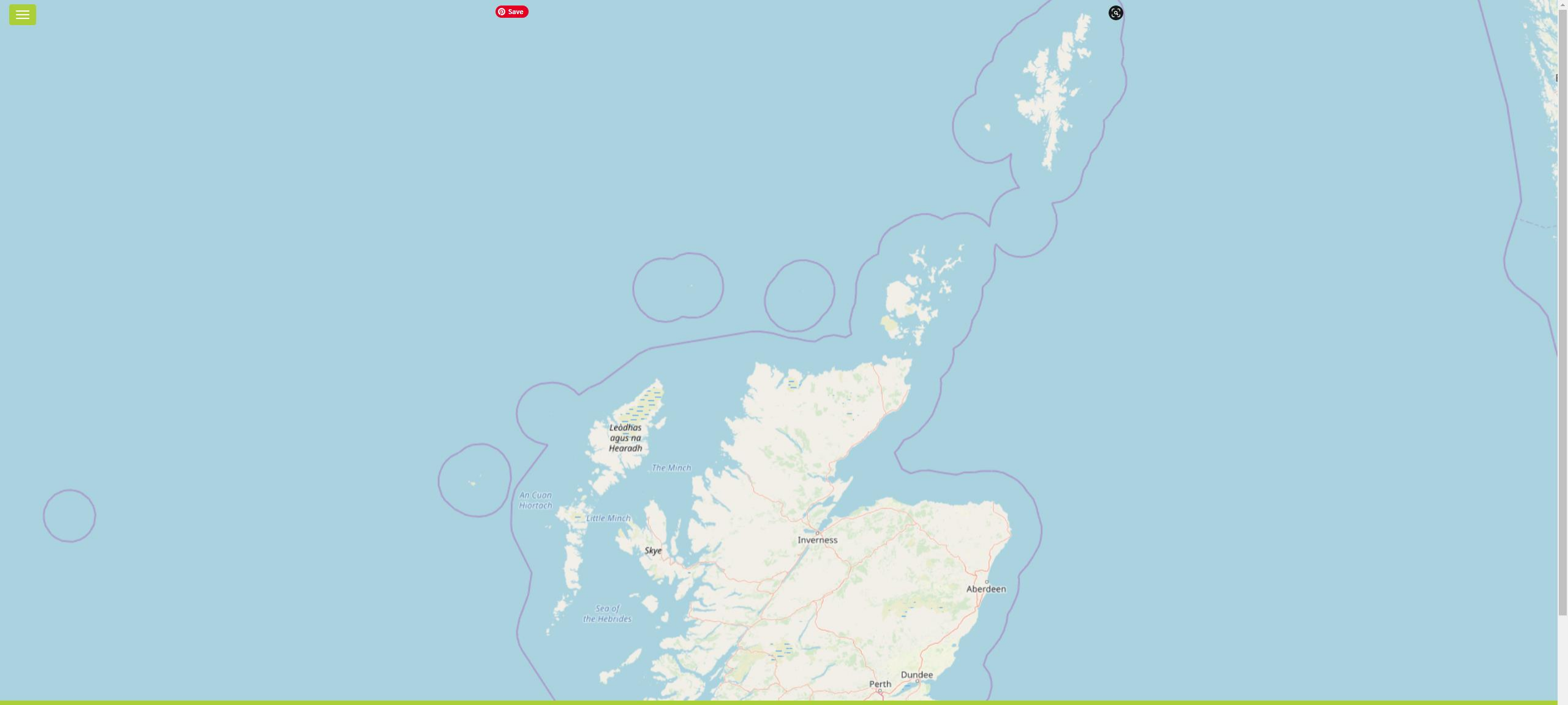
Sharing

Facebook Galleries

- Native upload
- Gets more hits
- Organised into Galleries

Google Maps

- Upload photospheres
- Organise them into tours, using Google Street View App



LOG OUT UPLOAD MAP

Exhibits

Archives

Add a Place

Form Type Place

Name: Title

Media: Nothing selected — Add Media

Primary Media: Nothing selected — Refresh List

Building Date:

New This Year: ☐ **Included This Year:** ☐

Language: Language

Opening Date 1:

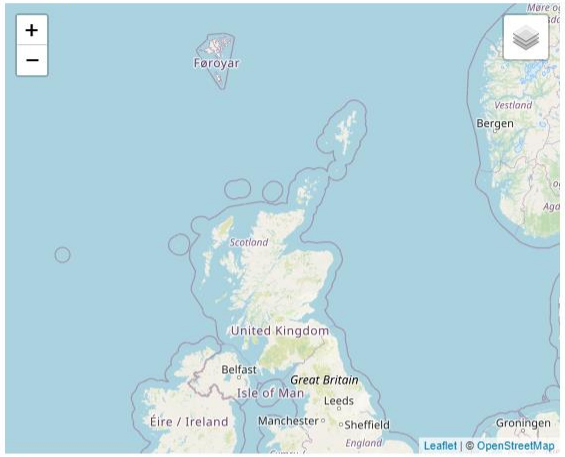
Opening Date 2:

DDO only: ☑

Drag & drop files here …

Select files... Browse …

Location:



Coords: Latitude — Longitude

Description: Description

Activities: Activities

Architect Name: Name (s)

Type: Museum

Community: Simple identifaction of the associated community

Opening Time: Timetable. Opening hour, closing hour

Opening Time: Timetable. Opening hour, closing hour

Address Line 1:

Address Line 2:

Place: Town, City …

Postcode:

Country: United Kingdom

Area: Aberdeen City

WC: ☐ **Disabled WC:** ☐

Disabled Access: ☐ **Refreshment:** ☐

Events For Children: ☐ **Parking:** ☐

Hearing Loop: ☐ **Limited Access:** ☐

Not Accessible: ☐

Home Page:

Social Media:

Add Media

File:

Drag & drop files here …

Select files... Browse …

URL: https://...

Name: Title

Type: Image

Format: Select a Format

Layers: Nothing selected

Media Creator: Media Creator

License to End User: Pick One

Media Creator URL: URL

License Chooser

Source:

Place: Nothing selected

Description: Description

Subject: Nothing selected

Tags:

Location:

Coords: Latitude Longitude

Cancel

Place: Town, City ...

Postcode:

Country: United Kingdom

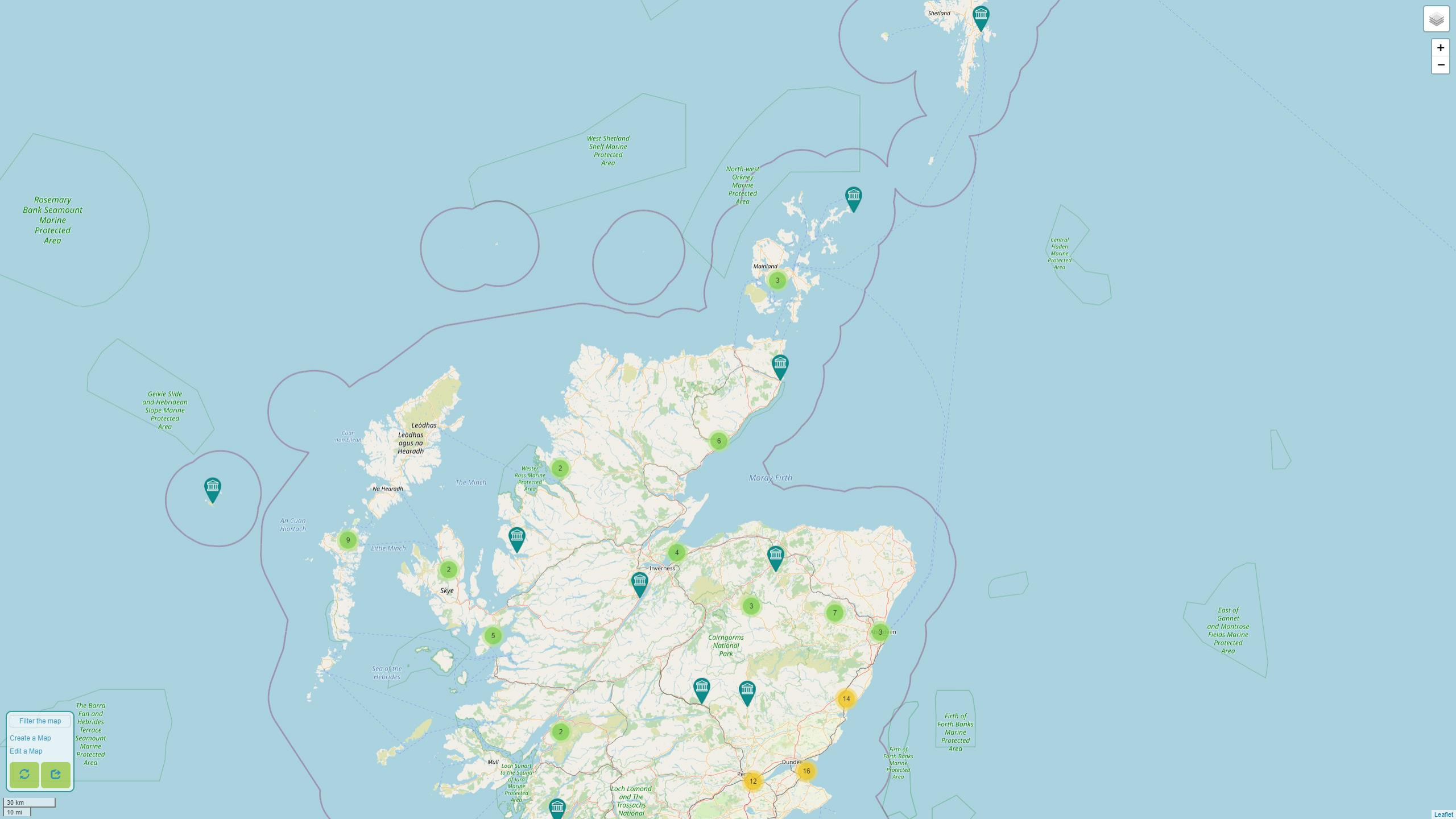
Events For Children:

Hearing Loop:

Not Accessible:

Parking:

Limited Access:


Shetland
West Shetland Shelf Marine Protected Area
North-west Orkney Marine Protected Area
Rosemary Bank Seamount Marine Protected Area
Central Fladen Marine Protected Area
Mainland
Geikie Slide and Hebridean Slope Marine Protected Area
Leòdhas
Leòdhas agus na Hearadh
Cuan nan Eilean
Wester Ross Marine Protected Area
The Minch
Na Hearadh
Moray Firth
An Cuan Hiortach
Little Minch
Inverness
Skye
Cairngorms National Park
East of Gannet and Montrose Fields Marine Protected Area
Sea of the Hebrides
The Barra Fan and Hebrides Terrace Seamount Marine Protected Area
Firth of Forth Banks Marine Protected Area
Mull
Loch Sunart to the Sound of Jura Marine Protected Area
Dundee
Loch Lomond and The Trossachs National
Filter the map
Create a Map
Edit a Map
30 km
10 mi
Leaflet

