

ALBANYÀ DARK SKY PARK

Application to the International Dark Sky Association

24/03/2017

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1-AUTHORSHIP & ACKNOWLEDGEMENTS

This application has been elaborated by Pere Guerra (Astronomy manager at Bassegoda Park), Juan Carlos Casado (StarryEarth) and Pere Horts (Cel Fosc and the Astronomical Society of Figueres) upon request by the authorities of the town of Albanyà (Mr. Joan Fàbregas, mayor of Albanyà and Mr. Joan Casellas deputy mayor).

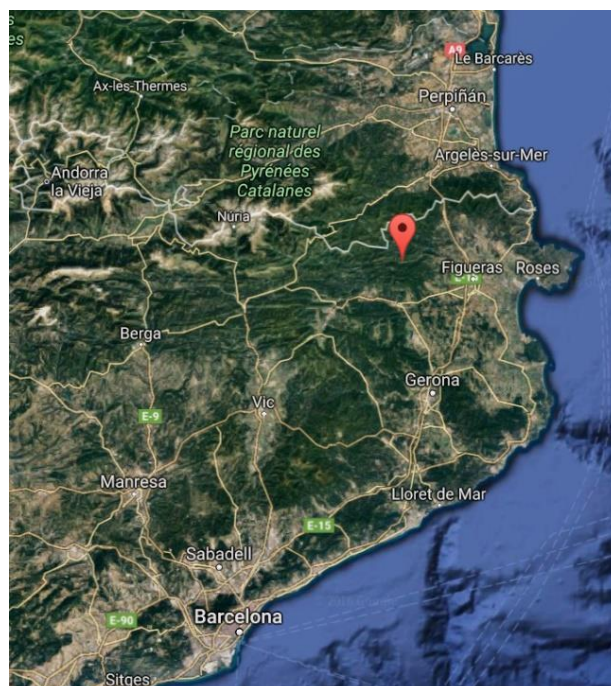
We hereby extend our gratitude to the institutions STARS4ALL, the Spanish Federation of Astronomical Associations, the Light Pollution Lab at Santiago de Compostela University, Astogirona, Astrobanyoles, Astrumlloret and Astrogarrotxa for their endorsements and support through the process of submitting the candidacy. We would also like to acknowledge Jaume Màs and Jose Jimenez for kindly sharing some of their photos for this application.

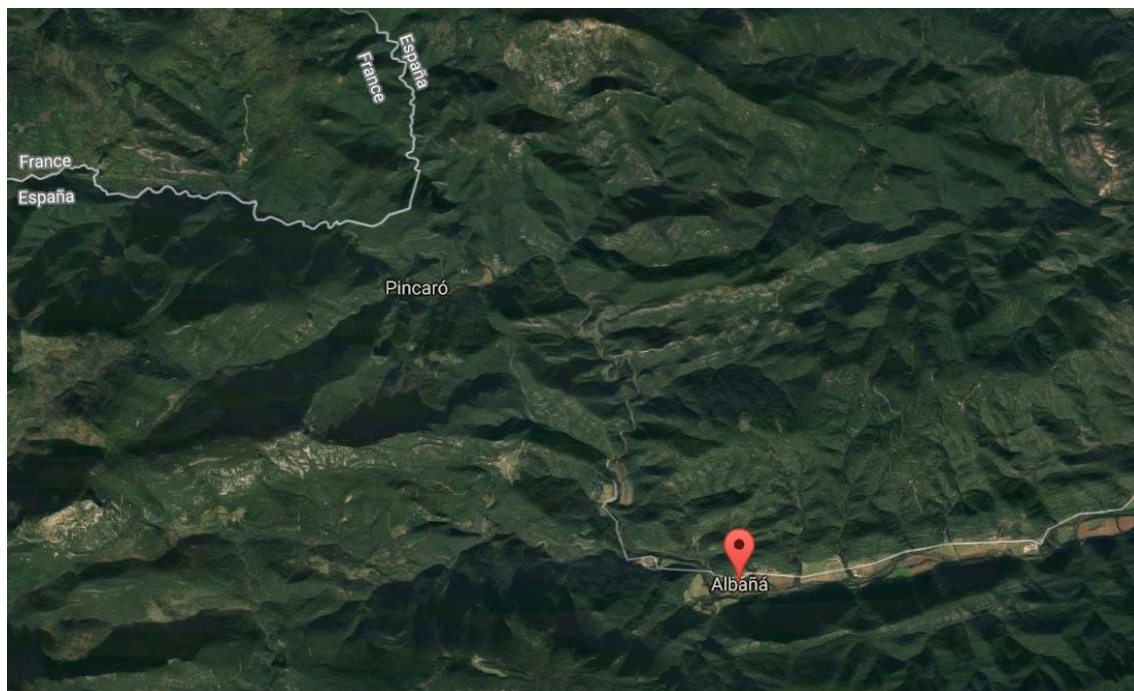
2- ABOUT THE MUNICIPALITY OF ALBANYÀ

2.1 LOCATION

Albanyà is a large municipality located in the nord-western edge of the empordanese pyrenes in Girona (Catalonia), boundary with the Garrotxa and Vallespir (southern France) counties. It limits with the empordanese municipalities of Sant Llorenç de la Muga, Cabanelles and Maçanet de Cabrenys, the vallespirenque municipalities of Manera, Serrallonga and Costoja and the garrotxins municipalities of Sales de Llierca, Montagut and Oix.

Albanyà municipality unique location is next to the natural park Parc d'Espais d'Interès Natural de l'Alta Garrotxa and only at 25 km from Figueres, the city of the famous painter Salvador Dalí.





2.2 DESCRIPTION OF THE MUNICIPALITY



Figure 1: A view of the town of Albanyà

The current municipality of Albanyà has a surface of 94'39km² and is the biggest of the Alt Empordà county and encloses a great part of the source of La Muga river. The municipality encompasses the town of Albanyà (located at 239 meters of altitude above the sea level), the Carbonils aggregate, the old Horts parroque, the Fau sanctuary an the old rural parroques that integrated the municipality of Bassegoda (Bassegoda, Lliurona, Sous, Ribelles, Pincaró, Corsavell, Sant Joan de Bossols and the sanctuary of Mare de Déu del Mont).



Figure 2: Albanyà main square and church

Therefore, aside from the town, the municipality is formed by an aggregate of disseminated neighbors, several hermitages and farm houses (the majority of which are abandoned or inhabited today).

The municipality of Albanyà also has ruins of old castles like the castle of Bac Grillera, the castle of Arget (VIII century), the castle of Jaume I of Bassegoda (XII century) and the Casal del Serrat (VIII century). The municipality also has roads as old as the Neolithic era, and some Neolithic caves.

Its unique location, next to the river Muga, allows visitors to be in permanent contact with the nature and to practice many different activities such as stargazing, adventure sports, fishing, hunting, hiking, horse riding, four-wheel drive, etc. This tremendous landscape full of peace, that represents one of the most virgin areas of the Empordà is well connected with the rest of the province.



Figure 3: A view of the town of Albanyà

The population of Albanyà has always been scarce, with a peak of 532 inhabitants in 1860. The old municipality of Bassegoda (now part of the municipality of Albanyà) peaked at 657 in 1860. Nowadays, the municipality of Albanyà has 150 to 160 inhabitants. This data reflects the depopulation that the municipality suffers, heightened specially after the second half of the 20th century after the disappearance of forest, agricultural and cattle activities.



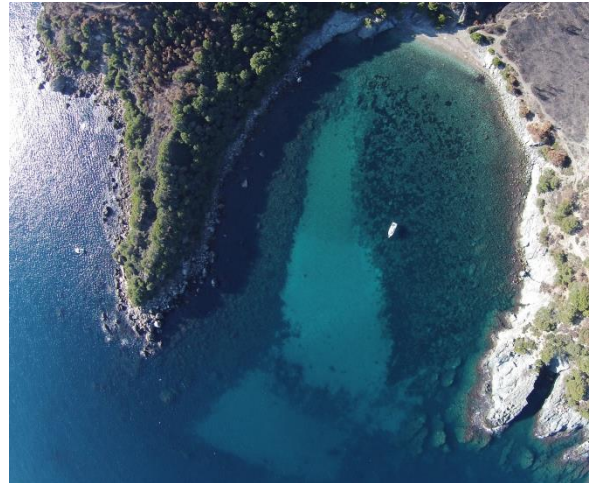
Figure 4: Astronomy activities being performed downtown Albanyà

2.3 SURROUNDINGS: EMPORDÀ AND COSTA BRAVA

The proposed Dark Sky Park of Albanyà is located at Garrotxa and the Alt Empordà county, famous for being the home of renowned painter Salvador Dalí. The park is just over half an hour drive from Museo Dalí.

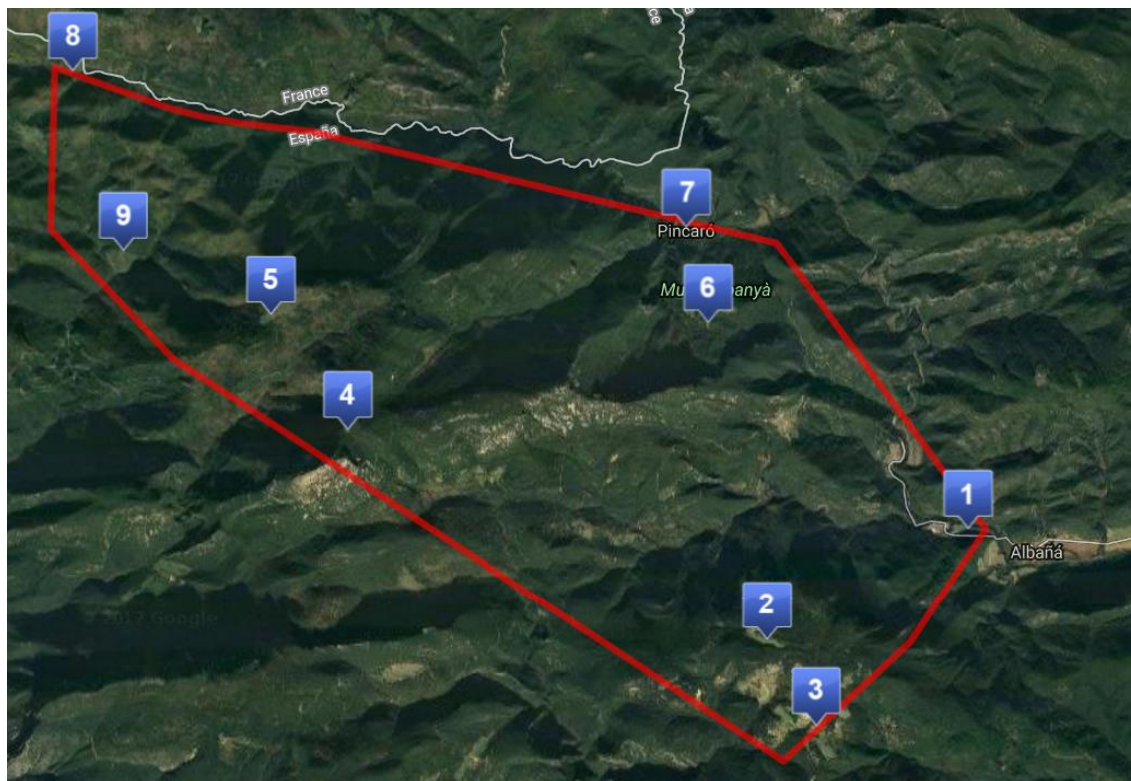
L'Empordà is a place full of millennial history, being home to the first Greek and Roman settlements of the Iberian Peninsula and its highly priced for its Mediterranean cuisine.

Importantly, renowned Costa Brava beaches are within an hour drive of Albanyà during summer. Many amateur astronomers that visit us benefit from the good weather of our country by choosing to spend the day at the beach while enjoying dark skies at night.



3-ALBANYÀ DARK SKY PARK

The proposed area for the Albanyà Dark sky park is entirely located within the municipality of Albanyà and encompasses Bassegoda Park, (which is the gateway in which most public astronomy sessions will be held), El Casalot (Lliurona), El Coll de la Creu (Lliurona), El Pla de la Bateria (Bassegoda) and el Pla de la Teularia (Pincaró).



