



## Royal Commission for AlUla Resolution Regarding Outdoor Lighting Requirements

No. C/15/25/1, dated 26/12/1446H, corresponding to 22/06/2025G

**The Board of the Royal Commission for AlUla,**

**By the powers and authorities legally vested in it;**

Upon perusal of Clauses (Third) and (Fourth) of Royal Order No. A/38, dated 29/1/1442H;

Upon perusal of paragraphs (4) and (20) of Article (7) of the Statute of the Royal Commission for AlUla issued under Clause (First) of the aforementioned Royal Order;

Upon perusal of Paragraph (3) of Article (5) of the Law of Municipalities and Rural Areas issued by Royal Decree No. M/5, dated 21/02/1397H;

Upon perusal of Articles (2) and (3) of the Regulation of Penalties for Municipal Violations issued under Council of Ministers Resolution No. 92, dated 05/02/1442H; and

Pursuant to the Commission's strategic objectives to develop its geographical scope and enhance the quality of the work and services it provides, and in pursuit of reducing visual pollution, preserving visual identity, and protecting the nighttime environment;

**Hereby resolves the following:**

**First:** Approve the Technical Guide for Outdoor Lighting, in the attached form.

**Second:** The fine for violations resulting from non-compliance with the Technical Guide referred to in clause (First) of this Resolution shall be as follows:

Violation	Unit	Party Responsible for the violation	Extent of the Impact	Notification	Correction Period after Notification	Fine Amount (SAR)	Procedure in Case of Repetition	Clarification
Violation of the provisions of the Technical Guide for Outdoor Lightning	Per building	Owner	Not severe	Applicable	14 days	3000	Double the fine	With the correction/removal of the violation at the violator's expense*

\* With due consideration to Article (3/2) of the Implementing Rules for the Regulations on Penalties for Municipal Violations, issued by the Minister of Municipal and Rural Affairs and Housing under Decision No. 4300204526 dated 12/03/1443H.

**Third:** This Resolution shall be implemented in phases to be announced on the Commission's website. Each phase shall have a time limit prior to its application of not less than 30 days.



**Fourth:** This Resolution shall not prejudice the Implementing Rules for the Regulations on Penalties for Municipal Violations issued by the Minister of Municipal and Rural Affairs and Housing under Decision No. 4300204526, dated 13/03/1443H, and the Table of Penalties for Municipal Violations issued under Ministerial Decision No. 4400905854, dated 19/11/1444H, insofar as they do not conflict with the provisions of this Resolution.

**Fifth:** This Resolution, along with the Technical Guide, shall be published in the Official Gazette and on the Commission's website. It shall enter into force as of the effective date of the first phase.

**Sixth:** The Commission shall take all necessary measures to ensure compliance with the provisions of this Resolution.

**Seventh:** This Resolution shall be communicated to those required to implement it.

# AlUla

Outdoor Lighting Instructions  
Royal Commission for AlUla



### Revision Update

1st Edition

1st Revision

Document Name	Edition	Edition Date	Revision	Revision Date
AlUla Guidelines for Outdoor Lighting Instructions	01	2025	01	2025



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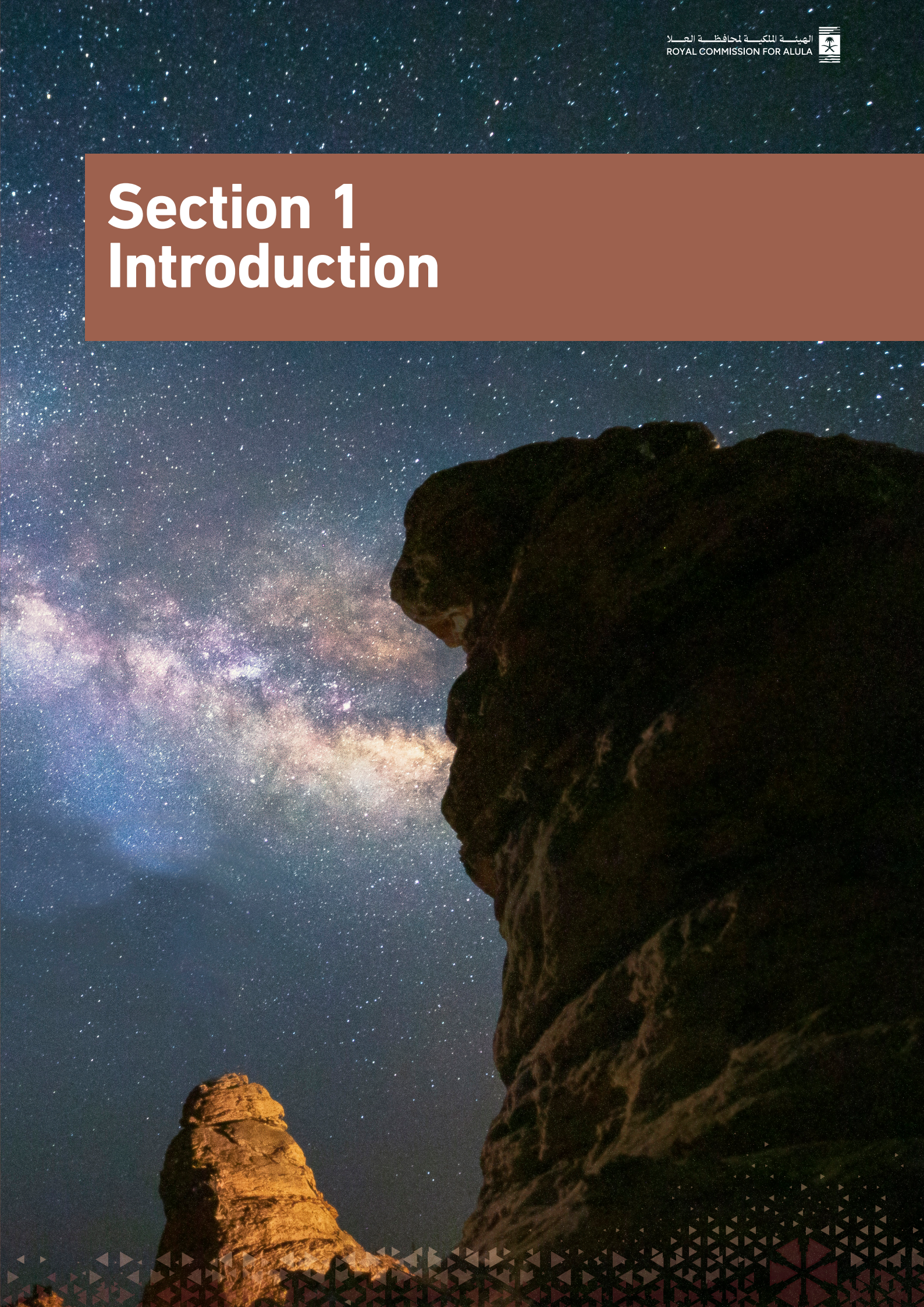
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# Section 1 Introduction