Tomintoul Museum

Tomintoul History

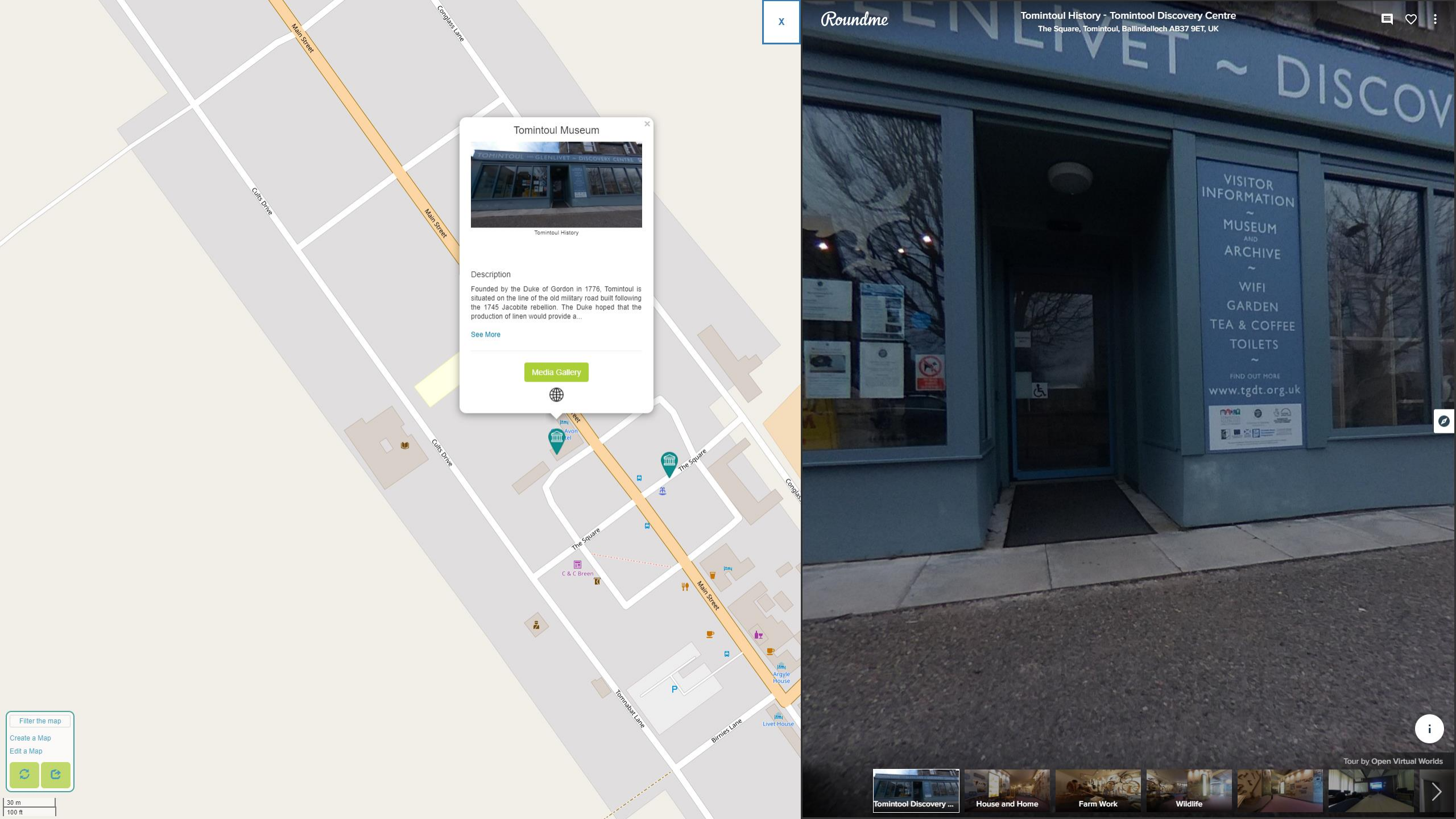
Description

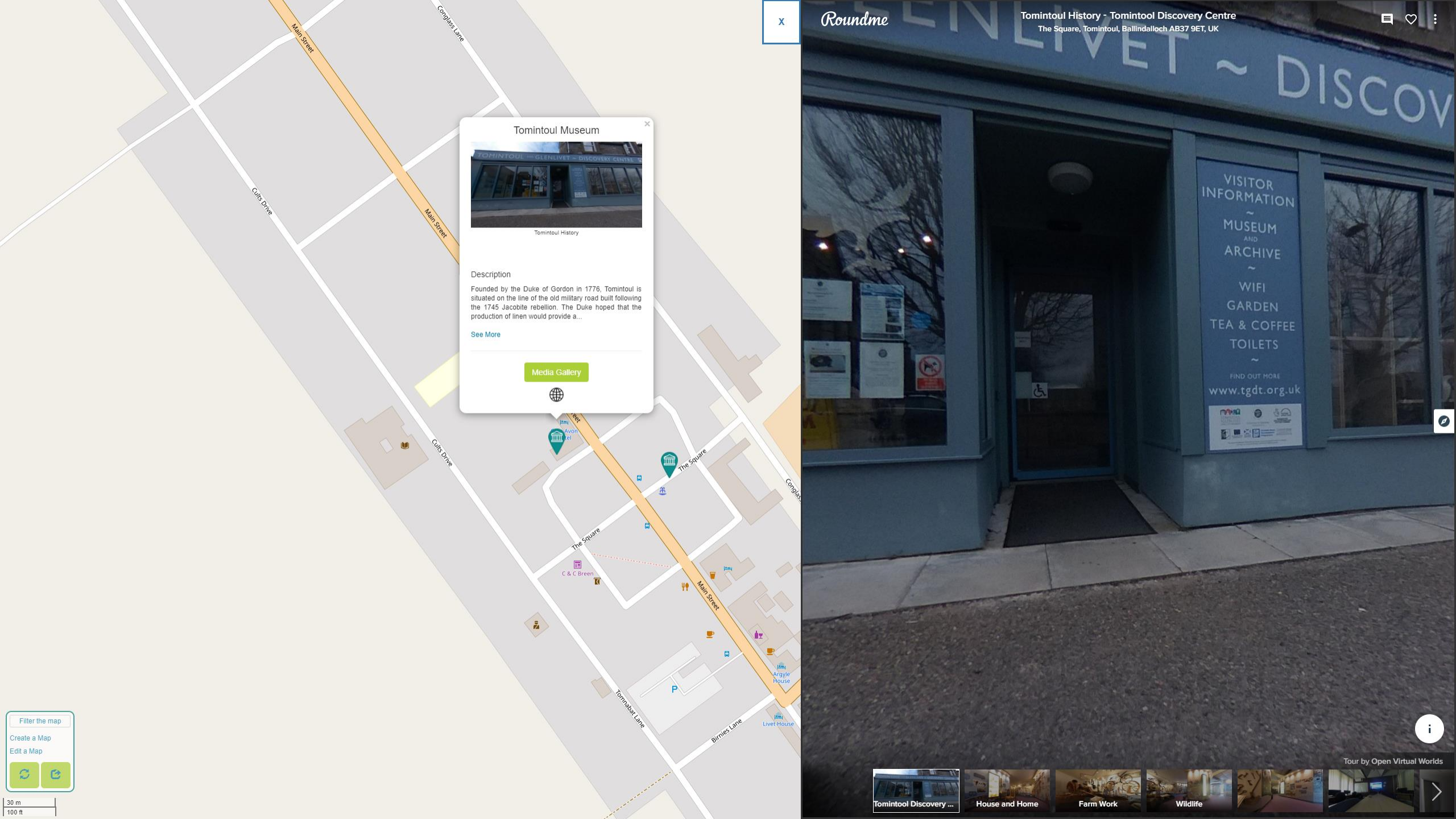
Founded by the Duke of Gordon in 1776, Tomintoul is situated on the line of the old military road built following the 1745 Jacobite rebellion. The Duke hoped that the production of linen would provide a...

See More

Media Gallery

Main Street
Culls Drive
Conglass Lane
The Square
A939
Tomnabat Lane
Birnies Lane
Lecht Drive
C & C Breen
Argyle House
Livet House
Filter the map
Create a Map
Edit a Map
30 m
100 ft
Leaflet


