

Conflicts over artificial light at night

Question (x10text): Based on your experience, can you give an example of a situation in which a person or group publicly complained about lighting?

Yes, I can give an example (open answers, n=141, internet links last access April 2018)

1. "Our group complained, for a variety of reasons, about inappropriate street lighting (non-full cut-off) as the streetlights of Edmonton were being replaced. Information on this can be found at www.Light-EfficientCommunities.com Note the videos available on YouTube.com with links found on the first page of the web site noted above."
2. "Street lights entering bed rooms."
3. "Yes. There is a little village in the Rhön, which never had public lighting. When the administration now demanded public lighting, the locals didn't agree and argued, that they had lived for such a long time without light. Also, they see light at night as pollution and successfully managed to avoid the installation."
4. "<https://thewest.com.au/news/7-news-perth/balcatta-family-at-war-with-council-and-neighbours-over-temporary-fence-put-up-to-keep-out-security-camera-and-bright-lights-ng-b88756302z>, LED from a neighbor shining directly into a residents yard. I have personally been contacted by 3 other urban residents looking for help dealing with nuisance obtrusive lighting in Perth, Western Australia."
5. "Too many for here"
6. "The cases are too numerous to be listed. Some examples:
<https://www.change.org/p/sindaco-di-venezia-spegnete-il-faro-da-72000-watt-di-porto-marghera>, <https://www.change.org/p/sindaco-di-valtournenche-diciamo-no-all-illuminazione-notturna-delle-montagne-si-alla-montagna-stellata>,
<https://www.nytimes.com/2017/03/27/world/europe/rome-streetlights-led-lights.html>,
<https://www.nytimes.com/2015/03/24/nyregion/new-led-streetlights-shine-too-brightly-for-some-in-brooklyn.html>, <https://www.wbez.org/shows/wbez-news/experts-warn-of-health-risks-as-chicago-switches-to-led-streetlights/c3729447-e95c-4fb6-a658-5bb0d5b8c7e5>"
7. "Issues on street lighting - in many newspaper articles. Light walks undertaken in several cities"
8. "Most cases I am aware of are related to commercial/neighbourhood lighting"
9. "There are many. Rome , New York, Madrid ... usually because of it bad impact on sleep, esthetic value or environmental impact."
10. "I regularly do outreach at astronomy events. It is now very common for people to relate their experience that with the recent change over to LED street lights, that they have now re-oriented the furniture on their bedrooms to avoid incident light from a nearby street light. A second experience is with people affected by nighttime construction work where high intensity lighting is used and cause glare for up to a distance of 1 kilometre."
11. "Light trespass from my uphill neighbor shining 100 of yards through not only my yard but another neighbors as well. "
12. "Concerned residents, including school children in Dunedin, and people living in small coastal towns north of Dunedin, as well as people from the small town of Naseby in Central Otago all desire a reduction in light pollution and have put forward their views for protecting their communities. "
13. "Astronomers in Rochester, NY: <http://www.rmssc.org/strasenburghplanetarium/telescope-viewing>"
14. "Many. Recently a group of citizens complaining about the introduction of new neutral white LED lighting on a bike trail near their house. It was in Ile-des-Soeurs near Montréal Canada."