## 1.1 General Provisions

- 1.1.1 This Guide aims to specify outdoor lighting requirements for all buildings located within the Commission's geographical boundaries, including public and private properties within those boundaries, and it must be complied with by all those concerned with its provisions.
- 1.1.2 All outdoor lighting within the Commission's geographical boundaries must conform to this Guide and all other relevant applicable laws and regulations.
- 1.1.3 The Commission may exempt any person from complying with any requirement stipulated in this Guide based on that person's request or on its own initiative.
- 1.1.4 The purpose of this Guide is to:
- set out the requirements for outdoor lighting within the Commission's geographical boundaries;
  - reduce light pollution and sky glow, and improve the nighttime environment;
  - protect the natural environment from the adverse effects of light pollution; and
  - conserve energy and resources.

## 1.2 Scope and Application

- 1.2.1 This Guide applies to outdoor lighting of existing buildings and their appurtenances located within the geographical boundaries falling under the Commission's jurisdiction, including public and private properties. This includes lighting installed before or after the effective date of this Guide, whether mounted on buildings or their appurtenances, such as poles, the ground, or any other location. However, this Guide does not apply to the following lighting sources:
- Outdoor lighting installed as part of a new development or other development works for which the lighting specifications were approved as part of a permit or license in accordance with the relevant applicable laws and regulations.
  - Public sports fields and stadiums.
  - Street or public space lighting owned or operated by the municipality or other government agencies.
  - Light generated by flame or fire.



## 1.3 GENERAL LANGUAGE RULES

### 1.3.1 Meaning and intent

- i. Except as otherwise provided in this document, the words, terms and phrases used must be construed according to the plain meaning of such words, terms and phrases in their common and approved usage.
- ii. If words, terms or phrases are specifically defined in a section of this document, that particular definition must govern the construction of such words, terms or phrases.

### 1.3.2 Grammatical Interpretation

- iii. Words used in the present tense include the future tense, whenever appropriate within the context.
- iv. Words used in the singular number include the plural. Words used in the plural include the singular, unless the context of the specific usage clearly indicated otherwise.

### 1.3.3 Mandatory and Discretionary Terms

- v. The words "must" and "will" are mandatory, establishing a duty or obligation to comply with the specific provision.
- vi. The words "must not", "will not" and "not permitted" are mandatory and represent the prevention of action.
- vii. The words "may" and "should" are permissive.

### 1.3.4 Conjunctions

Unless context clearly suggests otherwise, conjunctions must be interpreted as follows:

- viii. "And" indicated that all connected terms, items, conditions, provisions, and events apply.
- ix. "Or" indicated that one or more of the connected terms, items, conditions, provisions, or events apply.

### 1.3.5 Text Controls

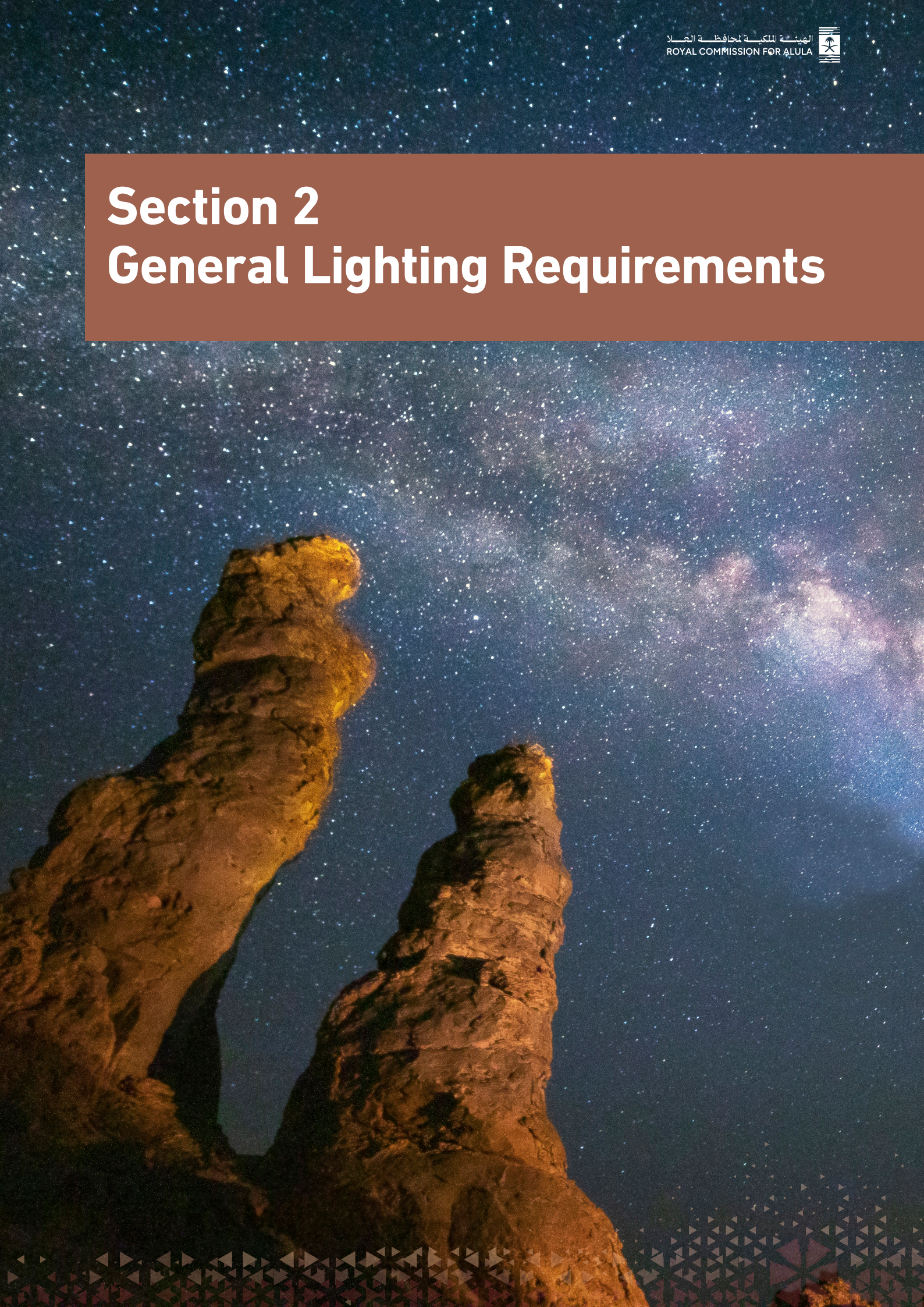
- x. In the event of a conflict or inconsistency between the text of this document and any illustration, figure, table, heading, caption or map, the text takes precedence.
- xi. Unless otherwise specifically indicated, lists or items or examples that use terms such as "for example", "including" and "such as" or similar language are intended to provide examples and are not an exhaustive list of all possibilities.
- xii. All Architectural dimensions annotated within figure diagrams are for reference only, unless otherwise mentioned in the guideline text itself.