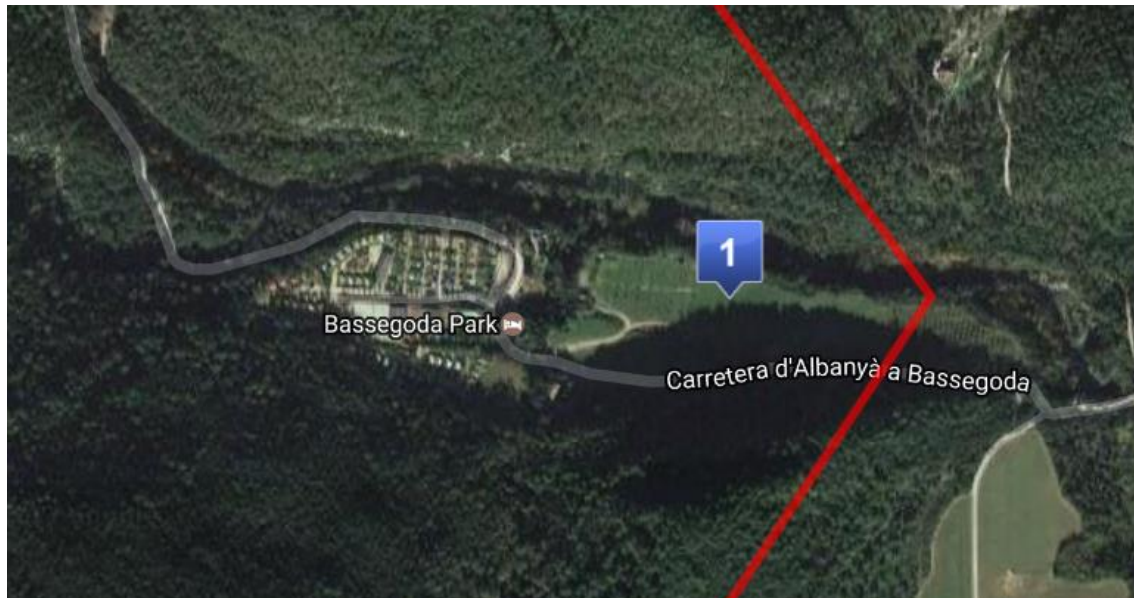
Source: https://www.scribblemaps.com/maps/view/Albanyà_Dark_Sky_Park/mSk4yklfV4

Number	Name	GPS Coordinates	Altitude
1	El Camp de l'illa (Bassegoda Park, Albanyà)	42°18'24.57"N 2°42'38.59"E	247m 810ft
2	El Casalot (Lliurona)	42°17'47.75"N 2°41'10.76"E	804m 2628ft
3	Coll de la Creu (Lliurona)	42°17'18.61"N 2°41'33.38"E	752m 2467ft
4	Pla de la Bateria (Bassegoda)	42°18'57.65"N 2°38'01.97"E	1191m 3907ft
5	Coll de Principi (Bassegoda)	42°19'35.98"N 2°37'26.37"E	1055m 3461ft
6	Pla de la Teularia (Pincaró)	42°19'32.91"N 2°40'45.15"E	622m 2041ft
7	Pincaro's Hermitage	42°20'04.88"N	420m

		2°40'35.12"E	1378ft
8	Hostal de la Muga	42° 21' 00.27"N	721m 2365ft
9	Mas Sobirà	42°19'56.71N 2°36'20.65" E	727m 2404ft

3.1 BASSEGODA PARK

Easily accessible by any car and only 20 minutes away from the highway, Bassegoda Park campsite is the official gateway to the Albanyà Dark Sky Park and where the majority of public outreach astronomy events will be held.



3.1.1 Camp de l'Illa (Albanyà)

El Camp de l'Illa is a publicly free accessible field owned by Bassegoda Park located very close to the campsite. Its location and ease of accessibility makes the field ideal for hosting astronomy events.

Located at 247m (810ft) of altitude it is the recommended location for deep sky stargazing with kids as the night temperatures are mild compared with higher altitudes and the valley that surrounds El Camp de l'Illa shields most of the observers from wind. Camp de l'Illa is also closest from the local towns should an emergency occur.

Bassegoda Park management team have been carefully cultivating astrotourism events in this field. Year by year the campsite gets many recurrent customers interested in Astronomy and the attendance and professionalism of astronomy events has been on the rise and improving on every event. The latest public outreach event of October 2016 was attended by up to 400 people. This has compelled the Bassegoda Park Management team to step up investment in astronomy to build a state-of the art observatory.



Figure 5: Photo of a science outreach event held in Camp del Illa in August 2016.

In the beginning of public outreach sessions organized at Camp de l'Illa we show live measurements of light pollution to the audience using a light pollution meter. We also use a green laser pointer to show to our visitors the light emitted by nearby cities once their pupils become dark adapted once the moon has set.

This helps us raise awareness about the need to contain light pollution and about the importance of the night sky for public health and to protect the environment.

We also help our visitors locate the most prominent constellations and stars in the sky. Ursa Major and Polaris and depending on the year, other constellations like Hercules, Orion or Cassiopeia or the summer triangle asterism.

We then move to other topics such as the Moon, whichever planets are available, double stars and finally deep space objects. The topics discussed vary widely according to the time of the year and the type of audience. We generally use dobsonian telescopes for that purpose as kids find them easier to reach.



Figure 6: A group of people stargazing the evening sky at Camp de l'illa, photo by Jose Jimenez.

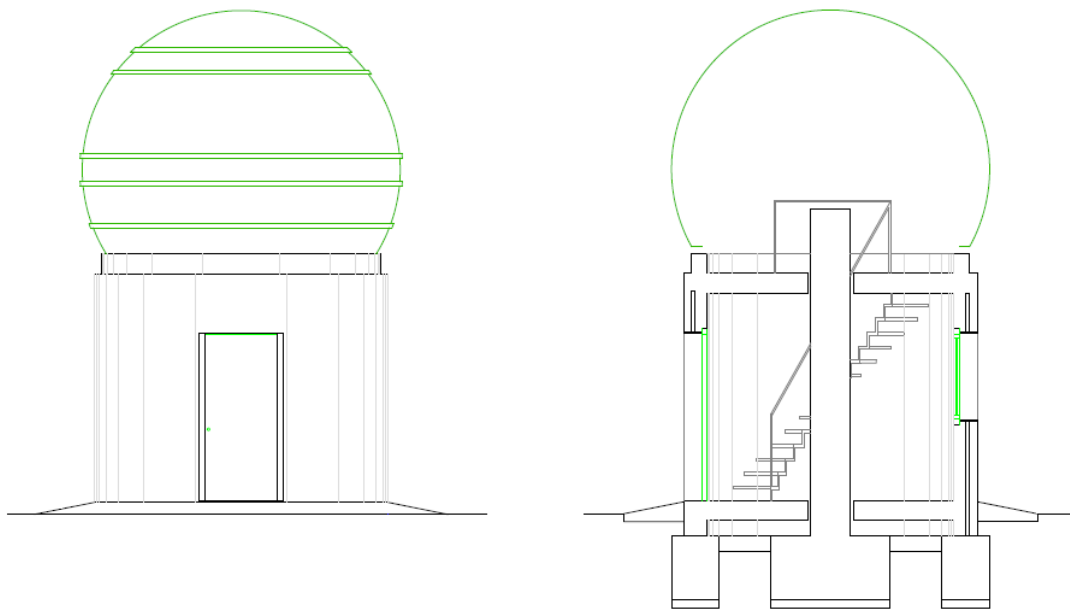


Figure 7: A group photo of the latest event held at El Camp de l'Illa on October 28th 2016.

El camp de l'Illa will host the future Bassegoda Park observatory, scheduled to be inaugurated on July 1st 2017.

3.1.2 The Bassegoda Park Observatory

The Bassegoda Park observatory will be completely automatized and will have state of the art astronomy equipment. It will host the biggest telescope in the province of Girona. And will be suited for both scientific research and astronomy public outreach sessions for the non-initiated and the amateurs.



The main instrument will be a 16" Meade ACF F8 Optical Tube Assembly (OTA) mounted on a 10Micron GM3000 HPS mount. The 16" OTA will be interferometry tested to ensure optimal performance of the OTA for scientific work.

The secondary instrument will be a ED80mm Triplet apochromatic OTA. This multi-purpose instrument will serve as guide scope, wide field imaging and viewing telescope and solar telescope when equipped with an energy deflection system and a quark H-alpha Daystar Quark Chromosphere (0.3A-0.5A) for safe observations of the Sun.

The telescope camera will be a Moravian G4-9000 with KAF-9000 chip mounted with a 7 position 50mm square filter wheel. The secondary camera will be the Atik Infinity video camera, ideally suited for video astronomy public outreach sessions with a projector.

The main instrument will be mounted inside a 4-meter dome for public visual observing sessions. The observatory will also have an Atik Infinity camera and a projector for public observing sessions with real-time video astronomy.

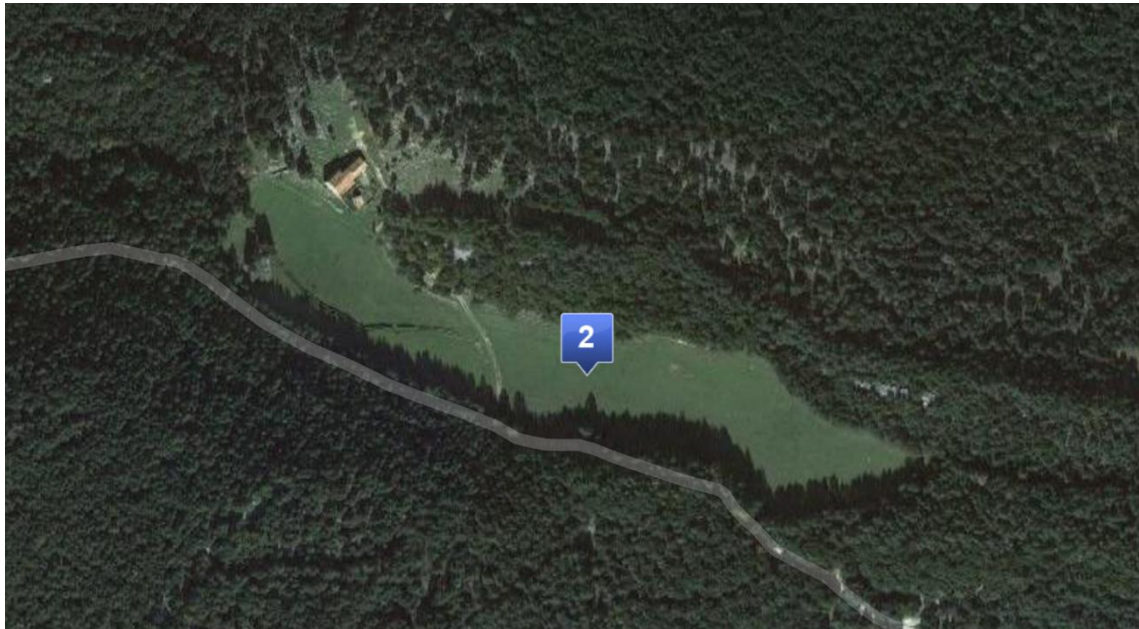
3.2 EL CASALOT (LLIURONA)

Located in Lliurona, at 804m (2628ft) deep within the proposed Albanyà Dark Sky Park. El Casalot is easily accessible by almost any car as the road is in good condition and most of it has pavement.

The ground at El Casalot is quite flat and the field is very adequate for both deep sky and planetary observing.

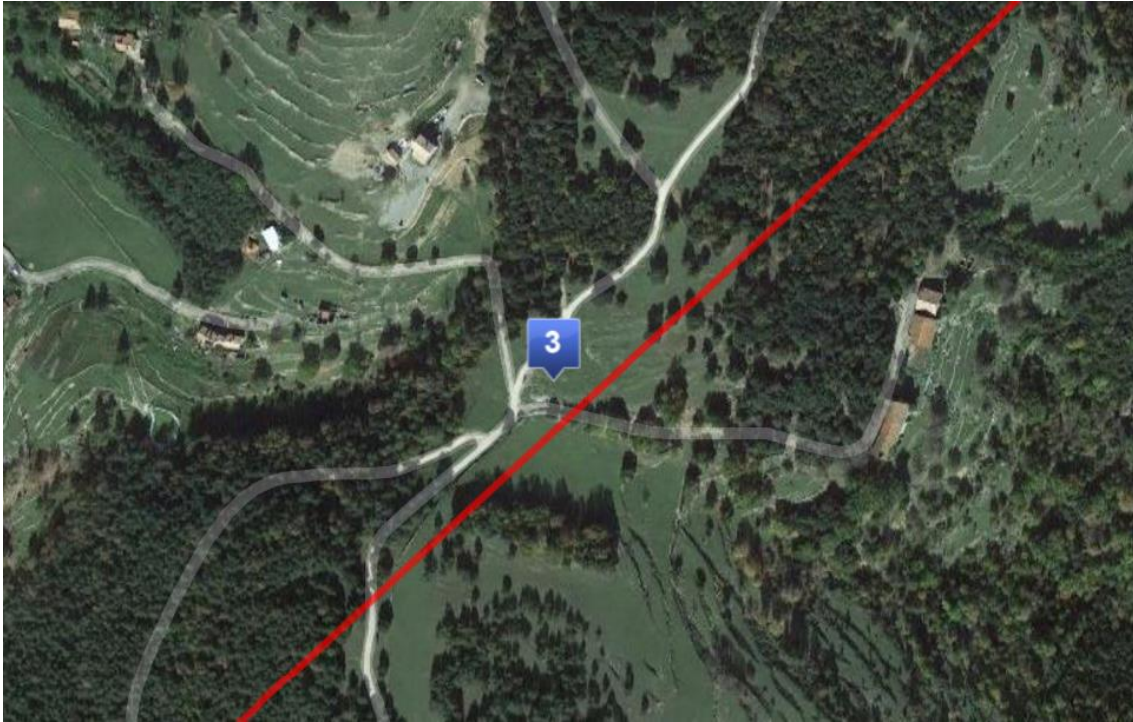
Located deep within the proposed Albanyà Dark Sky Park, El Casalot is the recommended place for the serious adult astronomy amateur carrying heavy equipment in a normal car in a windless weather.

The field is frequented by wild animals such as dears, it is important to stress that wild animals can be dangerous if disturbed, especially during the mating season.