15. "As a Radio Broadcast Engineer, I was aware of directives of FCC and FAA regulations regarding the light patterns required of safety beacons and lamps deployed on Radio Towers. These are formed to meet previous complaints of residents around towers (good neighbor policies), the death of migratory birds, yet maintain the safe illumination needed for aircraft navigation and safety."
16. "we tackled light pollution from different sources with success talking to industry and local governments: www.vvscapella.be"
17. "On Facebook, I frequently encounter friends posting about how light has negatively affected them. This is particularly true when the street lighting in their neighborhoods is changed from high pressure sodium to LED (usually 5000K color temperature). Light pollution, like other forms of anthropogenic alterations, seems to be subject to \"shifting baselines.\" Because HPS lights have been around for the entirety of most adults' lives, they don't seem to notice it as much, but when LEDs are installed, it comes as a shock."
18. "I have complained myself on many occasions, with mixed success. For example, two lamps over a pedestrian crossing had 'mindlessly' been installed facing about 45 degrees towards each other (sort of aimed at the crossing in between). The effect was excessive glare up and down the street, straight into motorists' and pedestrians' eyes. I complained to the government about this in 2015 but nothing was done. I complained again in 2017, and this time, within two weeks the government aimed the lamps DOWN. The pedestrian crossing got about as much light as before, but the horrendous glare was reduced 99%."
19. "Recent art installation lighting the Fremont Bridge in Seattle was shut off pending an assessment of potential impacts on juvenile salmon migration and predation. Initial story about art installation in Seattle Times February 8, 2018. I'm not aware of whether a followup story about shutting it off was published."
20. "Davis, California."
21. "Sure - there are so many: <http://adsabs.harvard.edu/full/2012JRASC.106..150H>"
22. "please refer to the list posted here: <http://nightsky.physics.hku.hk/reference-hong-kong-media.php>"
23. "I published article in AMA regarding light pollution and effects"
24. "There are hundreds of examples of bad lighting causing problems. Many communities have passed laws to protect sea turtles, to restrict blinding glare, or to protect astronomical observatories. I would be pleased to discuss these with you in more detail. "
25. "My concerns /complaint regarding Pattison Corporation application to digitize a billboard was recognized and ultimately denied due to safety reasons. My win was written up in the local paper & documentation is available at the City of Lethbridge, Alberta,Canada."
26. "lighting in cisalpina, italian trains where downlighting is so strong and glaring that people on the 3.5 h ride from milano to zürich get headaches, unconcentrated and aggressive."
27. "enjoying an evening outside with friends and the sky seems numb and not as sharp as when it is pitch black."
28. "<http://www.lastvanlicht.nl/>"
29. "The astronomers of Atacama. The Noche Zero group"
30. "In a project I am currently working on a group intent on safeguarding the adopted habitat of bats in the centre of a city filed an objection to the lighting of historical façades (which was the goal of the project initiated by the city), quoting national regulations / recommendations regarding light \"pollution\""
31. "Citizen scientists doing astronomical science research"
32. "Not an example but a note: we deal with a lot of these situations, but it is difficult to bring to mind highly specific examples."
33. "Take a look at every lighting manufacturer's website. Their portfolio is full of uplights and waste-lighting on sky"

34. "Yes this was a major concern for the Sunshine Coast Council and a strategy was incorporated into the Urban Lighting Masterplan. <https://www.sunshinecoast.qld.gov.au/Council/Planning-and-Projects/Council-Plans/Urban-Public-Lighting-Master-Plan>"
35. "Most large city LED retrofits but NYC specifically. "
36. " LoNNe objection to the street lighting norm EN 13201: www.cost-lonne.eu/wp-content/uploads/2013/08/LetterEN13201.pdf
Granted complaint Oö Verwaltungsgericht: www.cost-lonne.eu/wp-content/uploads/2016/07/O%C3%B6-Verwaltungsgericht-1704.pdf
Street lighting in Malta was too bright: <https://www.timesofmalta.com/articles/view/20151203/local/petition-calls-for-replacement-of-white-led-street-lights.594426>
Street lighting New York: <https://www.change.org/p/new-york-city-mayor-bill-de-blasio-revise-the-plan-for-converting-all-new-york-city-streetlights-to-led-fixtures-to-require-fully-shielded-fixtures-that-direct-all-light-downward-and-led-s-that-don-t-emit-so-much-blue-rich-light>
Street lighting in Rome: <https://www.mnn.com/green-tech/research-innovations/blogs/rome-residents-rally-against-newfangled-led-streetlights>"
37. "We live in an Urbanisation with very poor outdoor lighting - polls with cold White energy-saving bulbs that glow almost 270°. As the buildings have bright colours, the reflections of teh walls add to this additionally. In our flat it creates a pattern of light stripes on ceilings and walls that it is not possible to sleep there without curtains. Before, we lived in a rural Urbanisation whre we didn't Need any stair house- and living room light to manage short trips throug the house at night safely thanks to the street light 30 m away..."
38. "When they are observing night sky in astronomy activities"
39. "The Oracle Dark Skies Committee approached several businesses in the local area and successfully mitigated what had been light pollution from these businesses."
40. "New LED lighting that caused glare and irritation"
41. "astronomers at Galloway Dark Sky Park"
42. "Tennis courts"
43. "I know a justice (legal) process between a stadium and some house holders."
44. "I often hear of friends of mine (also astrophotographers) that lightpollution affects their images negatively."
45. "IDA, Dr. Andreas Hänel, Workshops, Messe 2018 Frankfurt am Main"
46. "The introduction of new LED street light, which are to bright and use to high CCTs. There are multiple cases on the internet, one group discussing this intensively is the Facebook group 'Ban Blue-Rich LED Streetlights and Headlights' (<https://www.facebook.com/groups/155084901640186/>). Personally, I'm assisting residents at Bergstraße, Germany."
47. "I ehard and though of it myself sometimes on why the library (for example at the TU Berlin) sometimes(?) has lights on while being closed. Same with supermarkets"
48. "Department of Justice. 2010. Kaua'i island utility pleads guilty to endangered species act and migratory bird treaty act violation, agrees to help protect threatened seabirds. US Department of Justice. Available from <https://www.justice.gov/opa/pr/kaua-i-island-utility-pleads-guilty-endangered-species-act-and-migratory-bird-treaty-act>. KSHCP (Kaua'i Seabird Habitat Conservation Program) 2016. Lighting for homes and business. KSHCP, Kaua'i. Available from: <http://kauaiseabirdhcp.com/lighting-homes-businesses/>
SKY QUALITY PROTECTION TECHNICAL OFFICE: <http://www.iac.es/servicios.php?op1=28&lang=en>
Ecolights for seabirds: <https://ecolightsforseabirds.weebly.com/>"
49. "This is kind of a weird question... There are thousands, or more likely hundreds of thousands of examples. Here are a few: <https://twitter.com/raulclima/status/975399097988472833>,