# Section 2

# General Lighting Requirements



## 2.1 General Requirements for Outdoor Lighting

2.1.1 All outdoor lighting shall:

- a. have a maximum Color Temperature (CT) of 2700K;
- b. have a minimum Color Rendering Index (CRI) of 80;
- c. be a Light -Emitting Diode (LED) products with a light source efficacy of at least 120 lumens per Watt. (lm/w);
- d. be mounted as low as possible, and in any case, no higher than the roofline, and be in scale with the heights of adjacent buildings and surroundings;
- e. be positioned so as not to cause distraction or hazards to vehicular traffic; and
- f. not include facade lighting except as determined by the Commission.

## 2.2 Lighting Zones

2.2.1 Outdoor Lighting must be in compliance with the requirements that apply to the relevant Lighting Zone. The Lighting Zones are as set out in Table 1 below, and as detailed in Appendix A.

Table 1: Lighting Zones

LIGHTING ZONES	AREA DESCRIPTION
LZ0	Undeveloped rural areas, desert areas, protected wildlife areas, and heritage areas.
LZ1	Rural areas and low-density residential areas.
LZ2	Suburban and peripheral urban areas, larger settlements, commercial and residential districts with moderate night-time activity.
LZ3	Central urban areas with high residential density, and areas with high night-time commercial and leisure activity in the central and southern parts of AIUla County.



## 2.3 Lighting Controls and Lighting Curfew Periods

2.3.1 Outdoor lighting may not be operated during daylight hours, and it must be switched off or dimmed during curfew periods as specified in Tables 2 and 3.

2.3.2 If used for security or safety purposes, it is permitted for lights to be controlled by a motion sensor, provided that the lights turnswitch off automatically after tenwithin a period not exceeding 10 minutes.

2.3.3 Exceptions to the curfew requirements:

- Buildings with a single external light required for safety and security purposes.
- Temporary decorative lighting for special occasions and public holidays. Businesses that operate 24 hours or open before sunrise.
- Businesses that operate 24 hours or open before sunrise.
- Mosques during the month of Ramadan, and if the Isha prayer time falls within the curfew period during certain months.

Table 2: Curfew Period in Residential Buildings

LIGHTING ZONES	LZ0	LZ1	LZ2	LZ3
<b>CURFEW TIME (START):</b>	10:00PM	10:00PM	12:00AM	12:00AM
Action Required	Turn off	Turn off	Turn off	Turn off or dim by at least 40%
Curfew Time (End)	1 hour before sunrise	1 hour before sunrise	1 hour before sunrise	1 hour before sunrise

Table 3: Lighting Curfew Periods in Non-Residential Buildings

LIGHTING ZONES	LZ0	LZ1	LZ2	LZ3
<b>CURFEW TIME (START):</b>	11:00PM	11:00PM	11:00PM OR 1HR AFTER CLOSING	12:00AM OR 1HR AFTER CLOSING
Action Required	Turn off	Turn off	Turn off	Turn off or dim by at least 40%
Curfew Time (End)	1 hour before sunrise	1 hour before sunrise	1 hour before sunrise	1 hour before sunrise

2.3.4 Appropriate controls are needed to ensure that lighting is turned off or dimmed by the start of the applicable lighting curfew period. The type of control used shall depend on whether the lighting is intended to be switched off completely at a specific time, dimmed to a certain level at a specific time, or dimmed up or down in response to a user's presence via sensors. All lighting curfew periods and controls share a goal of minimizing the impact of light on AlUla's flora and fauna, promoting grazing opportunities, while also providing safety and security for pedestrians, bicycle riders, and others.

## 2.4 Upward Light Spill

2.4.1 Outdoor lighting must be designed as cutoff or full-cutoff to prevent light from spilling upwards beyond the horizontal plane. See Figures 1 and 2 for permitted and non-permitted examples.

2.4.2 Lighting fixtures must incorporate shielding as shown in Figures 3 and 4. If a standard fixture is not used, accessories, such as external shields or louvres, can be used to reduce upward light.

2.4.3 Decorative lighting that emits any upward light, such as rope lights or string lights, may be unshielded only in LZ2 and LZ3, provided that the total output is below 300lm. In all cases, shielding is required for any decorative lighting exceeding 300lm.