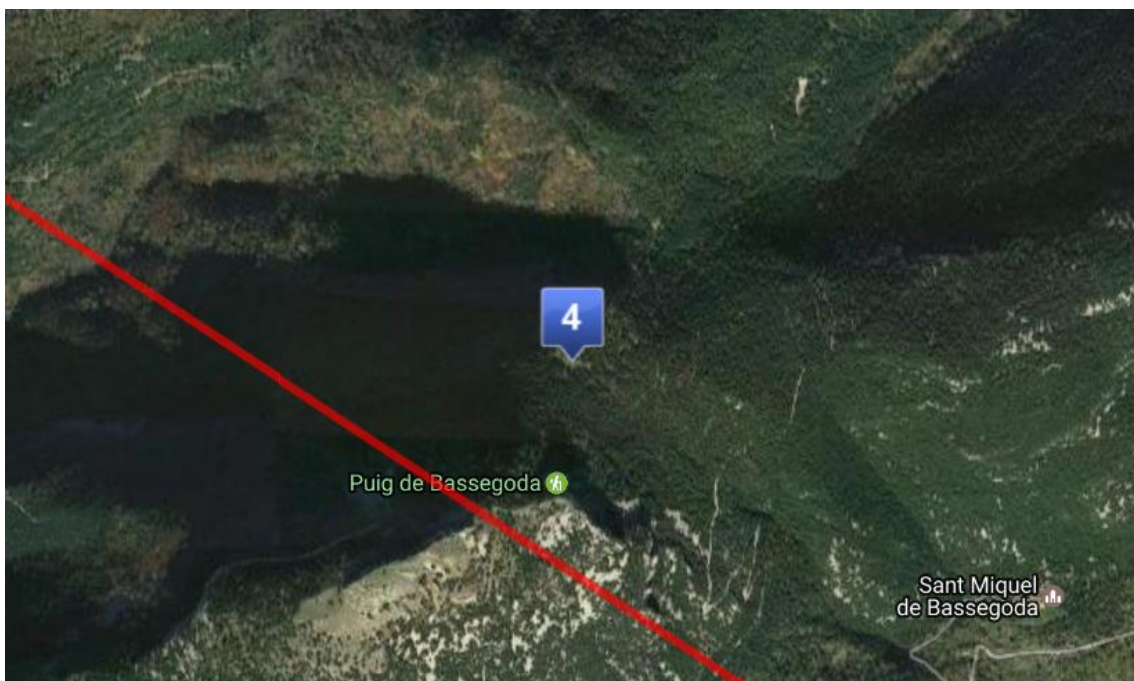
3.3 EL COLL DE LA CREU (LLIURONA)

Located at 752m (2467ft), El Coll de La Creu is easily accessible by almost any car. The field is still adequate to host a small number of persons that want a quiet place to spend the night stargazing.



3.4 EL PLA DE LA BATERIA (BASSEGODA)

High at 1191m (3907ft) rises El Pla de La Bateria, located next to the summit of Bassegoda peak, the highest mountain around. This field is only accessible by off road cars but offers impressive views of the pyrenes. This location is recommended for the astro photographer and the planetary observer.



Pla de la batería can be a really cold place during winter, as seen by this frozen leaf taken next to the summit at midnight.

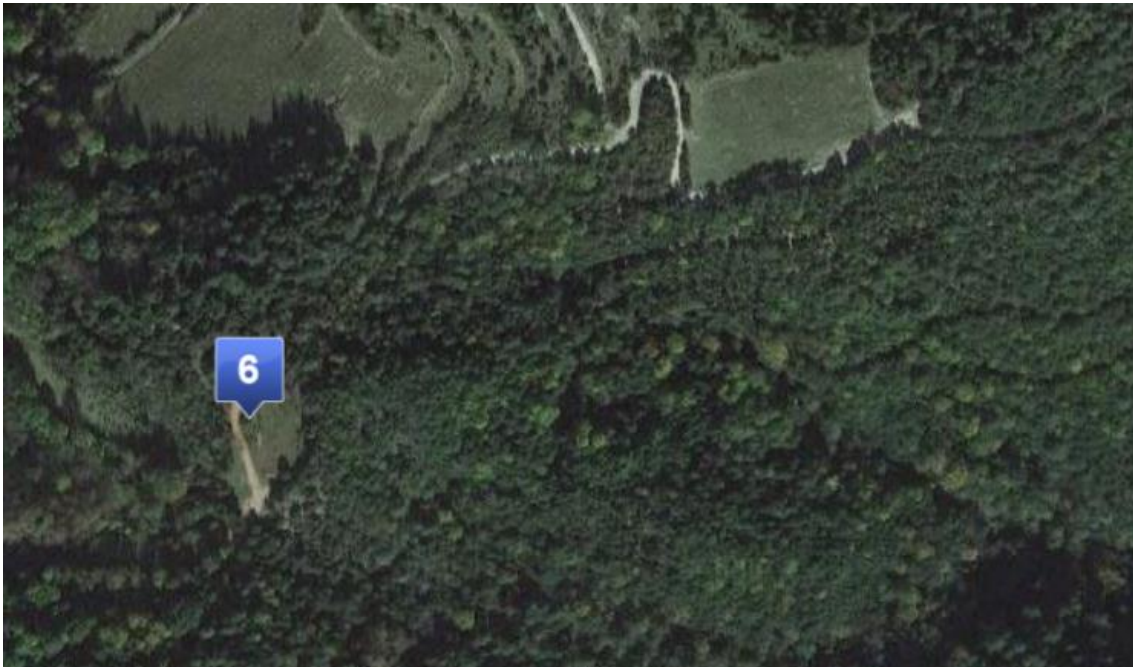


3.5 COLL DE PRINCIPI (BASSEGODA)

Located 1055m (3461ft) high, Coll de Principi is one of the darkest places of the proposed Albanyà Dark Sky Park. Coll de Principi is only accessible by small off road cars and is the most remote place of the proposed Dark Sky Park.



3.6 PLA DE LA TEULARIA (PINCARÒ)



Located at 622m (2041ft) this field is a very dark place in which to observe and it is only accessible by small off road cars.

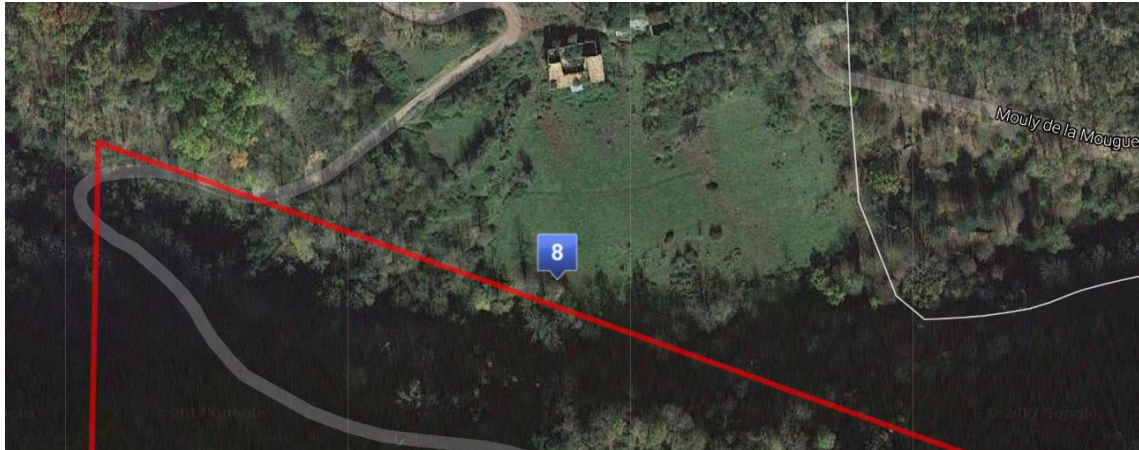
3.7 PINCARO'S HERMITAGE



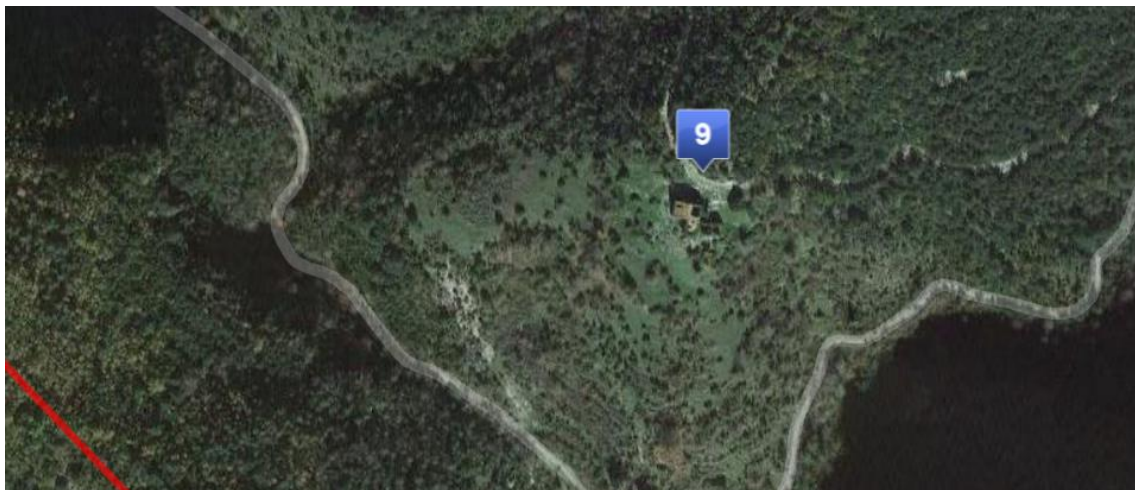
Located at 420m, (1378ft) The area around this old hermitage is a good place to observe the dark skies. It is only accessible by small off road cars.

3.8 HOSTAL DE LA MUGA

Located high at 721m (2365ft) and just within a few meters away from the French border, the field at Hostal de la Muga is adequate to observe. It is only accessible by small off road cars.



3.9 MAS SOBIRÀ



Located high at 733m (2404ft) this abandoned farm house has a field that is adequate to observe. It's only accessible by small off road cars.

3.10 OWNERSHIP

El Camp del l'Illa at Bassegoda Park is a privately owned property of public free access. Written authorization of Bassegoda Park is attached in this application.

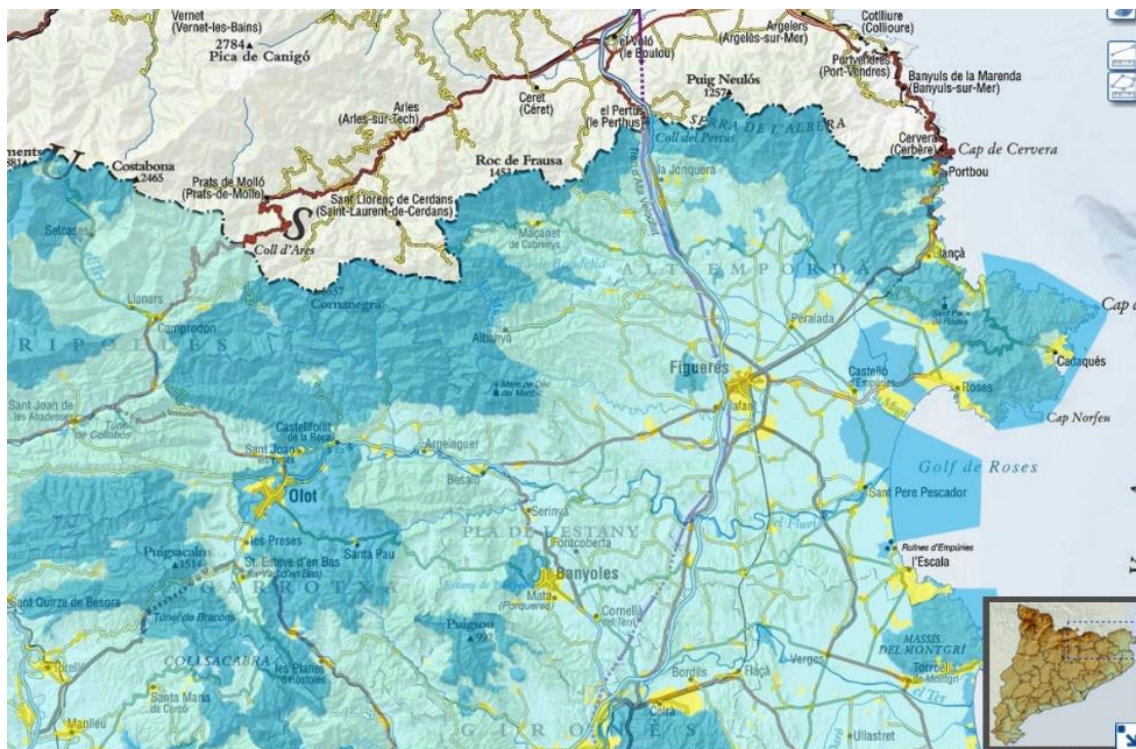
All other lands delimited by the proposed Albanyà International Dark Sky Park are part of the publicly accessible *Parc d'Espai d'Interès Natural*, a natural park. Many of those lands are public and some are privately owned, no restriction of public access can be made by land owners for the lands within the *Parc d'Espai d'Interès Natural* as per Albanyà municipality regulations.

3.11 ACCESSING ALBANYÀ INTERNATIONAL DARK SKY PARK

One key strength of amateur astronomy at proposed Albanyà Dark Sky Park is how easy it is to reach the park. It is located just within 20 minutes drive of the AP-7 highway, the GI-511 road is a well maintained road that can be driven by cars, trucks and caravans. From the moment you leave the highway there are signs indicating the direction of Bassegoda Park.

The observation field at Bassegoda Park is located just where the paved road ends and the rural road begins, making it possible for enthusiast astronomers to transport their large aperture telescopes on trailers and to easily access the observation field by car.