- <https://twitter.com/ret2indnri/status/970349702972694528>,
<https://twitter.com/ComericaCantsle/status/975671145646215168>"
50. "the city installed a spot light in a park near my house . The light went all over and was not helpful to those using the park. After 3 complaints the city took it down"
 51. "When meteor showers, eclipse, or other night sky event occurs, we request local suburban park to turn off lights so community can get together to enjoy. Usually works. (Still surrounding light pollution, but main sources of glare are gone.) "
 52. "Obstructive light enters through home windows"
 53. <http://www.celfosc.org/>, <https://www.ecologistasenaccion.org/article4558.html>,
<https://calidadedoceo.wordpress.com/>, <http://pmisson.blogspot.com.es/>,
<https://guaix.fis.ucm.es/reecl/node/17>, <https://www.astrosirio.org/2013/03/15/la-contaminacion-luminica-esa-gran-desconocida/>
 54. "People who complain about the fact that they do not see very well overnight because of new white LEDs"
 55. "The Authority, where I work, receives complains in particular from persons and NGOs which have an environmental agenda (astronomical association, nature protection, etc.). These are normally related to excessive lighting in environmentally sensitive or protected areas. The Authority responsible for Planning (developing permits) regularly receives complaints related to non-compliance of the developments when it come to outdoor lighting. "
 56. "<http://www.nachrichten.at/oberoesterreich/steyr/Initiative-will-mildere-LED-Laternen;art68,2227545>,
http://www.kleinezeitung.at/service/ombudsmann/5381158/AUTOOMBUDSMANN_Geblendet-von-den-neuen-XenonLeuchten, <http://vorarlberg.orf.at/news/stories/2901959>,
<http://www.tt.com/panorama/gesellschaft/13900022-91/umweltanwalt-schaltet-sich-bei-swarovskis--lichtshow-ein.csp>, <http://www.tt.com/lebensart/gesundheit/12963583-91/geblendet-von-nachbars-licht.csp>, <http://wien.orf.at/news/stories/2826164/>,
<http://www.tt.com/politik/landespolitik/11929944-91/beleuchtung-auf-bergeralm-darf-nicht-zu-hell-strahlen.csp>"
 57. "Visitors of our observatory, Visitors of night-walks under dark skies Members of groups dealing with the conservation of nature"
 58. "Visitors of our observatory/planetarium complaining about increasing light pollution esp. in suburban and rural areas."
 59. "Naturschutzbehörden, Wasserschiffahrtsämter, NATurschutzverbände, IDA ofizielle Stellen in Italien und Frankreich zuständig für Beleuchtung bzw. deren öffentliche Förderung"
 60. "At several epochs of the year, such as Christmas, carnivals or local festivals in the cities or villages there is a enormous waste of light that citizens don't want to renounce."
 61. "neighbours of a logistics center with a badly lit parking lot in southern germany"
 62. "light pollution in residential areas"
 63. "Regarding the new construction of two buildings in Zürich, Switzerland there have been several rounds of discussions with neighbours, city council and dark-sky-organisations about nighttime appearance, facade and landscape lighting to make sure the lighting would contribute to light pollutions as little as possible. "
 64. "sports lighting and neighbor lighting are the most commonly mentioned"
 65. "dont have a reference but in our city and neighbourhood, i personallly told the council authrorties to install the new led lights in a proper angel to cut glare and achive maximum efficiency . "
 66. "<http://www.arasdelosolmos.es/astronomos-y-expertos-debaten-en-aras-sobre-medio-ambiente-y-contaminacion-luminica/>, <http://www.luminicaambiental.com/alumbrado-inteligente-y-sostenible-en-zona-starlight/>, <http://www.luminicaambiental.com/starlight-cities-reto-medioambiental-cultural-y-cientifico-del-s-xxi-en-las-smart-cities/>"