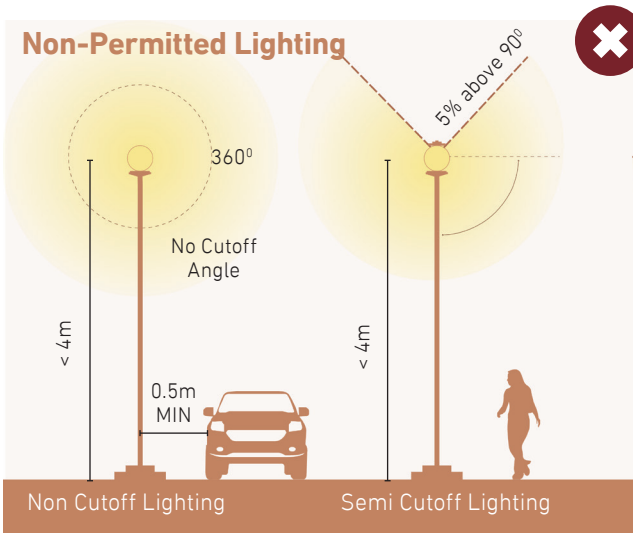


Figure 1: Example of Non Cut Off and Semi Cut off Lighting

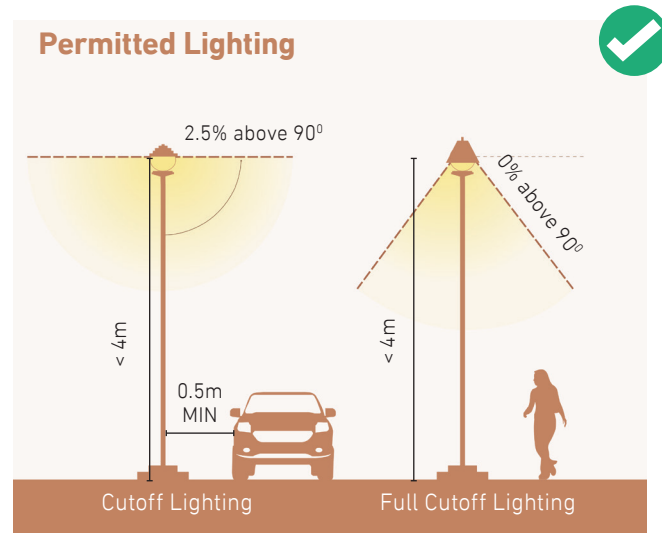


Figure 2: Example of Cut Off and Full Cut Off Lighting

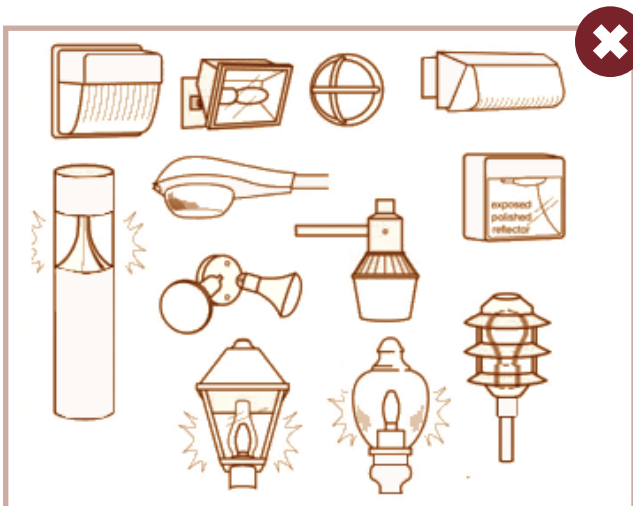


Figure 3: Examples of Non Cut off and Semi cut off Fixtures

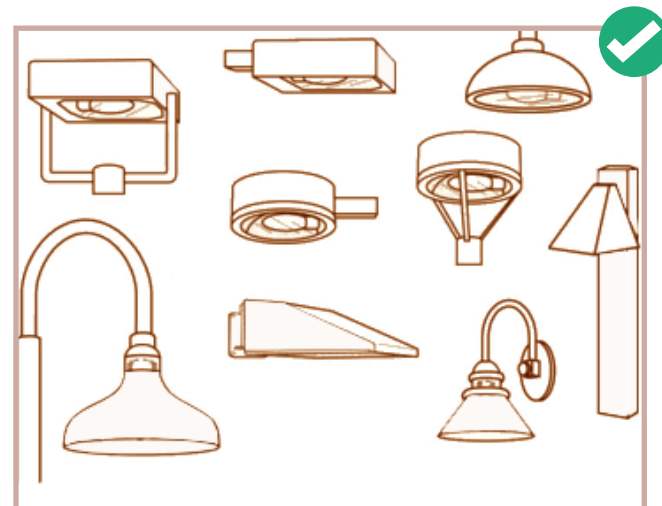
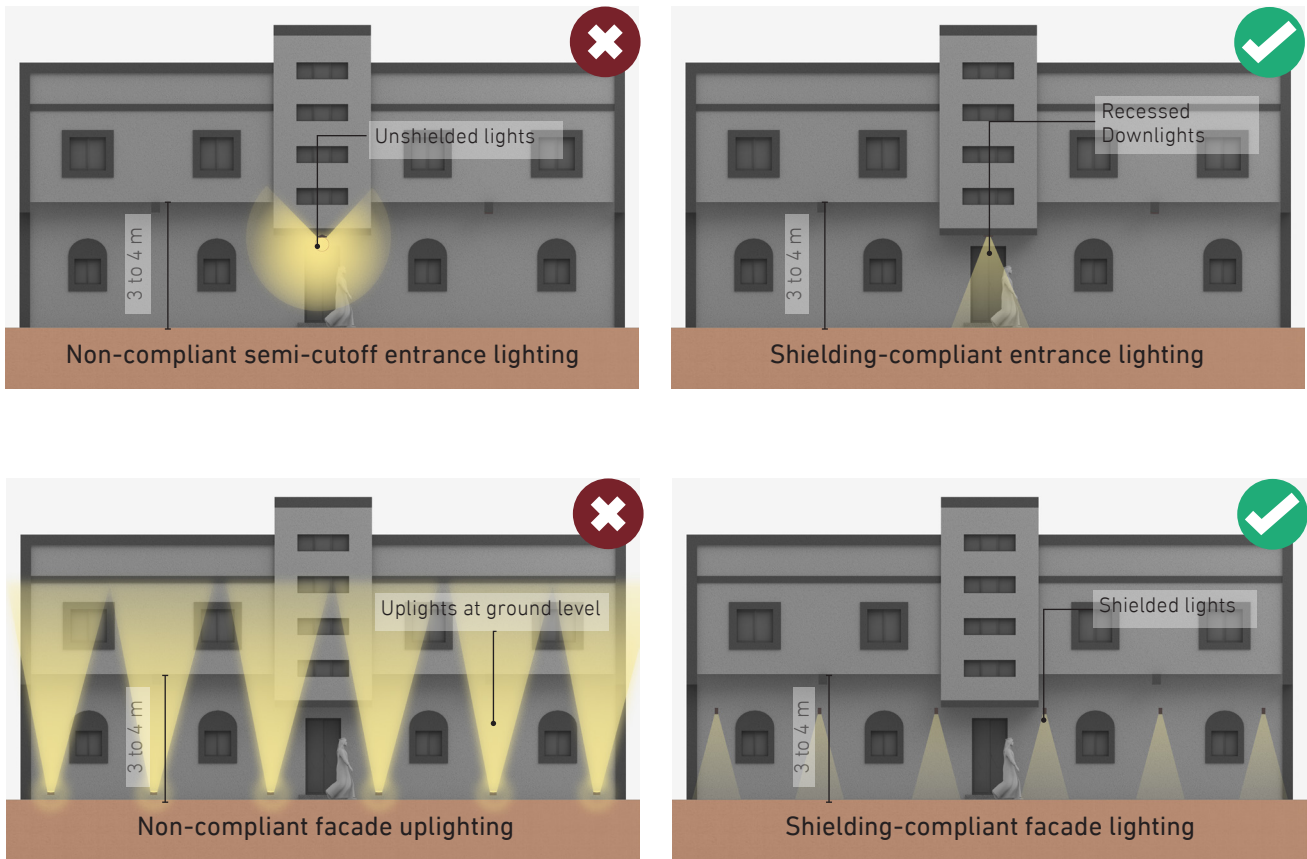