3.12 LIGHTING POLICY AT ALBANYÀ DARK SKY PARK



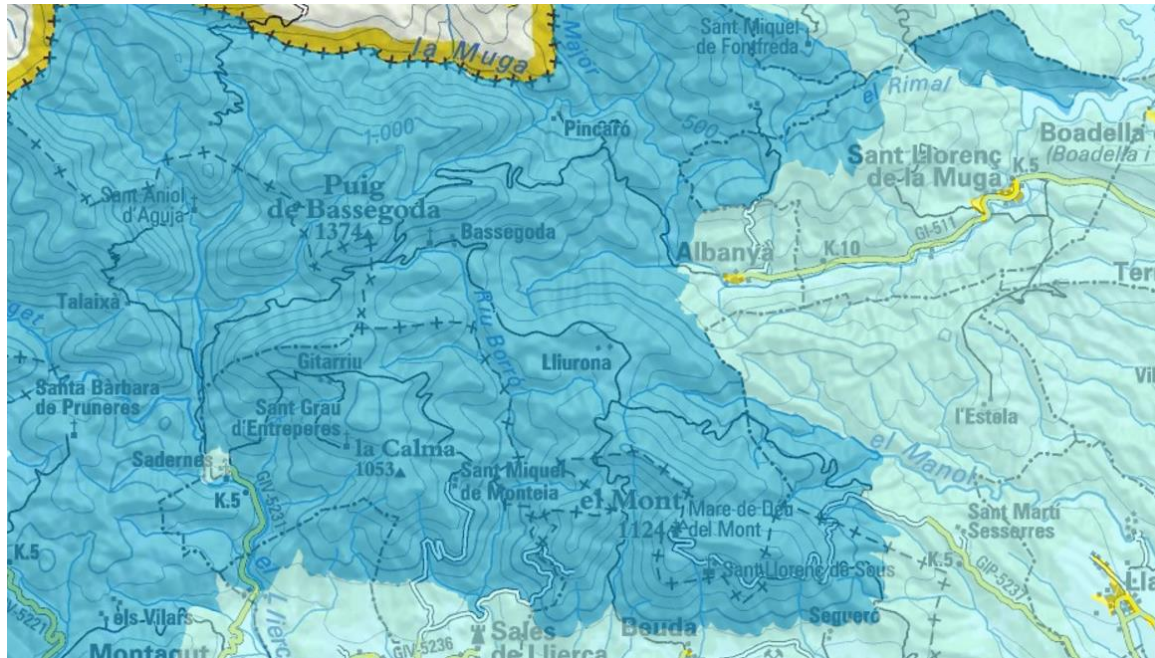
The Catalan law of light pollution (Law 6/2001) and its newest Decree 190/2015 (one of the most advanced in the EU) divides Catalonia in different zones, Zone E1 (dark blue, maximum protection), Zone E2 (light blue, high protection), Zone E3 (Moderate protection), Zone E4 (Low protection). **Compliance with these regulations is mandatory.**

References:

http://mediambient.gencat.cat/es/05_ambits_dactuacio/atmosfera/contaminacio_luminica/mapa-de-proteccio-contra-contaminacio-luminica/

<https://www.celfosc.org/biblio/legal/llei/dogc.htm>

<https://www.enginyersbcn.cat/media/upload//arxiu/noticies/Decret%20190%202015%20enllumenat%20proteccio%20medi%20nocturn.pdf>



The vast majority of the area covered by the proposed Albanyà Dark Sky park lies in Zone E1 (Maximum protection), and the only land in Zone E2 (High protection) within the park is owned by Bassegoda Park. The surrounding populations are also either in Zone E1 or in Zone E2 as seen in the map.

This guarantees that whatever light being setup in the park must comply with the following requirements:

1- Lighting types:

Lights must have less than 2% (5% in case of Zone 2) radiance below 440nm and will have a wavelength comprised between 280 and 780nm. In case of LED lighting, less than 1% (15% in case of Zone 2) should be below 500nm and the main wavelength should be above 585nm.

2- Maximum percentage of bright flow towards superior hemisphere setup per light:

The maximum bright flows towards superior hemisphere setup (FHS_{inst}) [percentage of light emitted above the horizon] per light, as a function of schedules and protection zones are as follows:

Protection Zone	FHS _{inst} (%)	
	evening schedule	night schedule
Zone E1	1 (full cut off)	1 (full cut off)
Zone E2	5	1 (full cut off)

Note: in Zone E1 all lights must be fully shielded and cut off to comply with the law.

3- Light trespass

Light trespass can be defined as the lighting that intrudes or as lighting intensity emitted by a light.

a) Maximum levels of light trespass

Protection Zone	Intrusion lighting (lux)	
	Evening schedule	Night schedule
E1	2	1
E2	5	2

In compliance Article 9 of the Decree 190/2015 lighting schedules are as follows:

- a) Night Schedule is defined as the time between 22h UTC until the sun rises for zones E1 and E2.
- b) Evening Schedule is defined as the time between the sun sets and the beginning of the night Schedule.

b) Maximum luminous intensity:

Protection Zone	Maximum luminous intensity (cd)
E1	2.500
E2	7.500

4- Maximum luminance levels:

Protection Zone	Maximum luminous intensity (cd/m ²)
E1	50
E2	400

Note: According to Article 14 of Regulation 190/2015 all lighting must be reduced in intensity during the night schedules for public lighting setups above 1KW.

4- LIGHTING

4.1- TOWN OF ALBANYÀ LIGHTING



The town of Albanyà is undergoing a process to optimize lighting to contain light pollution. As demonstrated by the latest lightpollutionmap.info readings, the authorities of Albanyà have successfully minimized light pollution already by halving the existing lighting inventory and by replacing some of the lights with a more efficient LED lighting system (A+ BC3000K). In the near future other steps are planned such as replacing the 30 public lights that are closest to the proposed dark sky park with colder (2200K LED lights). All lights have dark sky friendly fixtures with adequate shielding following IDA recommendations.

4.2- BASSEGODA PARK LIGHTING

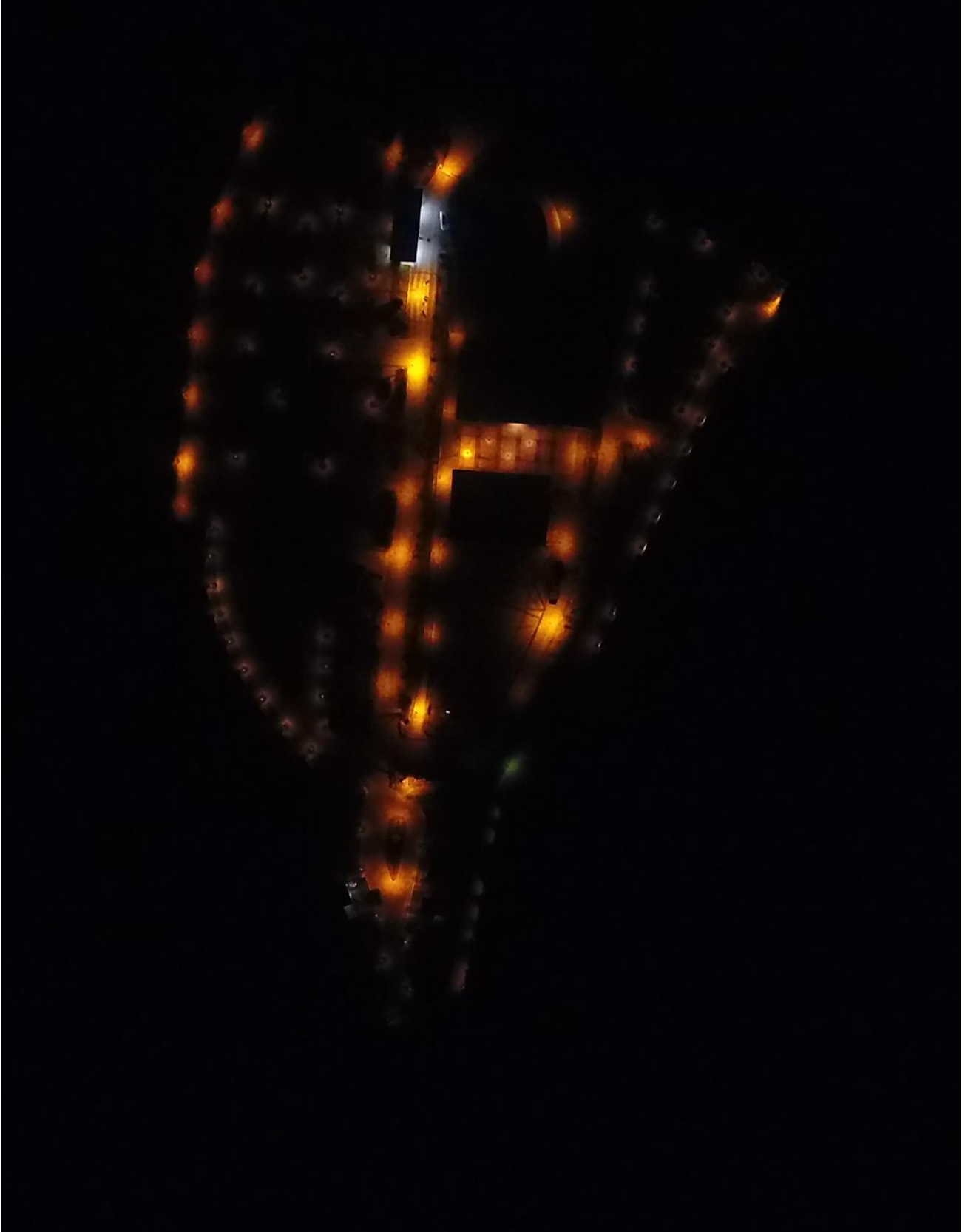


Figure 8 : Bassegoda Park aerial picture with all lights turned on (only 100 hours/year aprox.).



Figure 9: Bassegoda Park aerial picture with 50-60% of the lights on (from spring to late fall).

4.2.1 About the intelligent light management system

In 2010, Bassegoda Park spent 100.000€ to implement a custom solution to save energy and minimize light pollution, complying and going beyond the current requirements of Decree 190/2015.

This solution uses an advanced remotely controlled system to optimize lighting. As a result of this implementation, all street lights are turned on and off based on certain criteria.

A central server dims or turns off lighting based on real time occupation, season of the year and hour of the day. For instance, the system will reduce the light count of the main streets after 11pm when the campsite is open and will reduce the power of the high pressure sodium vapor lights from 75W to 32,5W after midnight to dim lighting.

Moreover, all electricity in the bungalows and caravan areas will be cut off by the light management system when there is no one booking those plots.



Figure 10: The intelligent lighting software separates Bassegoda Park in 5 lighting areas as seen above.



Figure 11: An example pic of how lighting can be controlled at the individual level in zone 1.



Figure 12: An example pic of how lighting can be controlled at the individual level in camp de l'illa zone.



Figure 13: An example pic on how lights are turned on/off depending on the season of the year covering from high season (summer) to the winter months when the campsite is closed.



Figure 14: How the scheduling to dim or turn off lighting is organized, according to the zones and lighting type.

4.2.2 Main lighting

The main lighting is comprised of **38 high pressure sodium vapor lights**. They are by a wide margin, the primary source of light pollution generated in the campsite as can be seen in figures 8 and 9. These lights are orange, fully shielded and oriented towards the floor at a 180° angle. The power of the lights is adjusted through the night by the intelligent light management system to make sure that no more lights are turned on than what's strictly necessary and that no light is brighter than what's adequate.





The main lighting is complemented by small partially shielded LED bollards (2200K) to illuminate the walkways that are in use in zones 1 through 5. There are 94 of these bollards located though the campsite. Due to its dim nature, color and partial shielding, almost no visible light can be seen from above. Moreover, these lights are also being constantly adjusted by the intelligent light management system and many of them are below trees.





Between the restaurant building and the games room there is an open square with 4 fully shielded 'Period' style fixtures with the bulb shielded in the opaque top like the ones shown (top left). There are also 4 shielded LED light fixtures.

In the roof of the covered terraces, in the 2 people rooms, there are 11 under canopy lighting fixtures.





In our covered terraces roof of the deluxe rooms there are 2 LED lights installed like the ones shown above.

4.2.3 Other lighting

There are 4 white LED wall mount fixtures like the ones shown below (left image) and a main LED light like the one seen in the right image. They are completely covered by the roof of the reception.





In the main terrace of the restaurant there are 14 unshielded LED lights like the ones shown in the picture installed.

Behind the restaurant building we have 4 fluorescents like the ones in the next photo all of them in the roof of the building:



In the sports field there are 2 unshielded wallpack like the ones shown in the next picture both of them partially covered with a roof:



In the barbecue areas there are 3 floodlights, they are turned on only when required.



In the main water deposit there is one unshielded wallpack light.



In one toilet building we have installed 1 wallpack light two LED fluorescents, all of them covered with a roof:



In the covered terraces of the 47 bungalows there are lights like the one shown in the picture:



As can be seen from the picture, the roof of the bungalow mitigates the impact of this kind of lighting.

Outside the maintenance warehouse there are two different kinds of wallpack lights:

Two lights of this type:



And three lights of this type:



Both previously mentioned lights are partially covered with roof. In the same building there are two fluorescent LED covered with a roof:



4.2.4 Summary Table

Distribution	Fitting & Bulb type	Wattage	Qty fitted	Shielded/C overed	Intelligent system management	Qty compliant	Notes
Street	High sodium vapor	75W 32.5W	38	38	YES	38	
Walkways	Bollards, 2200K LED	7W	94	94	YES	94	
Restaurant	'Period' Flexures	7W	4	4	YES	4	
Restaurant	Fixtures LED	7W	4	4	YES	4	
Reception	Mount fixtures LED	22W	4	0	YES	0	Make sure that the roof offers adequate shielding. Reception is closed after 10PM and lights turn off. TO BE RETROFITED ON MAY 10th 2017
Reception	Halogen	22W	1	0	YES	0	Make sure that the roof offers adequate shielding. TO BE RETROFITED ON MAY 10th 2017
Restaurant	Exposed bulb lights	10W	14	0	NO	0	Replace those lights as soon as possible.
Restaurant	Flouresce nt LED	18W	4	0	NO	0	Make sure that the roof offers adequate shielding.
Sports field	Wallpack	10W	2	0	YES	0	Shield or replace units.
Barbeque	Floodlight , Halogen	22W	3	0	NO	0	Change lighting angle.
Deposit	Wallpack	10W	1	0	NO	0	Make sure that the roof offers adequate shielding.
Covered terraces	Canopy LED	7W	11	11	NO	11	
Covered deluxe terraces	Canopy LED	7W	2	2	NO	2	
Toilet	Fluoresce nt LED	18W	2	2	NO	2	
Toilet	Wallpack	18W	1	1	NO	1	
Bungalow	Wallpack	7W	47	47	NO	47	
Warehouse	Wallpack	10W	2	0	NO	0	Shield or replace units.
Warehouse	Wallpack	10W	3	0	NO	0	Shield or replace units.
Warehouse	Fluoresce nt	18W	2	2	NO	2	
						TOTAL	239
						UNCOMPLIANT	34
						% COMPLIANT	85'77%

4.2.5 Management of lighting and dark sky

Bassegoda Park is the main source of lighting in the proposed Albanyà International Dark Sky Park. As such, the management team realizes that lighting policy within Bassegoda Park will play a crucial role to preserve the dark skies of Albanyà.