67. "We opposed a public art project on a bridge that would have shined spotlights straight up into the sky, and down into the water, causing light pollution (in both directions). The history is documented here, starting in 1999: <http://urbanwildlands.org/vtb.html>"
68. "Local development of shopping complex was initiated without dark-sky-friendly lighting in its design. When brought to city planning department's attention, enough pressure was applied that the lighting design was changed to be dark-sky compliant."
69. "In 2016 the Lisbon City Hall decided to put white LED's in all streets. There were almost no protests, because of the lack of general knowledge about light pollution. In 2018 they haven't installed all LED's (for economic reasons only). <http://ocorvo.pt/e-fez-se-luz-queremos-mesmo-estes-leds-em-todas-as-ruas-da-cidade-de-lisboa/>"
70. "recently one party of a small town of Usingen, requested by a astro-friend of mine. Else there where requests of lectures by some groupings mostly from german NaBu in the past few years."
71. "I'm chairman of <https://martinboroughdarksky.org>"
72. "I often hear people complaining on the glare or light trespass from a neighbor or particular light they have to deal with. By coming in the dark sky reserve, many people notice how different it is from where they live. When Montreal planned to convert to white LED, many people and groups complained and the city finally decided to go with 3000K LED : <http://www.cbc.ca/news/canada/montreal/montreal-led-streetlights-1.3940889>"
73. <https://mthamilton.ucolick.org/public/lighting/Pollution2.html>
74. "Dark Sky Reserves/Parks in Ireland worked together with local government to reduce the light pollution from streetlights."
75. "People living close to electronic billboards complain about excessive brightness after dark. Rural touristic areas, complain about losing dark skies as a natural attraction to the area."
76. "Visibility on roadway"
77. "During the study of the City of Rennes Lighting Master Plan in 2011, we made as usual a night walk in all City's districts and a survey with a group of inhabitants. They complained about too much public lighting during the second part of the night especially in natural zones within the city. The deputy mayor in charge of this study ask us at the very beginning of the study what lighting could be shut off in Rennes. It is why we proposed a Dark infrastructure methodology that we developed within the City Lighting Master Plan and that was approved by the Municipality in 2012 (see articles about Rennes LMP and Rennes dark infrastructure on our website www.concepto.fr and in Lighting magazines.)."
78. "A local resident complaining about harsh glare from newly installed LED streetlighting which replaced sodium lighting. Local council were not sympathetic."
79. "Introduction of inappropriate LED street lighting in an area regularly used for an astro-camp. This was due to lack of knowledge by the agency involved and the local and Welsh national government corrected matters quickly."
80. "The recent report that globally LED are significantly increasing pollution and not reducing it at all"
81. "I am employed by Dark Sky Wales and our mission is to educate the public about the wonders of the night sky and the effects that light pollution is having on our heritage: <https://www.walesonline.co.uk/news/wales-news/could-wales-dark-skies-bring-1808474>"
82. "Sentence by Italian Corte di Cassazione n.3130, February 8, 2008"
83. "During construction work of power plant, the light was on at night even if no one was working, illuminating the sky"
84. "Hotel project in Florida. The community and client specifically requested the hotel lighting design be done in a way to not affect the nearby sea turtles. "
85. "A particular building in the centre of the Brecon Beacons Dark Sky Reserve lit up all night with harsh lighting which was too bright to look at. Diminished not only people's chance to look at the stars but light glare effected driving. "
86. "Mass floodlighting of a nearby opencast mining area. Complaints made via local CfDS officer. "