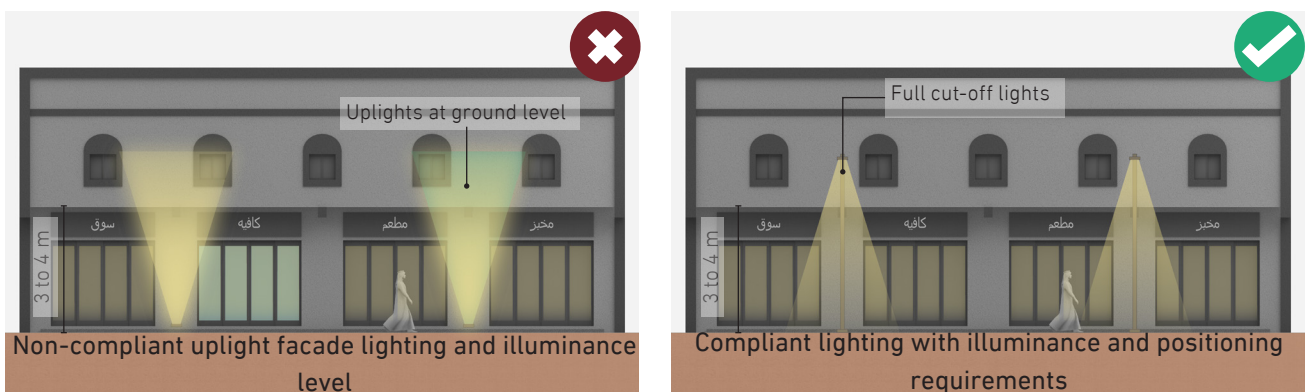
Figure 4: Examples of Full Cut Off Fixtures

### Light Spill Examples of a Residential Building without a Boundary Wall



**Figure 5:** Lighting must not spill beyond the property boundary nor exceed the permitted illuminance level.

### Light Spill and Color Temperature Examples of a Commercial Building



**Figure 6:** Retail premises luminaires must be fitted with shielding and must not use a color temperature cooler than 2700K. Luminaires must also be positioned as low as possible on the building facade.

## 2.5 Glare

- 2.5.1 To prevent unwanted glare, lamps or exposed light sources must be shielded with louvres or other mitigation accessories and installed with regard to possible viewing angles. See Figures 9 and 10 for illustrative examples.
- 2.5.2 Unshielded light sources with a lumen output below 300lm, as well as decorative lighting shown in Figure 22 and detailed in Table 11, are not subject to mandatory shielding measures
- 2.5.3 When using lighting shields or accessories, useful light must be directed to the intended target area, with minimal intrusive and/or back light spill.
- 2.5.4 Upward light pollution shall not be permitted under any circumstances.