Tomintoul Museum
Tomintoul History
Description
Founded by the Duke of Gordon in 1776, Tomintoul is situated on the line of the old military road built following the 1745 Jacobite rebellion. The Duke hoped that the production of linen would provide a...
See More
Media Gallery
Main Street
Conglass Lane
Cults Drive
The Square
C & C Breen
Argyle House
Livet House
Tomnabat Lane
Birnies Lane
Filter the map
Create a Map
Edit a Map
30 m
100 ft
Roundme
Tomintoul History - Tomintoul Discovery Centre
The Square, Tomintoul, Ballindalloch AB37 9ET, UK
VISITOR INFORMATION
MUSEUM AND ARCHIVE
WIFI
GARDEN
TEA & COFFEE
TOILETS
FIND OUT MORE
www.tgdt.org.uk
Tour by Open Virtual Worlds
Tomintool Discovery ...
House and Home
Farm Work
Wildlife


Tomintoul Museum
Tomintoul History
Description
Founded by the Duke of Gordon in 1776, Tomintoul is situated on the line of the old military road built following the 1745 Jacobite rebellion. The Duke hoped that the production of linen would provide a...
See More
Media Gallery
Main Street
Conglass Lane
Cults Drive
The Square
C & C Breen
Argyle House
Livet House
Tomnabat Lane
Birnies Lane
Filter the map
Create a Map
Edit a Map
30 m
100 ft
Roundme
Tomintoul History - Tomintoul Discovery Centre
The Square, Tomintoul, Ballindalloch AB37 9ET, UK
VISITOR INFORMATION
MUSEUM AND ARCHIVE
WIFI
GARDEN
TEA & COFFEE
TOILETS
FIND OUT MORE
www.tgdt.org.uk
Tour by Open Virtual Worlds
Tomintool Discovery ...
House and Home
Farm Work
Wildlife

University of St Andrews

OpenVirtualWorlds is an interdisciplinary group of researchers with expertise in computing, digital design, history and museology, and with 10 years experience in 3D and immersive technologies, focusing on system engineering and the relationship between quality of service and experience. Scientific results are addressing the use of Virtual Worlds, Cross and Parallel reality systems in mobile and immersive contexts. We have spun out SMART History, to create a Virtual Time binocular platform.

Filter by Type

Filter by Theme

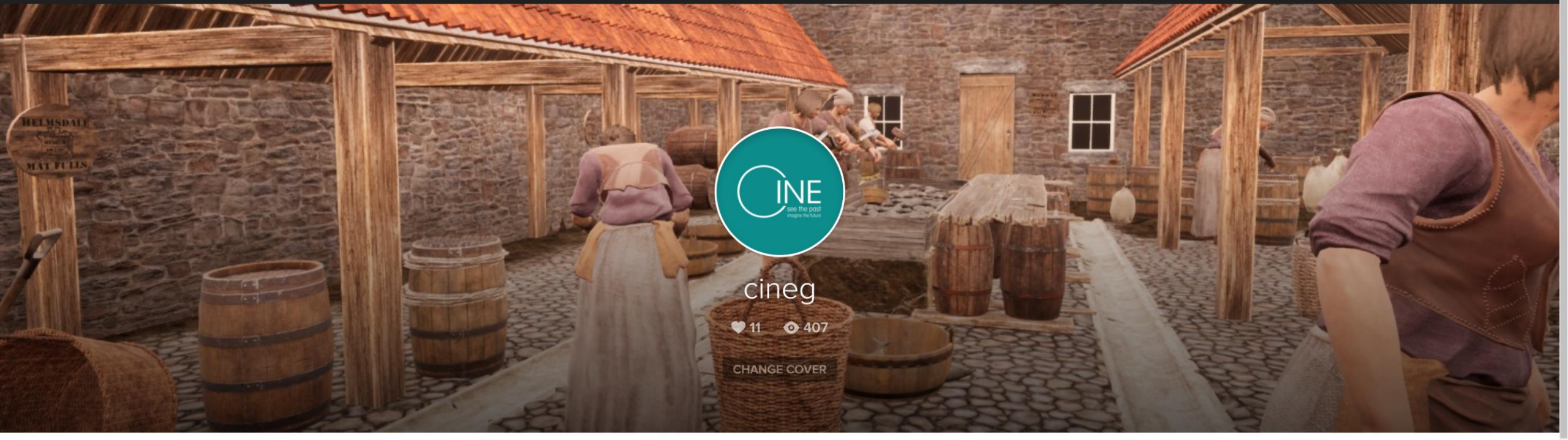
- All
- Partner edit
- Meeting edit
- Highlands and Islands edit
- Project Management edit
- Communication edit
- Power of Culture, the DNA of a region edit
- Visualisation and testing of cultural potentials edit
- Empowerment and cultural job-creation edit
- Inspiration edit
- Scottish Highlands edit
- Highlanders World War 2 edit
- Seaforth Highlanders edit
- Queen's Own Cameron Highlanders edit
- Gordon Highlanders edit
- Lovat Scouts edit
- Liverpool Scottish edit
- Argyll and Sutherland edit
- Actions edit
- Actions with Content edit
- Highlanders Museum edit
- North Isles Landscape Partnership edit