87. "A recent BBC documentary, Blue Planet II featured a piece on the effects of artificial lighting. This may not be exactly what you were asking for, but I am classifying the BBC as a group and the public awareness couldn't have been greater:
<https://www.telegraph.co.uk/news/2016/12/12/bbc-planet-earth-ii-filmmakers-defy-convention-save-lost-baby/>"
88. "I work as an expert witness and forensic scientist in lighting and the majority of my work comes from outdoor lighting codes, standards, environmental impact studies, litigation and criminal prosecution. "
89. "Ball field lighting that is poorly controlled and left on after activities are over"
90. "As a fairly \"urbanised\" National Park I get lots of complaints from residents about neighbouring lighting shining into properties. They tend to be individually based rather than an organised group. We also get these complaints as part of planning applications where residents voice their objections through the planning system. "
91. "Local Council and National transport authority installing 4000K LEDs and not considering local input"
92. "Many examples of complains. On the webpage: <http://svetelnezncisteneni.cz/>, every week someone searches for advice how to deal with disturbing light/too much light in their neighborhood."
93. "Last year, the Chilean Astronomy Society submitted 8 legal complains against companies in the Superintendence of Environment. "
94. "\"White night\" type festivals significantly change the experience of cities and towns that host them and must use very large amounts of energy."
95. "I have requested lights be removed or if not Properly shielded at several locations."
96. "Our group regularly deals with helping citizens who are bothere by light pollution - whether it's coming from public streetlights or commercial fixtures."
97. "several articles in media (all from one source: dark sky groups); not always very factual, mostly emotional."
98. <https://www.scunthorpetelegraph.co.uk/news/street-lighting-scheme-comes-under-622182>
99. "astronomers very often complain about too much lighting and they are afraid lighting designers will worsen the situation, however we have the knowledge to reduce it. "
100. "In Russia you can file a complaint about light pollution from advertising signs, and it works. But we haven't got any standarts about lighting pollution in the air, only inside the building (through the windows)"
101. "Awareness about the landscape lighting project for the Sparrow Hills in Moscow:
<http://www.the-village.ru/village/city/situation/298030-podsvetka-na-vorobievyh-gorah>. Hot topic in regards to the operation of the Pulkovo observatory near St. Petersburg:
<https://www.change.org/p/%D1%81%D0%BE%D1%85%D1%80%D0%B0%D0%BD%D0%B8%D0%BC-%D0%BF%D1%83%D0%BB%D0%BA%D0%BE%D0%B2%D1%81%D0%BA%D1%83%D1%8E-%D0%BE%D0%B1%D1%81%D0%B5%D1%80%D0%B2%D0%B0%D1%82%D0%BE%D1%80%D0%B8%D1%8E>"
102. "In a park near me one day someone turned on a spot light that stayed on all night. This is Canada where we get up to 500 cm of snow which lasts from November to early May.during this time the park is not used. During June ,July and August the period of darkness lasts from 11:30 pm to 2:30 am so you don't need lights . After I complained to the city 3 time the light was taken down."
103. "Habitants in a public meeting. They were annoy by public lighting in front of their houses."
104. "In many public sky observation. And my activity of dark sky activist (Animation, conf rence, exhibit...)"
105. "I have heard a lot of complaints from people affected by light pollution, one exemplary case was big tomato greenhouse in Poland near Czech and German borders that produced more light pollution than nearby city of 100 000 inhabitants. It was discussed on the government level and