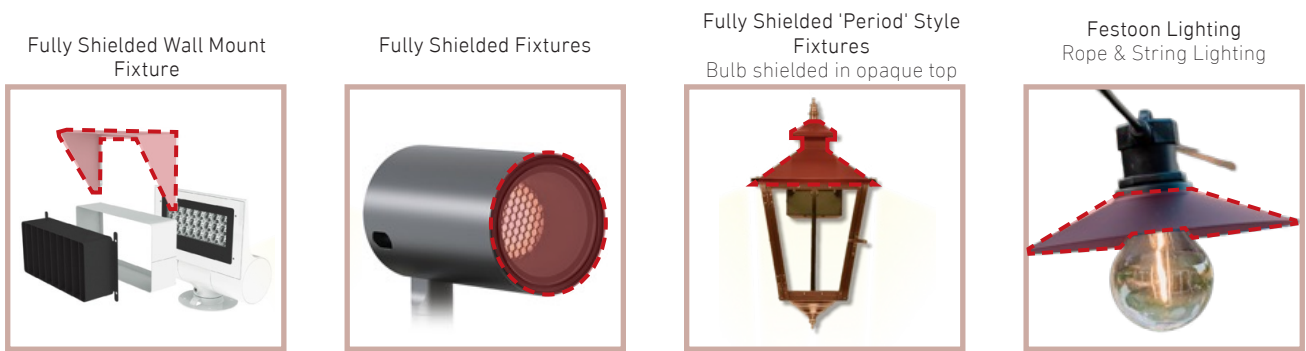


Figure 7: Examples of Shielding to limit/reduce glare

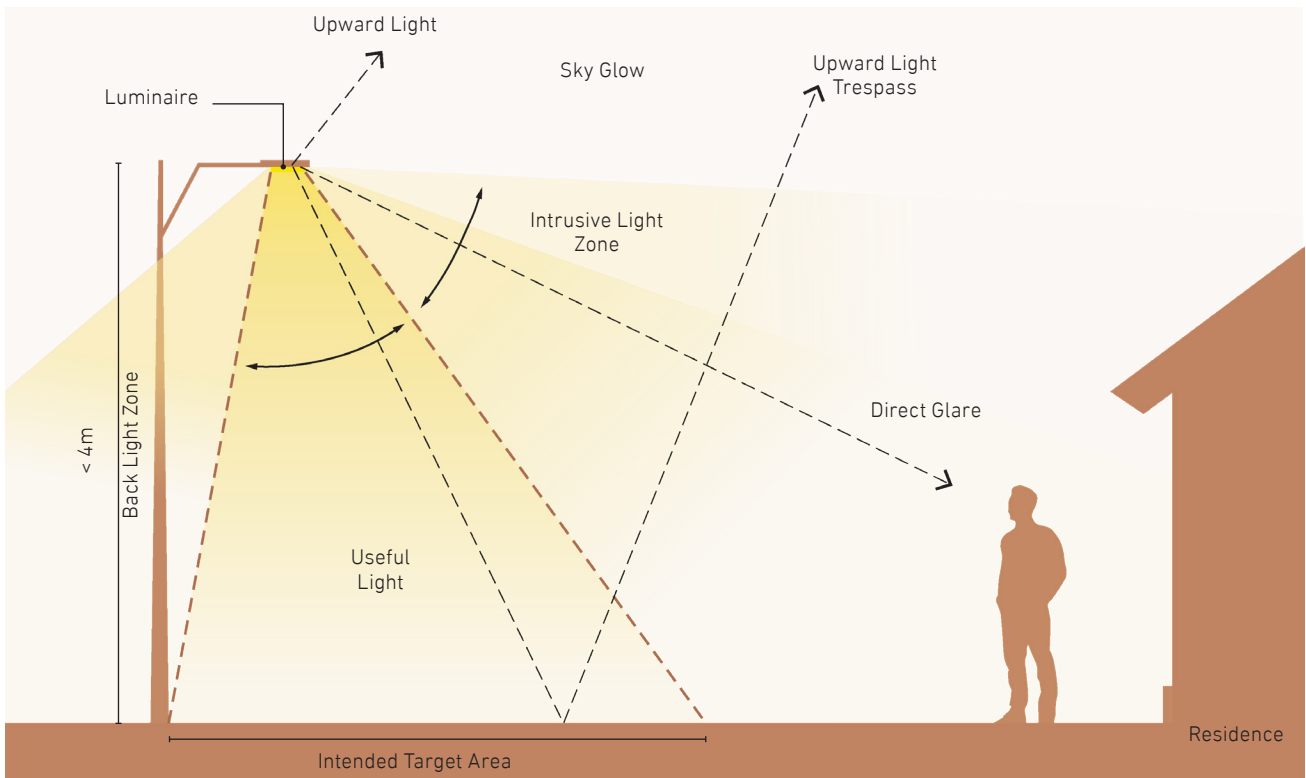
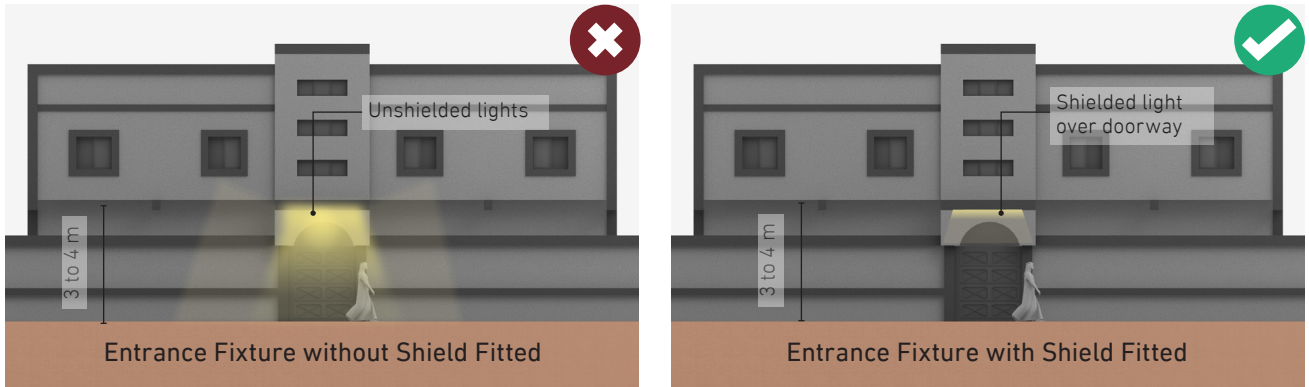
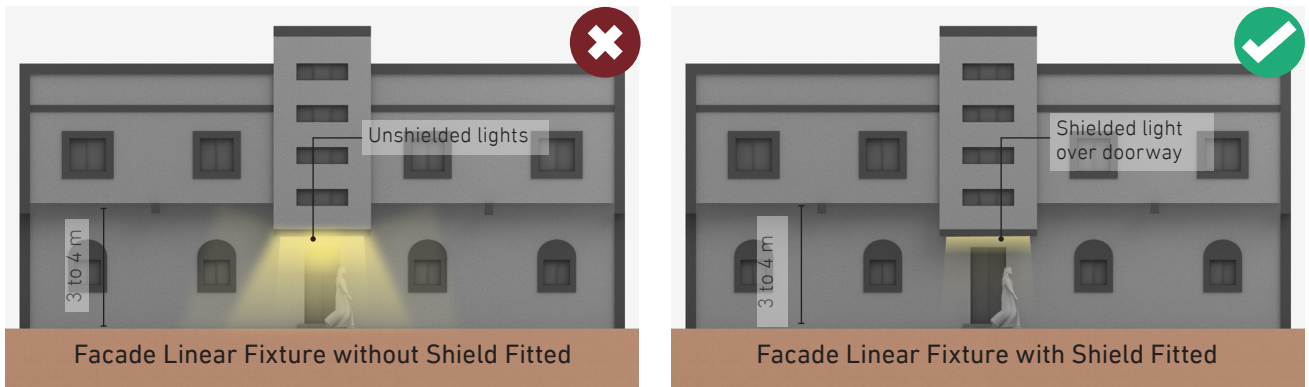