To commit to the preservation of dark skies, we follow strict lighting policies in compliance with Zone E2 of the Catalan regulation against light pollution.

Moreover, we constantly strive to improve our lighting system and we commit to replace whatever lights necessary so that all lighting within the park will be 100% compliant with IDA guidelines within the next 10 years.

As promoters of dark sky friendly tourism, we'll ask all our clients to be respectful about the environment and the dark sky and to only use lighting when necessary.

As part of the campsite policy we will only use lighting when strictly necessary and in compliance with the law and when there is a public safety issue.

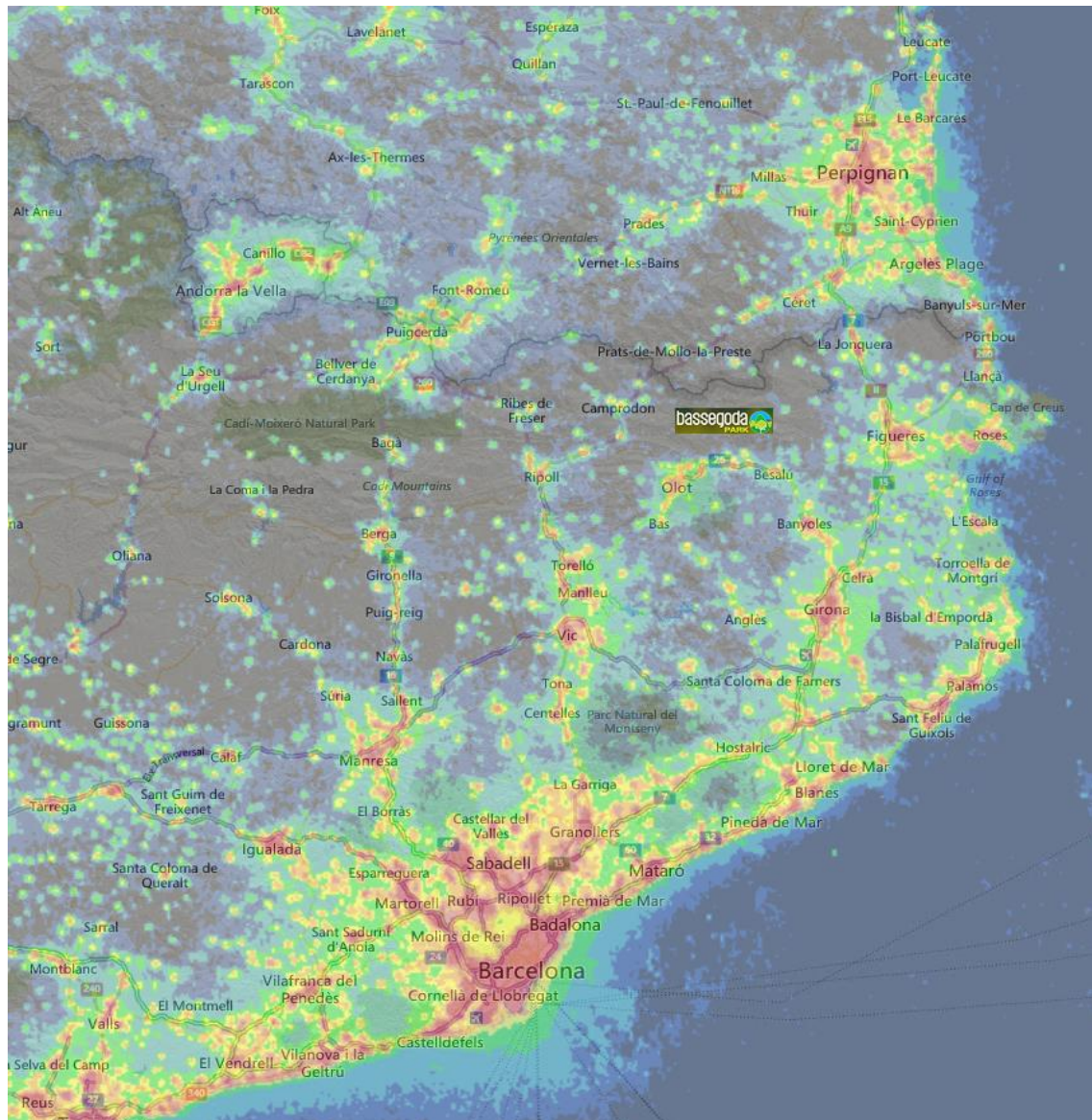
Kind regards,

CAMPING BASSEGODA S.L.
B17829367
Camí de Bassegoda, s/n
17733 ALBANYÀ (Girona)

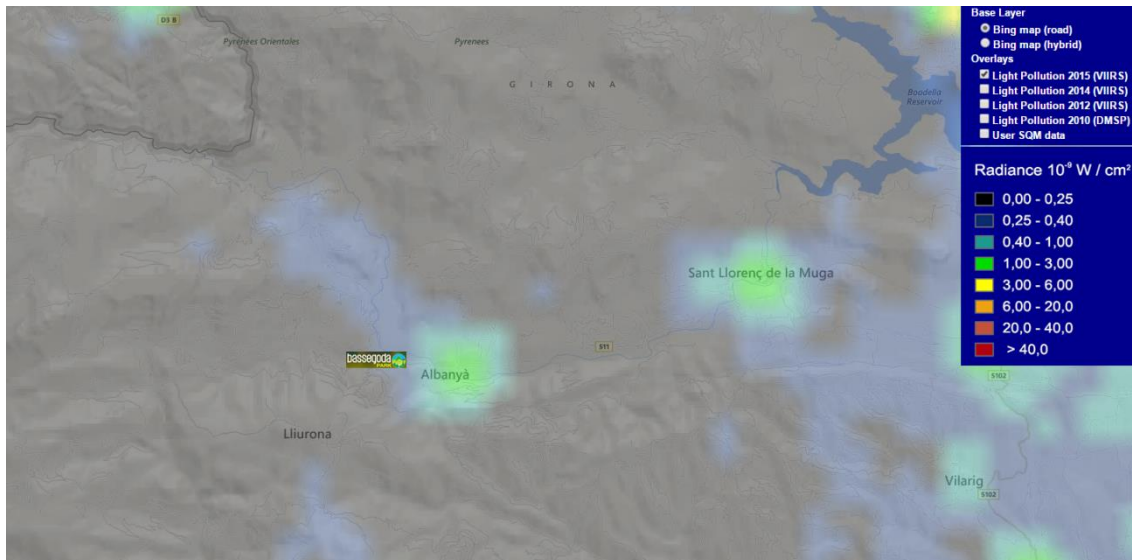
-Esteve Guerra
CEO Bassegoda Park

5- LIGHT POLLUTION ASSESSMENT

5.1 QUANTITATIVE READINGS



This picture of lightpollutionmap.info shows Bassegoda Park location in northern Catalonia, far away from the lights of Barcelona.



A more detailed view using lightpollutionmap shows the location of Bassegoda park. The closest town, Albanyà has very little impact in light pollution due to its very small size. Testimony of the efforts that our organization has made to limit light pollution impact of the campsite is the fact that virtually no light pollution is added due to the campsite lighting.

Reference:

<http://www.lightpollutionmap.info/#zoom=12&lat=5206581.21049&lon=308956.79959&layer=s=BOTFFFFTT>



A Unihedron SQM-L Sky Quality Meter has been purchased to take the SQM readings at Bassegoda Park, as it is the IDA recommended gold standard to measure sky brightness. All measurements have been taken following the guidelines [on how to carry out a dark sky survey](#), published in the Dark Sky Diary by Steve Owens.

A total of six locations have been chosen to assess the sky quality of Bassegoda Park Observing field. The site 3 has been found to be the darkest location in the field.

5.1.1 Camp de l'Illa (Bassegoda Park)

Site: 1	Time	SQM
11/10/2015	23:00	20.61
11/10/2015	23:30	20.71
11/10/2015	01:30	20.74
11/10/2015	02:30	20.76
11/10/2015	03:00	20.90
11/10/2015	03:30	20.87
11/10/2015	04:00	20.83

Site: 1	Time	SQM
26/11/2016	22:00	21,21
26/11/2016	22:10	21,07
26/11/2016	22:30	20,83
26/11/2016	22:40	21,05

Site: 1	Time	SQM
30/12/2016	22:30	21,01
30/12/2016	22:35	21,10
30/12/2016	22:40	21,08
30/12/2016	22:45	21,07

5.1.2 El Casalot (Lliurona)

Site: 2	Time	SQM
26/11/2016	23:25	21,12
26/11/2016	23:35	21,12
26/11/2016	23:50	21,04
26/11/2016	00:00	21,10

Site: 2	Time	SQM
30/12/2016	23:30	21,11
30/12/2016	23:35	21,10
30/12/2016	23:40	21,08
30/12/2016	22:45	21,07

5.1.3 EL Coll de la Creu (Lliurona)

Site: 3	Time	SQM
26/11/2016	00:30	21,21
26/11/2016	00:35	21,07
26/11/2016	00:45	20,83
26/11/2016	01:00	21,05

Site: 3	Time	SQM
30/12/2016	23:20	21,08
30/12/2016	23:25	21,21
30/12/2016	23:30	21,12
30/12/2016	23:35	21,17

5.1.4 EL Pla de la Bateria (Bassegoda)

Site: 4	Time	SQM
26/11/2016	01:20	21,10
26/11/2016	01:25	21,08
26/11/2016	01:30	21,06
26/11/2016	01:35	21,05
26/11/2016	01:40	21,13

Site: 4	Time	SQM
30/12/2016	23:55	21,10
30/12/2016	00:00	21,05
30/12/2016	00:05	21,10
30/12/2016	00:10	21,17

5.1.5 Coll de Principi (Bassegoda)

Site: 5	Time	SQM
26/11/2016	2:20	21,18
26/11/2016	2:25	21,11
26/11/2016	2:30	21,03

Site: 5	Time	SQM
30/12/2016	01:25	21,10
30/12/2016	01:30	21,05
30/12/2016	01:35	21,10
30/12/2016	01:40	21,17

5.1.6 Pla de la Teularia (Pincarò)

Site: 6	Time	SQM
26/11/2016	3:30	21,12
26/11/2016	3:35	21,12
26/11/2016	3:40	21,08
26/11/2016	3:45	21,02

Site: 6	Time	SQM
30/12/2016	02:35	21,20
30/12/2016	02:40	21,15
30/12/2016	02:45	21,15
30/12/2016	02:50	21,12

5.2 QUALITATIVE ASSESSMENT

5.2.1 Camp de l'Illa (Bassegoda Park)

Due to the subjectivity of making a qualitative assessment of the sky, up to five amateur astronomers were asked to qualitatively assess the sky brightness of this field. In a clear, moonless night, all observers were able to see M33 with the naked eye, although an observer reported that he could only see M33 with averted vision about 25-50% of the time.

All observers reported the summer Milky Way to be “very structured” and “impressive”. Sporadic clouds were reported to be “light pollution free” after 1 AM in the west and north west while being “midly light polluted” in the south east.

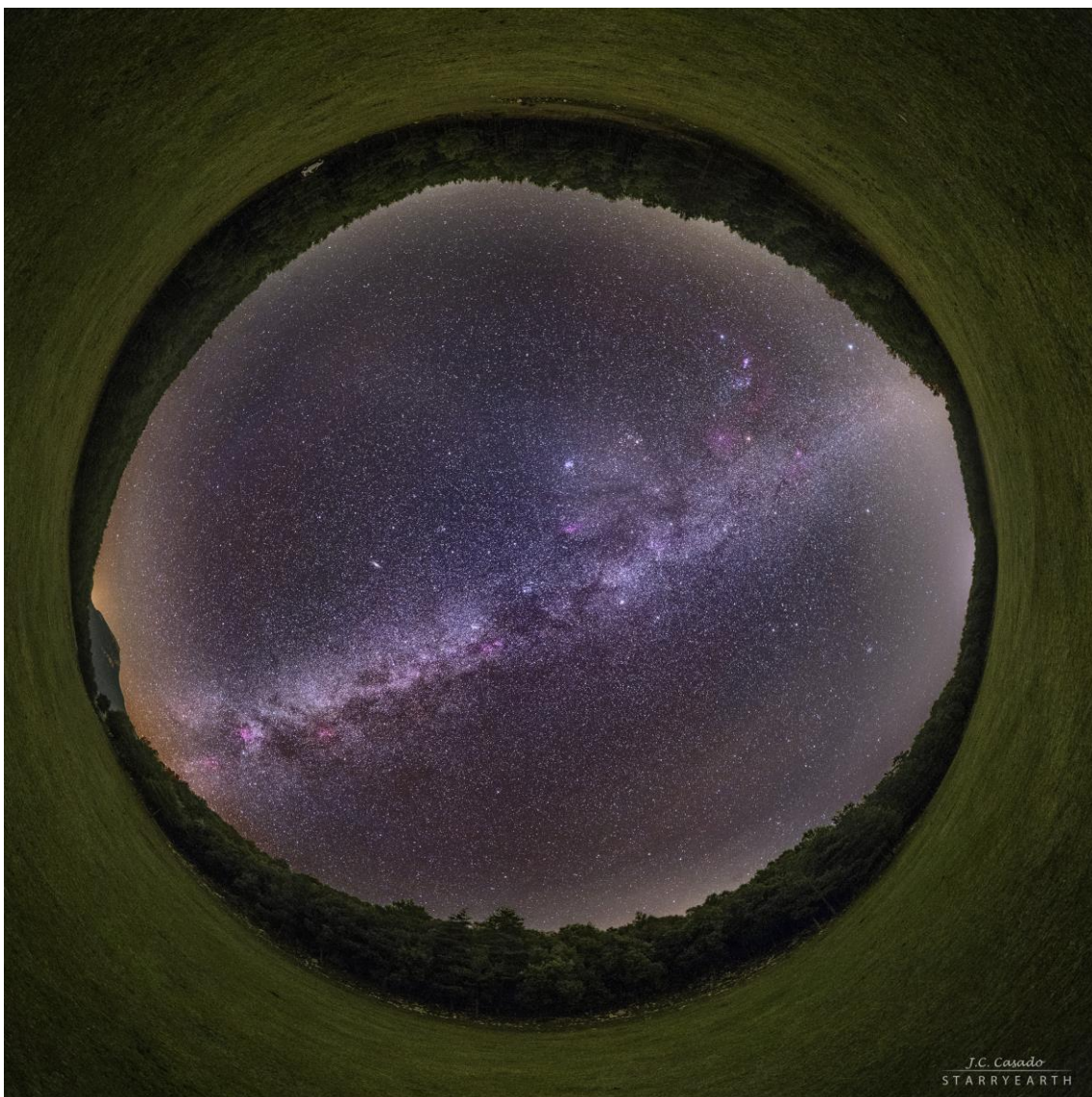
The consensus among amateur astronomers was that the Bassegoda Park observation field was in the upper Bortle Scale Class 4, possibly Lower Bortle Scale Class 3 category.

