

## 15. Lightscape Management Plan

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The lightscape management plan has been prepared in collaboration with lighting management authorities who are responsible for lighting within and beyond the proposed Dark-sky Park area. Lighting management objectives have been agreed so that they are practical and there is support for a long-term vision to conserve and enhance the dark sky quality of the region through responsible lighting management.

The objectives of this Lightscape Management Plan are:

- To ensure the preservation of pristine dark-skies over and beyond Ballycroy National Park & Wild Nephin.
- To promote the reduction in light pollution and light waste wherever possible whilst demonstrating good night-time lighting practices.
- To seek improvement in the nocturnal environment of wildlife,
- To protect and expand dark observing sites for astronomy, and provide accessible locations for the general public to experience the naturally starry skies of Mayo.
- To provide guidelines for the management of existing and future lighting within and beyond the Dark-sky park

The plan has been prepared in accordance with guidelines from the International Dark-sky Association and also where relevant, Outdoor Lighting Guidelines for Dark-Sky preserves, from The Royal Astronomical Society of Canada.

This plan promotes the adoption of best practice in planning for lighting, the use of appropriate lighting fixtures and their correct installation. It also aims to provide practical advice on mitigating obtrusive light both within and outside of the National Park boundary.

The key elements of the best practice ethics within this plan are as follows:

*Lighting shall only be used where it is needed, when it is needed and in the appropriate amount for the specified task required.*

*Outdoor lighting fixtures should be fully shielded and make appropriate use of timers and motion sensors.*

The IDSA guidelines state “*the LMP should conform to, or surpass agency or departmental policy on lighting and dark sky protection as well as other applicable guidance and laws (e.g. environmental leadership programs, agency orders, wilderness act, energy management guidelines).*”

As stated in The National Energy Efficiency Action Plan 2009-2020, the Public Sector has been challenged to reach energy-efficiency savings of 33% by 2020. This target requires management commitment at the highest level and the involvement of all public sector employees.

This Lightscape Management Plan is the first of its kind to be adopted by the NPWS/Wild Nephin management team. It represents a leadership template for other complimentary environmental programmes. Mayo County Council has also noted that the Dark-sky policies will assist the authority in achieving its energy efficiency obligations by 33% has prompted the council to look at innovations such as part-night lighting of street dimming in public areas outside of the Dark-sky designated land.

#### **Lighting within the proposed Dark-sky Park**

The majority of the proposed Mayo International Dark-sky Park encompassing 15,000 hectares has no artificial lighting whatsoever. Only two locations have on-site lighting and these are; the National Park Visitor Centre and the Park Rangers Offices at Lagduff. The latter premises are not accessible to the public due to security reasons (this is the only area in the whole of the proposed Dark-sky park that is not publicly accessible). These external lighting fixtures are

documented in the accompanying Lighting Inventory, together with the rationale behind these lighting fixture details of when they would be in use.

Lighting within these two sites is the responsibility of the National Parks and Wildlife Service, who outsource the duties for maintenance of external lighting to the Office of Public Works (OPW), a government owned service organisation providing Estate Portfolio Management and Flood Risk Management Services across Ireland.

### **Lighting outside of the Dark-sky Park**

Public lighting in surrounding villages and small towns is managed by Mayo County Council who outsource to a public maintenance contractor, Electric Skyline. We have worked closely with both parties to ensure that policy and planning for public lighting in these areas will be managed in accordance with the objectives of this plan.

It should be noted that the proposed Dark-sky Park does not have the statutory power to request that local residents, businesses or organisations replace existing external lighting. However, we have developed a plan of education designed to influence the local community to encourage change as the awareness of potential light pollution is increased.

### **Light Management Policy Statements**

1. To continue to improve existing lighting fixtures on the two properties within the Dark-sky park to achieve an objective of 100% compliance within the next two years, providing the fixtures continue to meet health & safety obligations and regulations. This policy exceeds the requirement for 90% compliance within a five year target.
2. Any future replacement of existing fitted within the park properties thereafter shall maintain or exceed the dark-sky guidelines.

3. All outdoor lighting fixtures with the park properties must be fully shielded and make appropriate use of timers and motion sensors.
4. To ensure that the correlated color temperature of lamps in outdoor lighting within park property shall not exceed 4000 Kelvins.
5. To adopt a policy of not illuminating previously unlit areas of park owned land, unless specifically for issues of human or animal safety and or welfare.
6. To adopt a policy prohibiting illuminated signs within the Dark-sky Park. To improve the visibility of signs after dark, their location, colour scheme, and material should permit reading the sign with flashlights or existing lighting.
7. To maintain a self-imposed curfew of zero lighting on Park property lighting when buildings are not in use. Any future security camera arrangements should be installed using infa-red lighting or motion sensor lighting only.
8. To continue to actively engage with local residents in the surrounding towns and areas of the Dark-sky park, providing advice and guidance on good lighting practices that are dark-sky compliant. In particular, to ensure that no lighting will be allowed to be projected into the dark-sky park from adjacent property owners.
9. To continue our SQM sky monitoring programme to ensure the existing sky quality does not diminish and maintain records and an annual report to demonstrate this monitoring.

10. To continue active engagement with Mayo County Council to request improvement or adaption of street lighting within the surrounding villages of the proposed dark-sky park. Such changes might include, but not be limited to; proposed retrofit/replacement, timing alteration, reduction in wattage.
11. To actively encourage all residential and commercial properties surrounding the Dark-sky Park to adopt a policy of zero, or to reduce as far as practicable, exterior lighting after 22.30 hours. This should not inhibit the need for businesses to manage out-of-hours duties in accordance with health and safety legislation.
12. The policies identified in this Light Management Plan should in no way endanger human or farm livestock by restrictive lighting practice.