Figure 8: Luminaire Glare & Lighting Spill

Lighting Glare Example of a Residence with Boundary Wall



Lighting Glare Example of a Residence without Boundary Wall



**Figure 9:** Recessed down lights with shielded light source (bulb) to avoid external glare.

Lighting Glare Example of a Retail Building



**Figure 10:** Retail Buildings shall align to lighting glare requirements for all facade fixtures and signage lights.

## 2.6 Light Spill

2.6.1 All Residential and Non-Residential Buildings, which have an interface onto a public road with a pavement, are only allowed a Light Spill of up to 1.5m from the actual plot boundary, as show in Figures 12 and 14. Permissible light levels (Lux) at the plot boundary are listed in Table 4 below. Wherein, for on-plot outdoor lighting is detailed in Section 3.3.

Table 4: Permitted Illuminance Levels within 1.5m of the Plot Boundary.

LIGHTING ZONES	LZ0	LZ1	LZ2	LZ3
Max. vertical illuminance at the plot boundary (Lux).	0.5	1	3	8

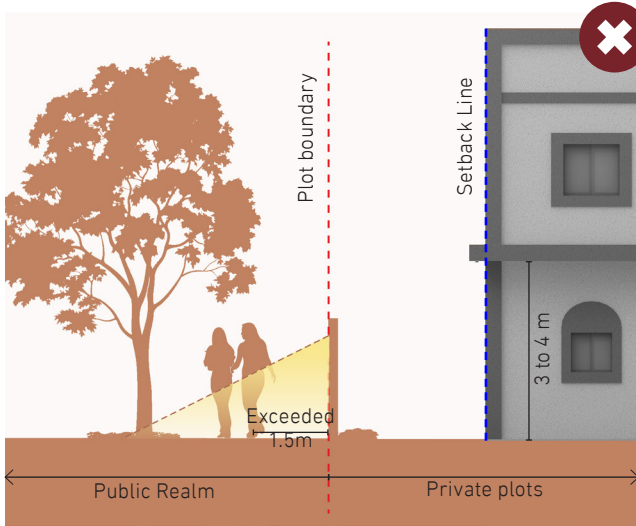


Figure 11: Excessive light spill beyond the plot boundary into the public realm is not permitted.

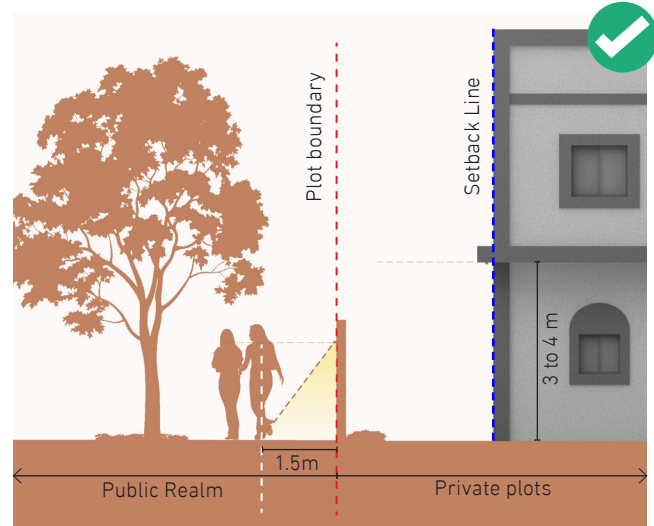


Figure 12: Light spill is permitted up to 1.5m from the actual plot boundary.

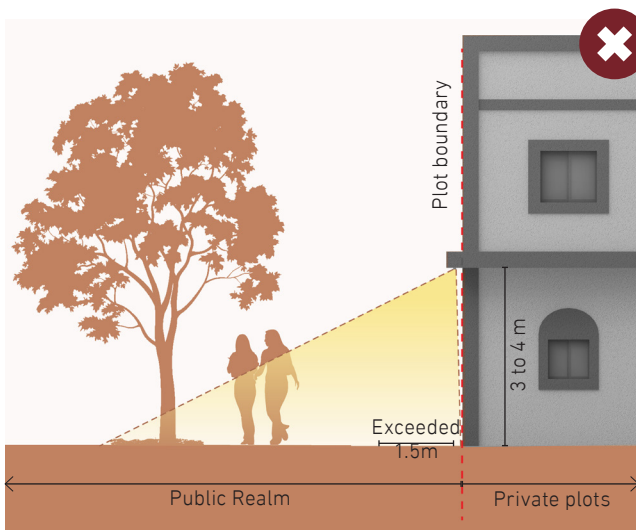


Figure 13: Excessive light spill beyond the plot boundary into the public realm is not permitted.