<http://www.skyandtelescope.com/astronomy-resources/light-pollution-and-astronomy-the-bortle-dark-sky-scale/>





5.2.2 El Casalot (Lliurona)



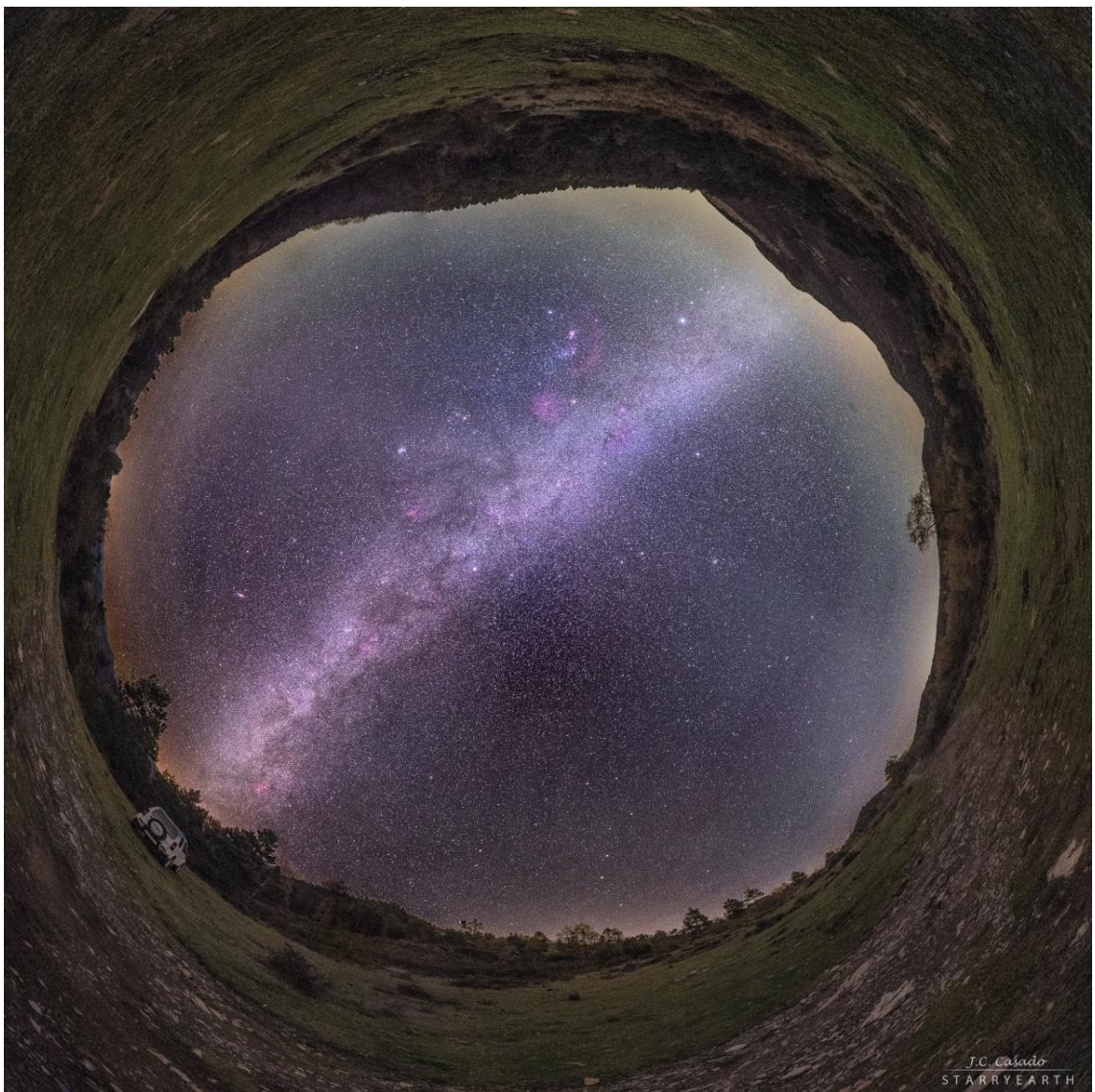
5.2.3 El Coll de la Creu (Lliurona)



5.2.4 El Pla de la Bateria (Bassegoda)



5.2.5 Coll de Principi (Bassegoda)



Views at Coll de Principi show hints of the zodiacal light, proof of the extraordinary properties of the dark skies in this location.

5.2.6 Pla de la Teularia (Pincarò)



Views at Pla de la Taularia also show hints of the zodiacal light, proof of the extraordinary properties of the dark skies in this location.

5.2.7 DSO qualitative assessment

To further enhance the qualitative assessment for this application, some DSO images are included.

The qualitative assessment images in this section are taken with permission from Jaume Mas website at skyplanetsbcn.blogspot.com. He observes from his home in downtown Albanyà.



A picture from Jaume Mas primary observation site at downtown Albanyà with a Canon 350D.



Lovejoy comet, Deep Sky Stacker, 6 images of 120 seconds.



M13 Hercules cluster, 8" F5 Newtonian without coma corrector.

M42 Comparison: Dark polluted skies of Barcelona vs Albanya

M42 Orion Nebula from the dark polluted skies of the city of Barcelona.

Equipment:

Meade Schmidt-Cassegrain 8",
Canon 350D, Orion Skyglow filter,
NEQ6

Total combined exposure time:
84,5 minutes processed with
Pixinsight Core 1.7.



M42 Orion Nebula from the dark skies of Albanya.

Equipment:

Skywatcher ED80 + Canon 350D +
NEQ6

Total combined exposure time: 8
minutes processed with
Pixinsight Core 1.7.



Skywatcher ED80, Canon 350F, NEQ6, guiding with MEADE 90nm +DMK221

14 mages of 5 minutes each for a total combined time of 70 minutes. Processing made with Pixinsight Core 1.7. In the negative image the following objects can be seen:

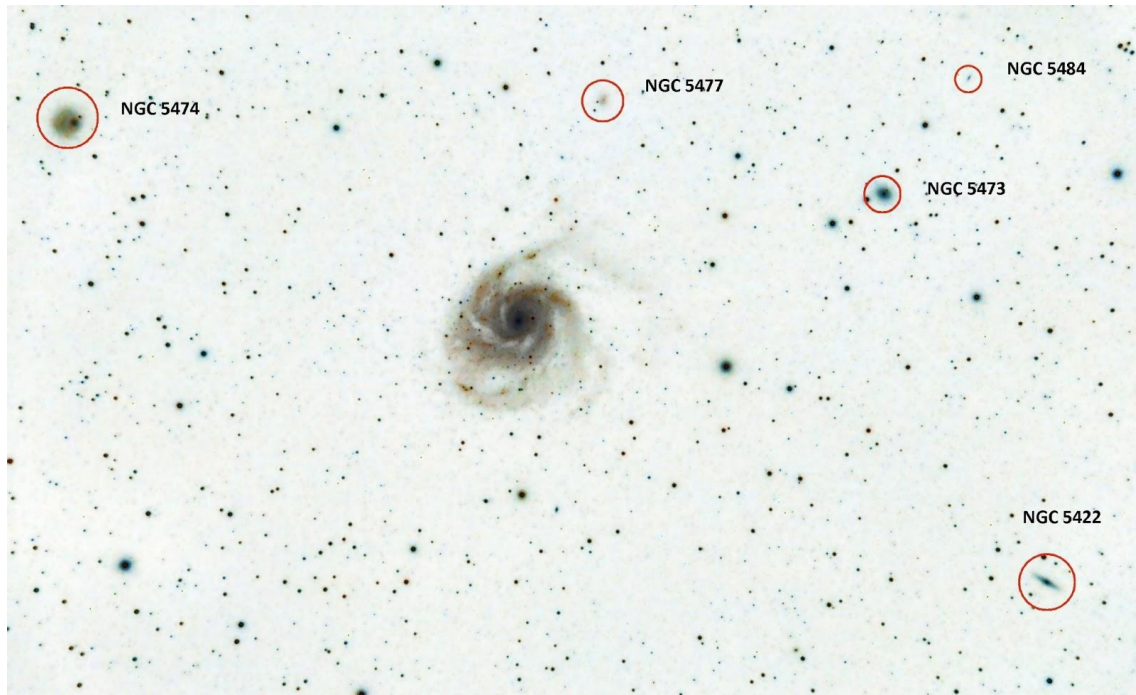
NGC 5473 with magnitude 10,4

NGC 5474 with magnitude 10,8

NGC 5422 with magnitude 11,8

NGC 5477 with magnitude 14,0

NGC 5474 with magnitude 15,7!!



6- SLEEPING AT ALBANYÀ DARK SKY PARK

Being a rated first class campsite establishment, Bassegoda Park proves that stargazing does not conflict with the possibility of having a good sleep. This establishment offers comfortable lodgings in Bungalows and rooms to complement the traditional Plots and tents area offerings.

6.1- BUNGALOWS

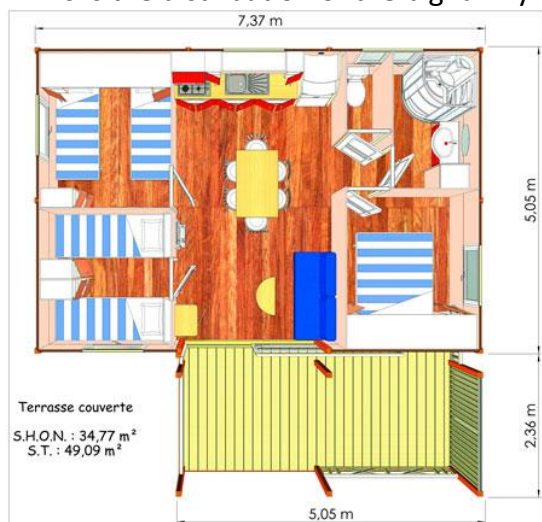
The vast majority of the bungalows are family bungalows with capacity ranging from 2 to 7 people. All of them are surrounded by trees and carefully decorated with flowers. Each bungalow is separated from the others by vegetal fences to preserve privacy. All our bungalows range from one bedroom to three bedrooms. Most of the bungalows are equipped with:

- Totally furnished hob kitchen, big fridge, microwaves, coffee machine, toaster, blender, cookware, dishes and cleaning utensils.
- The living room, with a lot of natural light, has chairs, table, sofa and television. It also has a large sliding door that, once opened, can convert the dining room and terrace into one space gaining breadth and comfort.
- Bathroom with shower and WC.
- Covered terrace.
- Heat and silent air conditioning Mitsubishi Inverter
- Bed linen.
- Blanket and bed spread.
- Shower gel and shampoo.
- Hand soap.
- Dish detergent and cleaning kit.
- Clothes line.
- Full insulation and the windows are double glazed.

Moreover Bungalow Plus have:

- Big covered terrace (12m²) with chairs and table plus solarium (5m²).
- Blind in the bedrooms

This is the distribution of the big family bungalow (Bungalow Plus 7 pax):





Furthermore we are proud to include a Bungalow offer for the disabled and handicapped people. Additionally, all areas at Bassegoda Park are handicapped friendly.

6.2- PLOTS

All our plots range from 70m2 to 120m2. All our plots have vegetal barriers that provide privacy and serve to delimitate each plot and are strategically located in a very shadow areas of the camping. All the plots have electric connection (10amp to 25 amp), water, waste pipes and some of them have TV connection as well. Plots can accommodate caravans and motor-homes with their awnings and kitchen units. Depending on the size of the caravan, there is usually enough space to park your car and have a small patio as well.



6.3-TENTS AREA

When our customers are looking for an 100% natural experience we count with our tents area in the middle of the forest.



7- ASTRONOMY EQUIPMENT AVAILABLE AT BASSEGODA PARK



Skywatcher 8" F5 with EQ5 Mount
(Available)

Orion Skyquest XX14g 14" f4.6 Dobsonian with
GOTO (available prior written request).



The campsite management has already spent a considerable amount of money to buy astro equipment that is both suitable for planetary and deep space observations.

This equipment is available to be used by campsite guests interested in astronomy upon payment of a fee. The guests must also provide evidence of their membership of an astronomy club. The Skywatcher 8" F5 reflector can be booked without previous notice while a session with the Orion Skyquest XX14g must be booked a week in advance and requires that guest spent at least a night at Bassegoda Park.

Aside from the telescopes, the campsite also owns two set of 8x50 6.5^o porro prism binoculars, plasticized A2 star charts and green laser pointers that can be booked by everyone in the campsite.

These astro gear is also regularly used during our stargazing events.

8- FUTURE WORKING PLANS

8.1- LIGHT POLLUTION MONITORING

In collaboration with the town authorities of Albanyà, Pere Guerra, astronomy manager at Bassegoda Park will monitor and maintain a record of SQM measurements at different spots of the proposed Dark Sky Park on moonless nights through the whole year.