Create a layer

Create a Map

Edit a Map

Leaflet



cineg

11 407

CHANGE COVER

Helmsdale Curing Yard

Helmsdale, UK

Longhouse Farming Settlement

Highland Council, UK

Iron Age Roundhouse

Highland Council, UK

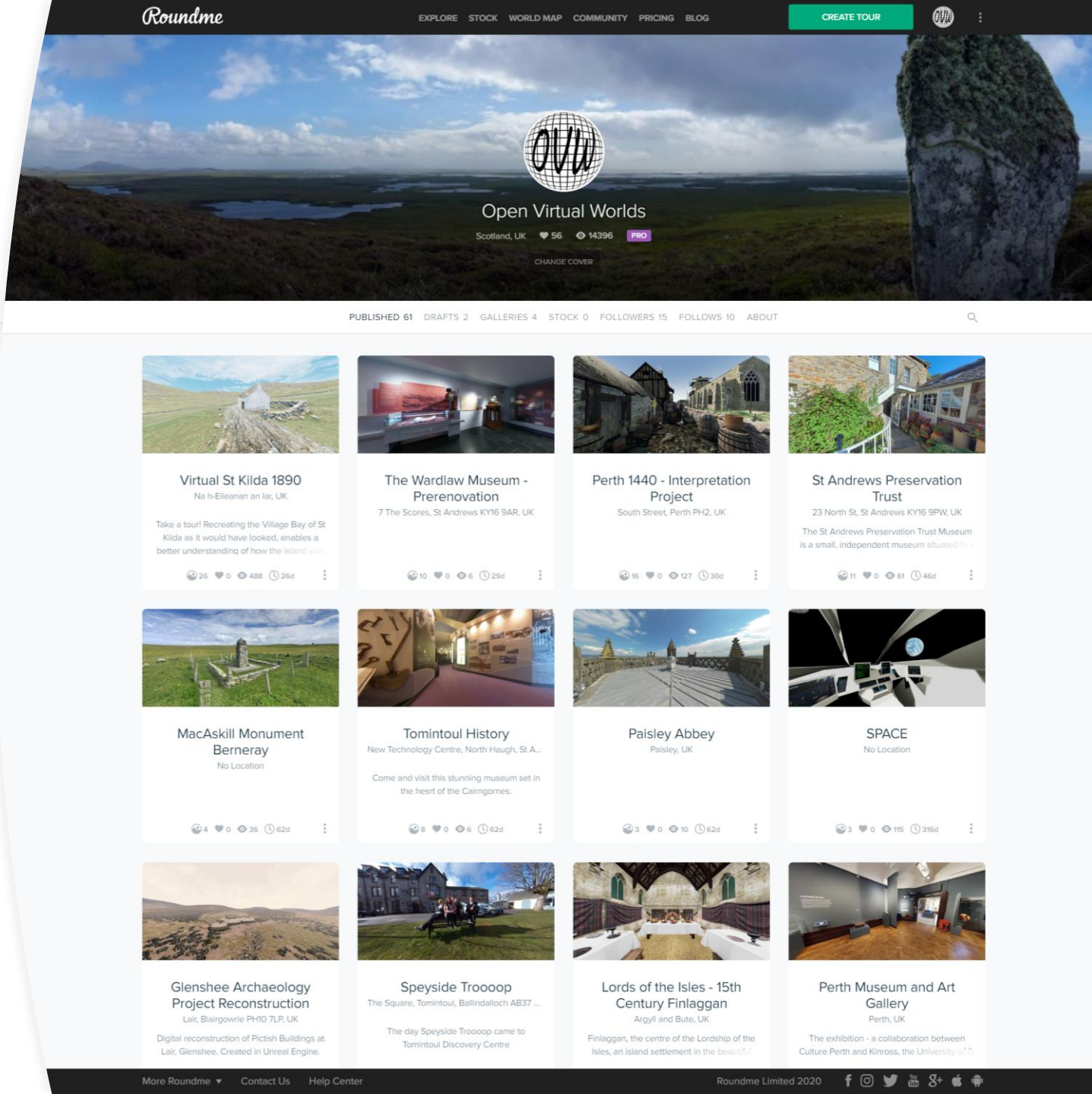
Skriðuklaustur Medieval Augustinian Settlement