- the company operating the greenhouse eventually agreed to install light shades to eliminated the light pollution: https://liberec.idnes.cz/sklenik-smog-svetlo-obloha-znecisteniturow-elektrarna-rajce-teplo-energie-17m-/liberec-zpravy.aspx?c=A160208_085110_liberec-zpravy_ddt"
106. "neighbor of an illuminated industry area"
 107. "Concerns over disturbance to bats' migration groups raised by environmental groups"
 108. "Pickett State Park actively engaged the city of Jamestown, TN especially after applying for and receiving IDA Dark Sky Park status. The local electric coop was replacing lights with inappropriate fixtures. Changes have been made and the city has now passed a lighting ordinance."
 109. "Cielobuio, Italy. It's an association like Dark sky."
 110. "Unwanted lighting hampers us from enjoying night scape in rural area."
 111. <https://www.anpcen.fr/>
 112. "The spill light that enters peoples homes"
 113. "Outdoor \"security\" lighting outside of some factories created glare and a nuisance to people in neighboring properties."
 114. "When Montreal, CA wanted to convert all public lights to 4000K LEDs a lot of people complained for various reasons (health, aesthetics):
<http://www.cbc.ca/news/canada/montreal/montreal-led-streetlights-1.3940889>,
<http://montrealgazette.com/news/local-news/montreals-push-for-outdoor-led-lights-isnt-just-a-night-sky-problem-its-unhealthy-scientists-warn> [montreal, 4000K]"
 115. <https://www.bz-berlin.de/artikel-archiv/berlin-fuerchtet-die-lichtverschmutzung>
 116. "I have received various emails about road lighting, sports ground lighting, religious building & architectural lighting and bridges being lit. Also car head lights with high temperature LEDs increasing becoming a complaint. "
 117. "Recently a family posted a complain in a little town in Asturias, Spain because the municipality installed a new lighting system in the village that definitely ended up with one of the wonders of the village: the darkness of the night."
 118. "Various LinkedIn groups promoting darker skies and lower colour temperature of street lights"
 119. "Neighbors in Barcelona complain about the high intensity of light used in publicity pannels in the street. This light penetrates their homes at night."
 120. "Sincerly I see almost every day an examples of how light is used as an bad instrument for architectural projects. I wan't critique the work of my colleges but somethimes I ask myself which parameters do they use to create a lighting design project."
 121. "International Dark-Sky Association"
 122. "Sky beamers ... It resulted in these being seen as advertising and therefore needing planning permission. See Martin Morgan Taylor and Bob Mizon of the Commission for Dark Skies for details."
 123. "Councillors and residents object to Cricket Club floodlight extension.
<https://leicestershirepress.com/2017/04/04/councillors-and-residents-object-to-cricket-club-floodlight-extension/>, Leicestershire County Cricket Club, Grace Road, Leicester."
 124. "Myself to Knowsley Countil and bad light produced from Sports centre used at night. Badly designed lghting causing light pollution and glare."
 125. <https://independent.academia.edu/ColinHenshaw>
 126. "Please see our website <https://www.britastro.org/dark-skies/> or the IDA:
<http://www.darksky.org>"
 127. "see baddileysuniverse.net for papers on measurments in Mlavern Hills AONB and modelling atmos. spectral scatter and ground reflection a from different lumiaire types contact cj.baddiley@physics.org"
 128. " <https://lightaware.org/>, <http://www.lightmare.org/> "

129. "I have had many letters/e-mails from individuals distressed, even suicidal, about intrusive lighting into premises"
130. "Chicago 1974"
131. "EVERY LA IN THE UK HAS HAD HUGE NUMBERS OF COMPLAINTS FROM LED RETROFITS"
132. "This is our FB group. We have people from around the world. It's not big, but it's powerful. We have already implemented change in my city convincing it to install 3000K instead of 4000K. We still want better. (Chicago): <https://www.facebook.com/groups/155084901640186/>"
133. "The local community and the UK CfDS complained about the poor race course lighting (MUSCO) that had been erected with little by way of lighting controls. The result being excess glare and energy waste, as well as the loss of the night time sky over the surrounding area."
134. "Street lights and facade lights in our village"
135. "- near natural protected aerea (park, forest)"
136. "Well not a specific example, but over the years many complaints about new lights shining into bedrooms, and tennis courts and sports floodlights typically are offenders."
137. "I have personally spoken to my first selectman and my towns zoning enforcement officer to no avail. My neighbor has lights that flash on and off all night long. I have asked him to stop personally, in 2 letters I wrote and a letter from my lawyer all to no avail. My sleep patterns and grumpiness have increased exponentially. I am at my wits end. "
138. <https://www.irishexaminer.com/ireland/shell-fined-for-corrib-noise-and-light-pollution-from-new-years-gas-flare-419492.html>. This happened very close to Ballycroy Dark Sky Park, which has Gold-Tier International Dark Sky Park status.
139. "The Swan River Trust is a State Government agency. My client was the City Council. The Trust intervened during the design stage of a proposed lighting project located adjacent to the river. They wanted to ensure there was no obtrusive light. A zone 0 was established with no luminaries."
140. "Illuminated advertising Systems on building"
141. "https://www.tcd.ie/news_events/articles/just-how-bright-are-we-look-at-the-astronomical-costs-of-our-light-pollution/5495, <http://www.thejournal.ie/light-pollution-ireland-2038274-Apr2015/>"