Real time sky quality measurements will also be shown at any astronomy outreach sessions done at Bassegoda Park to the public for educational and record keeping purposes.

The planned observatory will also be able to assess light pollution remotely, by regularly taking pictures of areas of the sky up to 4.203°x4.203° in size. A plan will be setup to keep record of how light pollution impacts DSO during different seasons of the year.

We're also in talks with Mr. Miquel Serra Ricard, director at Observatorio del Teide, to setup a program to automatize an upload light pollution data from the skies of Albanyà.

The management team of Bassegoda Park are members of Cell Fosc, a national association against light pollution and will collaborate with Cell Fosc on making sure that the surrounding populations comply with Zone E1 and Zone E2 regulations.

8.2- EXPANSIONS OF SCIENCE OUTREACH PROGRAMS

Since 2015, Bassegoda Park collaborates with Starlight foundation by being part of the Starlight certification program and subscribes the values of Declaración de La Palma to preserve the night sky and the right of humanity to see the lights of the stars.

This distinction also includes the responsibility to organize astronomy outreach sessions. To that effect, Bassegoda Park has been increasing the frequency of astronomy outreach sessions, making at least one event during the spring and fall months and one astronomy event every two weeks during the summer months.

The campsite administration also plans to use the upcoming observatory as the cornerstone in which to base a new astronomy public outreach event called *Sky Experience* in which people will enjoy dinner while looking at live video astronomy views of deep space objects, we'll include an explanation as to how light pollution affects the views of Deep Space Objects in this events.

9- LETTERS OF ENDORSEMENT

9.1- BASSEGODA PARK



LETTER OF SUPPORT FROM BASSEGODA PARK

In the beginning of this decade, Bassegoda Park management team realized the touristic potential of the remarkable skies of Albanyà and started taking measures to mitigate light pollution.

Through this years, we've spent 100.000€ to improve lighting and to implement a custom lighting solution to save energy and minimize light pollution. This implied a complete overhaul of our lighting system and a strong bet from our small business organization.

At the same time, we realized that this decision made sense as it would help protect the environment that has nourished our business for so long.

This bet soon payed off as many of our frequent visitors that come to our public access camp de l'illa field with their kids have now become amateur astronomers.

We've also seen an increase of people coming at Bassegoda Park eager to learn more about the remarkable skies of Albanyà, to the point where in recent astronomy dedicated programming *sky experience* events, we hosted up to 300 people.


Years later and though a lot of hard work, our humble campsite has evolved to become a place not only aimed at providing lodging service to families, but also dedicated towards promoting science and knowledge of the environment to our visitors so that families with their kids can visit us to have a great time learning about the night sky and becoming better persons while having fun.

The proposed IDA Dark Sky Park designation at Albanyà would be a great milestone in this journey as it has the potential to greatly contribute on raising awareness of places such as ours, devoted at providing a respectful, environmentally friendly touristic offer that is fully aware of the greatness of the night sky and the need to protect it.

Kind regards,

-Esteve Guerra

CEO Bassegoda Park


CAMPING BASSEGODA S.L.
B17829367
Camí de Bassegoda, s/n
17733 ALBANYÀ (Girona)

9.2- CEL FOSC



Fernando Jáuregui, President of Cel Fosc, Association against Light Pollution declares that:

- Cel Fosc is the only national association that is carrying activities in the defense of the natural darkness of the night in all the Spanish territory.
- Cel Fosc has an official representative to coordinate activities and strategies between IDA and the European social movements in the defense of dark sky.
- Cel Fosc is promoting activities leaded by IDA in the Spanish territory.

For our association it's a pleasure to declare our support to the managers of the *Cámping Bassegoda Park* in the province of Girona relative to the project of building an astronomical observatory with an astronomy center in order to reinforce its application to achieve the IDA designation as **International Dark Sky Park**.

They are in close contact with the vice-president of Cel Fosc, Mr. Pere Horts which offers his advise and support.

Pamplona, Spain. March 3, 2017

Fernando Jáuregui
President of Cel Fosc,
Association against Light Pollution

9.3- STARS4ALL



European
Commission

Horizon 2020
European Union funding
for Research & Innovation

Madrid, March 17, 2017

Dr. Oscar Corcho, as coordinator of the STARS4ALL Project (<http://www.stars4all.eu/>), funded by the European Union's Horizon 2020 under grant agreement nr.: 688135

HEREBY STATES

His support to the project of the Municipality of Albanyà and the Bassegoda Park, in the Catalanian province of Girona, to achieve the IDA designation as an International Dark Sky Park.

It is anticipated that this project, which includes building an astronomical observatory and an astronomy outreach center, will be a significant step forward in the ongoing efforts for preserving the quality of the night skies across the South Western European region.



Dr. Oscar Corcho García
Catedrático de Universidad
Departamento de Inteligencia Artificial
Escuela Técnica Superior de Ingenieros Informáticos
Universidad Politécnica de Madrid
Campus de Montegancedo s/n
Boadilla del Monte-28660 Madrid, España

9.3- LIGHT POLLUTION LAB AT SANTIAGO DE COMPOSTELA UNIVERSITY



Laboratorio de Contaminación Lumínica
LPL-USC
Light Pollution Lab

Santiago de Compostela, March 17, 2017

Salvador X. Bará, Coordinator of the Light Pollution Laboratory of Universidade de Santiago de Compostela, Galicia,

HEREBY STATES

His support to the project of the Municipality of Albanyà and the Bassegoda Park, in the Catalanian province of Girona, to achieve the IDA designation as an International Dark Sky Park.

It is anticipated that this project, which includes building an astronomical observatory and an astronomy outreach center, will be a significant step forward in the ongoing efforts for preserving the quality of the night skies across the South Western European region.



Dr. Salvador X. Bará

Prof. Titular de Universidade.
Área de Óptica, Facultade de Óptica e Optometría,
Universidade de Santiago de Compostela (USC).
Campus Sur, 15782 Santiago de Compostela. Galicia (Spain, European Union)
E-mail: salva.bara@usc.es / phone: +34-881813525

9.4- LETTER FROM THE ADMINISTRATION: DIPUTACIÓ DE GIRONA



EL PRESIDENT DE LA DIPUTACIÓ DE GIRONA

Benvolgut/uda,

Ha arribat al meu coneixement la intenció del poble d'Albanyà (Girona) de presentar la seva candidatura com a parc de cel fosc a la International Dark Sky Association (IDA).

Des de la Diputació de Girona, vetllem per a preservar i consolidar els destacats atractius turístics i naturals de la nostra terra a fi de captar una oferta turística de qualitat i respectuosa amb el medi natural a les terres de Girona.

A aquest efecte, la candidatura d'Albanyà com a primer parc de cel fosc de Catalunya i de tot l'Estat Espanyol son excel·lents notícies per a les comarques gironines i compta amb tot el nostre recolzament i suport.

Us saludo ben atentament,

Pere Vila i Fulcarà

Girona, 3 de març de 2017

ENGLISH TRANSLATION:

Letter from the president of Diputació de Girona (administrative of the province of Girona)

Greetings,

It has reached my knowledge that the town of Albanyà (Girona) will submit an application as a Dark Sky Park to the International Dark Sky Association (IDA).

From Diputació de Girona, we strive to preserve and consolidate the highlighted touristic and natural appeals of our land with the goal to attract a quality environmentally aware touristic offer t in the land of Girona.

For these reasons, the candidacy of Albanyà as the first Dark Sky Park of Catalonia and of the entire Spanish State are excellent news for the regions of Girona and we fully endorse and back this initiative.

Kind regards

Pere Vila I Fulcarà

Girona, March 3rd 2017

9.5- LETTER OF SUPPORT FROM THE MAYOR OF ALBANYÀ

Dear IDA members,

Through this letter, I would like to establish the willingness of the town of Albanyà to aspire to the candidacy of International Dark Sky Park by the International Dark Sky Association.

The town of Albanyà is a humble town, with 147 inhabitants, most of them non-resident. Moreover, the municipality of Albanyà is surrounded by 94,43 km² of forest most of it protected as natural park and of public access.

The modest size of our town contrasts with the huge natural and environmental wealth that surrounds our municipality, that has privileged dark skies by western Europe standards, as seen in this application.

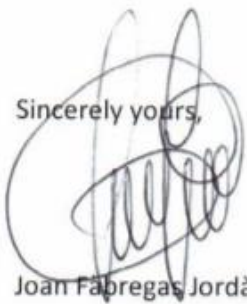
Fully aware of the importance to preserve the night sky as a natural heritage, our town has gone through important expenses to minimize light pollution.

To this effect, we've shielded and halved public lighting. Also, we're in the process to replace 3000K LED lighting near Bassegoda park observatory with 2200K LED lighting.

As you can see from this application, the willingness of the municipal authorities and of Bassegoda Park managers is to place our town as a reference for astro tourism in our province. To that end, the candidacy introduced to IDA is a major leap forward in that direction and I respectfully ask you to take it into consideration.

Should you wish to confirm first hand the veracity of this application, we'll be trilled to have you with us in our town.

Sincerely yours,

A handwritten signature in black ink, appearing to read 'Joan Fabregas Jordà', written over a large, loopy circular flourish.

Joan Fabregas Jordà

Mayor of the town of Albanyà

9.6- ASTROGIRONA



Rafael Balaguer, President of Astro Girona astronomy Association
Llagostera, 20-03-2017

Greetings,

I'm Rafael Balaguer, president of Astro Girona, a Catalan astronomy association.

By this letter, I would like to state my endorsement to the candidacy of Albanyà to become a Dark Sky Park recognized by the International Dark Sky Association (IDA).

Our association has been to Bassegoda Park (located in Albanyà) many times to participate in its dedicated outreach programing oriented towards teaching kids about the importance of the night sky and the need to protect it. I can confirm their skies are first quality.

I believe that having an International Dark Sky Park in the province of Girona will greatly help to raise awareness among locals about the need to contain dark pollution and look forward to Albanyà becoming a reference hub in our province.

Kind regards,

Rafael Balaguer Rosa, president

ASTROGIRONA. Associació Astronòmica de Girona

MPC C99

Member 7186 International Meteorite Collectors Association

C/ Lleó I, 2. Centre Cultural Can Roig. Biblioteca Julià Cutiller

17240 Llagostera, Girona

Telèfons: 626229549 / 972831312 / 972832207

9.7- ASTROBANYOLES



Banyoles, March 8th 2017

Dear all,

At Astrobanyoles, a group of astronomy and science from Pla de l'Estany, located in Banyoles (province of Girona and 40 km away from Albanyà), we're aware of the project of Bassegoda Park to build an observatory and outreach centre for astronomy and we want to convey our total endorsement towards the candidacy of Albanyà to achieve a IDA International Dark Sky Park designation.

We hereby make this endorsement to back their candidacy and to be able to share many observation nights with them.

Kind regards,



A handwritten signature in blue ink, which appears to be 'Carles Puncernau', written on a light-colored background.

Carles Puncernau
President of Astrobanyoles

9.8- ASTROGARROTXA



Dear Sirs,

Astrogarrotxa is a 30 years old astronomical society established in Olot, a town amidst the mountains in the region of Girona which belongs to Catalonia, within the Spanish territory. We have own amateur observatory in Batet, a mountain hamlet close to Olot.

We have very recently been informed of a new project which is being promoted in Albanyà by Bassegoda Park in order to set up a brand new and bigger astronomical observatory and lecture centre on a mountain high near that village, not far from Olot. This is really good news due to the pristine dark sky all around that mountain area.

We, as members of Astrogarrotxa, want to express our warm congratulations and give our total support to Bassegoda Park and the local authorities of Albanyà for carrying out such a convenient project which would perfectly combine science and astronomical tourism in our region.

Also we sustain their application to be given the IDA designation as International Dark Sky Park since we have been informed, too, that Mr Pere Horts is giving them technical advising and support. Mr Pere Horts is the vicepresident of *Cel Fosc*, a leading organization in defense of dark skies throughout Catalonia and Spain.

For our association it is just a pleasure to let you know our most positive feelings about the above mentioned projects.

Olot, Catalonia. March 20, 2017

Joan Torres Nalda,
President of Astrogarrotxa

9.9- SPANISH FEDERATION OF ASTRONOMICAL ASSOCIATIONS



Federación de Asociaciones Astronómicas de España

Domicilio social:
Organización Central del CSIC
Unidad de Cultura Científica
C/ Serrano, nº 117, CP. 28006, MADRID
e-mail: federacionastronomica@gmail.com
www.federacionastronomica.es

Blanca Troughton Luque, President of the Federation of Astronomical Associations of Spain (FAAE) states that the Federation:

It has been legally incorporated in Spain since November 2014.

It is composed by 51 astronomical associations of Spain, representing 5,529 people.

It has among its aims to promote the defense of the natural darkness of the night and in particular of the night sky as a right to preserve for future generations and as an astronomical and tourist resource.

We express our full support for the project of the municipality of Albanyà and camping Bassegoda Park in the province of Girona regarding the construction of an astronomical observatory with an astronomy center in order to reinforce its application for the achievement of the IDA's designation as International Sky Park. This means an advance in making an effort to preserve the quality of the night skies of Spain.

Madrid, Spain, March 21, 2017.



Blanca Troughton Luque

President of the Federation of Astronomical Associations of Spain

E-mail: blancatroughton@terra.com

Phone: +34 658070867

9.11- ASTRUMLLORET

ASTRUMLLORET, AMANTES DE LA ASTRONOMÍA
C/Padre Claret, 22.
17310 Lloret de Mar (Girona)
NIF G55151890
astrumiloret@gmail.com

INTERNATIONAL DARK SKY ASSOCIATION (IDA)

Apreciados miembros de International Dark Sky: Con la presente queremos comunicarles que todos los componentes de nuestra entidad, amantes de la astronomía, damos nuestro más decidido apoyo al PROYECTO DEL MUNICIPIO DE ALBANYÀ para conseguir UN CIELO OSCURO A FIN DE MONTAR UN OBSERVATORIO ASTRONÓMICO.