Eastern Region, Iceland

- https://en.wikipedia.org/wiki/Unst_Bus_Shelter
- http://www.unstbusshelter.shetland.co.uk/p/home.html
- http://news.bbc.co.uk/1/hi/scotland/north_east/8239248.stm

Introduction and overview

- Motivation and history
- What is a photosphere
- Anatomy of a tour
- How to make a tour
- **How to share a tour**
- What about video?
- Sources and resources



Resources

- Guidance for participation in digital doors open days
- Virtual Tour Map resource

Equipment and software

- Mobile phone, piece of string or stick
- 360 camera, tripod or monopod
- Camera, clicker, tripod, panoramic head
- Google street view
- Hugin
- Roundme
- CUPIDO

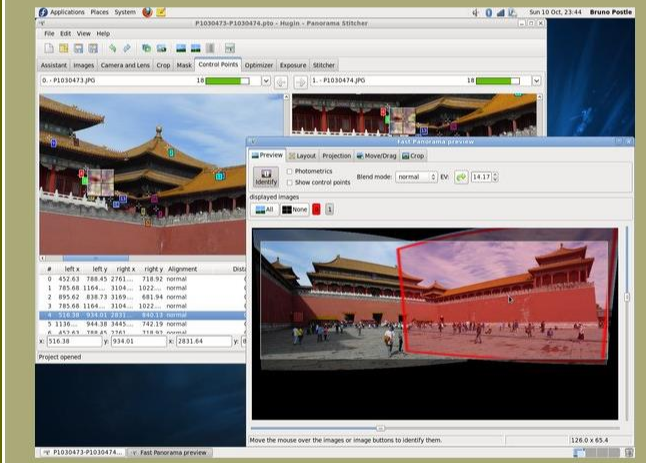
Hugin - Panorama photo stitcher

Hugin 2019.2.0 released! 2019-12-30

Release notes...

Goal: an easy to use cross-platform panoramic imaging toolchain based on Panorama Tools.

With Hugin you can assemble a mosaic of photographs into a complete immersive panorama, stitch any series of overlapping pictures and much more.



http://hugin.sourceforge.net/

Status

Hugin has now reached a *stable* state: the software is recommended for general use.

Download locations for stable binaries releases are listed by platform here.

Hugin is in constant development. From time to time somebody is kind enough to publish binaries of development versions.

Hugin has been localised with Brazilian Portuguese, Bulgarian, Catalan, Chinese Simplified, Chinese Traditional, Czech, Dutch, Danish, English, French, German, Hungarian, Italian, Japanese, Korean, Polish, Russian, Slovakian, Slovenian, Spanish, Swedish and Ukranian translations.

News

Hugin-2019.2.0 released 2019-12-30
Hugin is more than just a panorama stitcher

Hugin-2019.0.0 released 2019-04-06
Hugin is more than just a panorama stitcher

Hugin-2018.0.0 released 2018-02-03