Por ello nos dirigimos a su prestigiosa Asociación, conocida como una de las instituciones de protección del cielo nocturno más prestigiosas del mundo, con el ruego de que concedan a dicho proyecto UNA CERTIFICACIÓN de su entidad con el fin de conseguir que Albanyà sea una zona protegida de la contaminación lumínica para garantizar las condiciones idóneas para la observación astronómica.

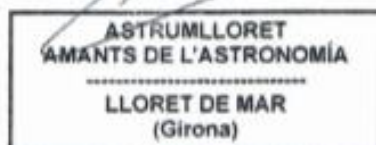
Queremos recordar que en Cataluña existe una ley y un reglamento que lo desarrolla y que protege el territorio de los efectos negativos de la contaminación lumínica y que hace referencia expresa a los espacios naturales como Albanyà.

Asimismo debemos recordar que la Declaración de la UNESCO del 2007 sobre la Defensa del Cielo Nocturno y el Derecho a la Luz de las Estrellas reconoce como un derecho implícito de los ciudadanos la conservación del cielo como patrimonio cultural y natural de las generaciones futuras.

Igualmente son incontables los científicos que aseguran que una iluminación adecuada, además de proteger la investigación en astronomía, tiene una serie de beneficios que se relacionan no solo con la protección del medio ambiente, sino también con las especies nativas de flora y fauna y la salud de las personas y como un gran componente de eficiencia energética y de ahorro del consumo eléctrico, con las consecuencias positivas para reducir la contaminación no solo lumínica sino también atmosférica.

Por todo ello damos nuestro más decidido apoyo al proyecto de Albanyà para que se consigan las mejores condiciones ambientales e infraestructuras lumínicas necesarias para observar el universo.

En Lloret de Mar, a veinte de marzo del 2017
Firmado: Santiago Ontañón – DNI-36703856
Presidente de Astrumiloret



TRANSLATION AstrumLloret

Dear members of the International Dark Sky: We hereby would like to convey that all members of our entity, lovers of astronomy are strong endorsers of the project of the municipality of Albanyà to become a place with dark skies with the goal to build an astronomical observatory.

To this goal we address your prestigious association, known as one of the most prestigious institutions for the protection of dark skies, asking you to CERTIFY said project by your institution so that Albanyà becomes a zone protected against light pollution to guarantee ideal conditions for astronomy observation.

By means of this letter we would also like to remind that in Catalonia there is a law and a regulation that protects the territory against the negative effects of light pollution with an explicit reference to natural spaces like Albanyà.

Moreover we wish to call to mind that the declaration of UNESCO in 2007 about the defense of the Night Sky and the right to see the light of the stars acknowledges the implicit right of citizens to preserve the skies as a cultural and natural heritage for future generations.

Also there are uncountable scientists that argue that appropriate lighting, in addition to protect the research in astronomy, has multiple benefits that relate not only towards the protection of the environment, but also towards the native species of flora, fauna and human health and as a big component of energy efficiency and electricity consumption, with the positive consequences of not only reducing light pollution but also atmosphere contamination.

For all these reasons, we make a most decisive commitment to endorse the project of Albanyà so that optimal environmental and lighting conditions can be reached to observe the universe.

Lloret de Mar, March 20th 2017

Santiago Ontañón – Id 36703856

President of AstrumLloret

9.11- NOMINATION LETTER

Dear IDA members,

By the submission of this letter and this application, I'm following up on the request made by the authorities of Albanyà to seek a unique opportunity, that is, to aspire to the International Dark Sky Park candidacy at your organization.

Seven years ago while studying at Harvard College I was shown the magnificence of planet Saturn through the telescope at the Loomis-Michael observatory during a STAHN astronomy outreach session. I started making questions, immediately my passion for astronomy arose.

After coming back to my country, I fixed an old 4" telescope and began stargazing the night sky. Soon afterwards, I realised that our family-owned campsite at Albanyà provided the incredible opportunity to get a break from the lights of the province of Girona.

Quickly, we understood that our night sky was a treasure and we began the endeavour to protect it by making a more efficient use of lighting at the campsite. We also bought a more advanced astronomy gear to be used on astronomy outreach events that reinforced the awareness of the local population about astronomy and the opportunities that the skies of Albanyà offered.

This present day, and with the invaluable help of the authorities of the town of Albanyà, our campsite has become a gathering point for the non-initiated and the amateur astronomer.

Years ago, I had the privilege to be thought about the wanders of the night sky. Now I have the pleasure to participate in science outreach sessions to incite the next generation of amateur astronomers and scientists to raise questions and to teach them about the immensity of the universe.

As and IDA member, I'm confident that having Albanyà designated as an International Dark Sky Park will greatly contribute towards the promotion of scientific knowledge and light pollution mitigation by helping establish a much-needed reference point in the region.

For these reasons, I humbly submit my nomination and this application for your consideration.

Kind regards,



-Pere Guerra

Astronomy Manager, Bassegoda Park

10- PRESS RELEASES

10.1 DIARI DE GIRONA

Diari de Girona

DIUMENGE, 19 DE MARÇ DE 2017 | 23

L'Alt Empordà

Un cel fosc a Albanyà per observar l'espai

► L'Ajuntament i el Càmping Bassegoda-Park intenten rebre un certificat d'una entitat d'Estat Units que garanteix la manca de contaminació lumínica a la zona ► L'objectiu és garantir les condicions idònies per a l'observació astronòmica

C. VILÀ ALBANYÀ

■ Albanyà vol protegir el seu cel de la contaminació lumínica per tal de ser un dels llocs ideals perquè els astrònoms, professionals i amateurs puguin observar l'univers amb claredat. L'Ajuntament i el Càmping Bassegoda-Park treballen per aconseguir una distinció internacional que atorga una entitat d'Estat Units per ser declarat Parc Internacional de cel fosc, el primer de l'Estat.

L'alcalde, Joan Fàbrega, constata que Albanyà té un poble petit però un ampli paisatge amb «uns cels foscos de característiques privilegiades per als estàndars de l'Europa occidental». A més, el càmping ha fet una aposta des de fa temps per promoure el turisme astronòmic i disposar d'un observatori i un centre de divulgació. Fa temps que porten a terme activitats didàctiques relacionades amb la naturalesa i la divulgació astronòmica.

El 2015 es va convertir en un dels primers de tot el món acreditat amb una certificació Starlight que, amb l'aval de la Unesco dins

El càmping Bassegoda promou les condicions ambientals i infraestructures per observar l'univers

el programa MaB (Home i Biosfera), reconeix la bona qualitat del cel nocturn. Ara volen anar més enllà i volen obtenir la certificació de la International Dark Sky Association (IDA), una de les institucions de protecció del cel nocturn més prestigioses del món. La certificació no només garanteix, a tot aquell que hi estigui interessat, que trobarà un entorn idoni per a l'observació, sinó que obligarà a continuar protegint el cel de contaminació lumínica.

El director del Bassegoda Park, Esteve Guerra, remarca que «aquest reconeixement reforçaria el creixent atractiu d'Albanyà per



Imatge facilitada del cel d'Albanyà. AJUNTAMENT/JUAN CARLES CASADO

als astrònoms amateurs que volen gaudir del turisme rural i familiar en un entorn privilegiat, lluny de la contaminació lumínica dels nuclis urbans».

El president de l'Associació Astronòmica de Figueres, Pere Horts, considera que les infraestructures en les que treballa el càmping i les condicions del cel d'Albanyà són molt importants

perquè «ve a suplir una mancança històrica que hem patit des de sempre» i mai hi havia hagut unes condicions similars a l'Alt Empordà.

Per protegir i preservar les «privilegiades qualitats del cel nocturn de la localitat d'Albanyà», l'Ajuntament ha informat que tant el poble com el càmping han reformat el seu sistema d'enllume-

nat nocturn per minimitzar l'impacte de la contaminació lumínica. «Els cels lliures de contaminació lumínica d'Albanyà permeten organitzar, durant els mesos de primavera, tardor i estiu, activitats dirigides a promoure el coneixement del cel estrellat com a part de la natura i a experimentar un turisme sostenible, respectuós amb el medi ambient i proteccionista del cel nocturn.

Albanyà no és l'únic que intenta obtenir aquesta certificació. L'observatori del Montsec també l'hauria demanat.

Protecció lumínica

A Catalunya, des del 2001, una llei protegeix el territori dels efectes negatius de la contaminació lumínica i un reglament posterior de 2015 la desenvolupa. El territori es divideix en tres tipus de zones on s'han de complir unes normes. Les de màxima protecció serien els espais naturals com els que vol potenciar Albanyà. Una segona zona seria la subrural i la tercera, els nuclis urbans on més es concentra la contaminació lumínica.

A dark sky at Albanyà to observe space.

The city council and Bassegoda Park are trying to get a certification from a EEUU entity to guarantee the lack of light pollution in the area. The goal is to guarantee ideal conditions for astronomy observation.

Albanyà wants to protect its sky against light pollution to become one of the ideal places to observe the universe by professional and amateurs astronomers. The city council and the campsite Bassegoda Park are working to achieve this international distinction granted by a EEUU entity to be declared the first International Dark Sky Park statewide.

The mayor, Joan Fàbregas notes that Albanyà is a small town but with a landscape of privileged dark skies by western Europe standards. Moreover, the campsite has been betting on the promotion of astro tourism since long ago and an observatory and an outreach center will be available. They've been making didactic activities related with nature and astronomy outreach since long ago.

In 2015 [Bassegoda Park] became one of the first campsites around de globe to be accredited by Starlight certification that, with the UNESCO avail in its program MaB (Man and Biosphere), acknowledges the good quality of the night sky. Now they want to go one step further in this direction

by obtaining the certification of the International Dark Sky Association (IDA), one of the most prestigious institutions to protect the night sky in the world. The certification not only guarantees, to everyone interested, that they will find an ideal environment for observation, but will also enforce to continue the protection of the night sky against light pollution.

The director of Bassegoda Park, Esteve Guerra, notes that “this recognition would reinforce the increasing attractive of Albanyà by amateur astronomers that want to enjoy rural family tourism in a privileged environment, far away from light pollution city sources.

The president of the Astronomy association of Figueres considers that the infrastructures that the campsite is working on and the conditions of the night skies of Albanyà are very important as it will make up for a historical need that we have suffered, there has never been such favorable conditions in Alt Empordà county.

To protect and to preserve the privileged qualities of the night sky of the municipality of Albanyà, the city council has informed that both the town and the campsite have undertaken a reform of the lighting system to minimize the impact of light pollution. <<The light pollution free skies of Albanyà allow to organize, during the spring, summer and fall months, activities dedicated towards the promotion of knowledge about the starry night sky as part of nature and to experience a sustainable tourism that is respectful with the environment and protective of the night sky>>.

Albanyà is not the only place that tries to get this certification. The Monstec observatory is also applying.

Protection against light pollution

In Catalonia, since 2001, there's a law that protects the territory against the effects of light pollution and a subsequent regulation in 2015 that deploys the law . The territory is divided in three [four] zones where the regulation must be obeyed. The ones with maximum protection are the natural locations like the ones that Albanyà wants to promote. The second zone would be subrural and the third [and forth] are urban areas that are a prime source of light pollution.

10.2 TRAMUNTANA TV

<https://translate.google.com/translate?hl=en&sl=auto&tl=en&u=http%3A%2F%2Fwww.tramuntanatv.com%2Fnews%2Falbanya-opta-a-convertir-se-en-el-primer-parc-internacional-de-cel-fosc-de-tot-l-estat%2F>

10.3- EL PUNT AVUI

<https://translate.google.com/translate?hl=en&sl=auto&tl=en&u=http%3A%2F%2Fwww.elpuntavui.cat%2Fsocietat%2Farticle%2F5-societat%2F1096448-albanya-promociona-el-poble-pels-nivells-baixos-de-contaminacio-luminica.html>

11- STARLIGHT CERTIFICATION



Fundación
Starlight



CERTIFICACIÓN

Tras proceder al estudio de la información referente al campamento, la Fundación Starlight acuerda la concesión de la siguiente cualificación:

"BASSEGODA PARK" **"CAMPAMENTO STARLIGHT"**

Consecuentemente, el complejo referenciado en esta certificación pasa a estar incluido en la lista de sitios Starlight, en la modalidad de "Campamento Starlight".

Los Campamentos Starlight constituyen una cualificación otorgada por la Fundación a aquellas instalaciones acreditadas que organizan actividades dirigidas a promover el conocimiento del cielo estrellado como parte de la naturaleza y a experimentar un turismo sostenible, respetuoso con el medio ambiente y proteccionista con el cielo nocturno. Un Campamento Starlight además debe gozar de un nivel de calidad que le cualifique y convertirse en propagador de los valores contenidos en la Declaración de La Palma, en Defensa del Cielo Nocturno y el Derecho a la Luz de las Estrellas.

Además, ponen a disposición de sus clientes información sobre Starlight y algunos medios para la observación astronómica y se implican como agentes activos en la propagación de la cultura astronómica, ofreciendo dotaciones sencillas para la observación nocturna.

La concesión de este Certificado será válida hasta el 31 de diciembre de 2015.

La renovación del mismo se producirá de manera automática, después de recibir el pago de la cuota correspondiente durante la primera quincena de 2016 y un pequeño informe con las actividades de difusión de la astronomía y protección del cielo llevadas a cabo durante 2015.

La concesión del Certificado constituye un compromiso y el comienzo de una etapa de mejora continua en sus diversos aspectos, tanto los referidos a la calidad y coherencia del producto turístico, como los relativos a la necesidad de preservar y mejorar la calidad de los cielos nocturnos y la protección de los recursos asociados al entorno del alojamiento.

La Laguna, a 19 de agosto de 2015.

Luis A. Martínez Sáez

Director Gerente