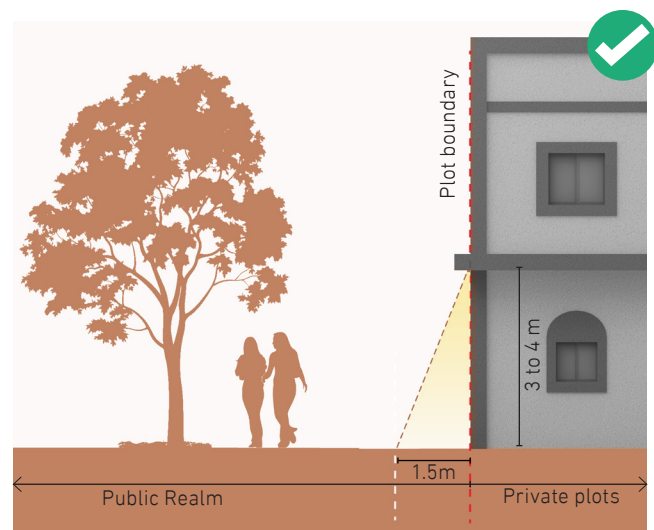
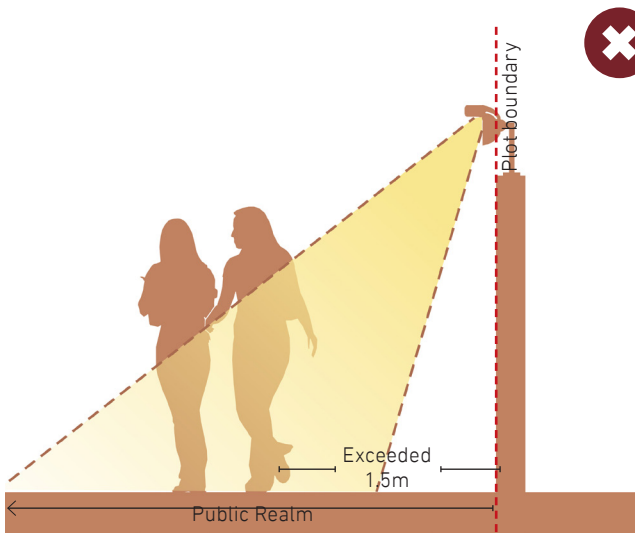


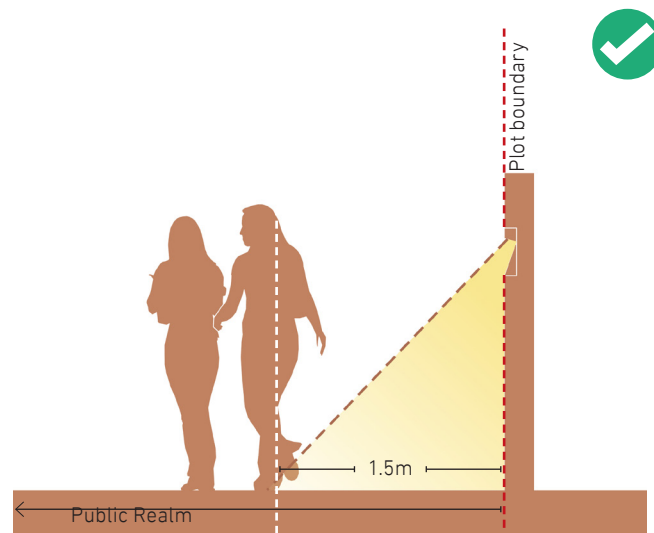
Figure 14: Where a property faces directly onto a paved public road, light spill is permitted up to 1.5m from the actual plot boundary.

2.6.3 Luminaries on residential properties shall not be directed toward adjacent properties.

2.6.4 Light spill beyond the target area is not permitted, as it may cause light pollution in the form of sky glow.



**Figure 15:** Non-Permitted Light Spill



**Figure 16:** Light spill is permitted with appropriate shielding, such as recessed wall lighting

## 2.7 Light Intensity Allowances

2.7.1 Light intensity requirements for buildings must comply with the lighting-zone specific illuminance requirements (see Table 5).

2.7.2 The overall outdoor lighting for any building must not be excessive, and in all cases must not exceed the maximum lumens per lamp (see Table 6) or the total site lumen allowance (see Table 7).

Table 5: Light Intensity Requirements by Building Type

BUILDING TYPE	LIGHTING ZONE	LIGHT INTENSITY REQUIREMENTS
A Small (single-occupancy) residential or small mosque with only 1 light fitting	LZ0	Maximum lumens per lamp (Table 6) only
B Small (single-occupancy) residential or small mosque with 4 or fewer light fittings	LZ1, 2, and 3	Maximum lumens per lamp (Table 6) only
C All other residential buildings and mosques	All Zones	Maximum lumens per lamp (Table 6) and Site Lumen Allowances (Table 7)
D All non-residential buildings	All Zones	Site Lumen Allowances (Table 7) only

Table 6: Maximum Lumen Figures

LIGHT TYPE	LIGHTING ZONES - MAXIMUM LUMENS PER LAMP			
	LZ0	LZ1	LZ2	LZ3
Functional Lighting	600	800	1250	1250
Landscape or Decorative Lighting	Not Allowed	300	300	300



- 2.7.3 The total lumens of all outdoor lighting on a site must not exceed the total site lumen limit. This limit is the sum of the lumen allowances identified in Tables 7 and 8.
- 2.7.4 The total installed luminaire lumens shall be calculated as the sum of the initial luminaire lumens for all luminaires on the exterior of the project site/building, including building-mounted fixtures.
- 2.7.5 Existing lighting on a site must be included in the calculation of total installed lumens.

Table 7: Site Lumen Allowances

LUMEN ALLOWANCES		LIGHTING ZONES				UNITS
		LZ0	LZ1	LZ2	LZ3	
A	Base allowance for all buildings	0	3500	7000	14000	Lumens
B	Additional allowance per meter of outdoor illuminated space at the building	5.5	13.5	27	54	Lumens / m2

- 2.7.6 Base Allowance (Table 7): The initial lumens from which every project's calculation starts, regardless of project size.
- 2.7.7 Additional Allowance (Table 7): The lumens that may be added to a project per square meter of outdoor occupiable area.

**2.7.8** Table 8 sets out the amount of additional lumens that a project may request to add to the site lumen allowances in Table 7. The criteria for these additional lumens are listed below:

**2.7.9** A maximum of three (3) special-use allowances is permitted per project. If a project is eligible for more than three (3) special-use allowances, the applicant must choose his preferred three (3) allowances and exclude the others from the calculation.

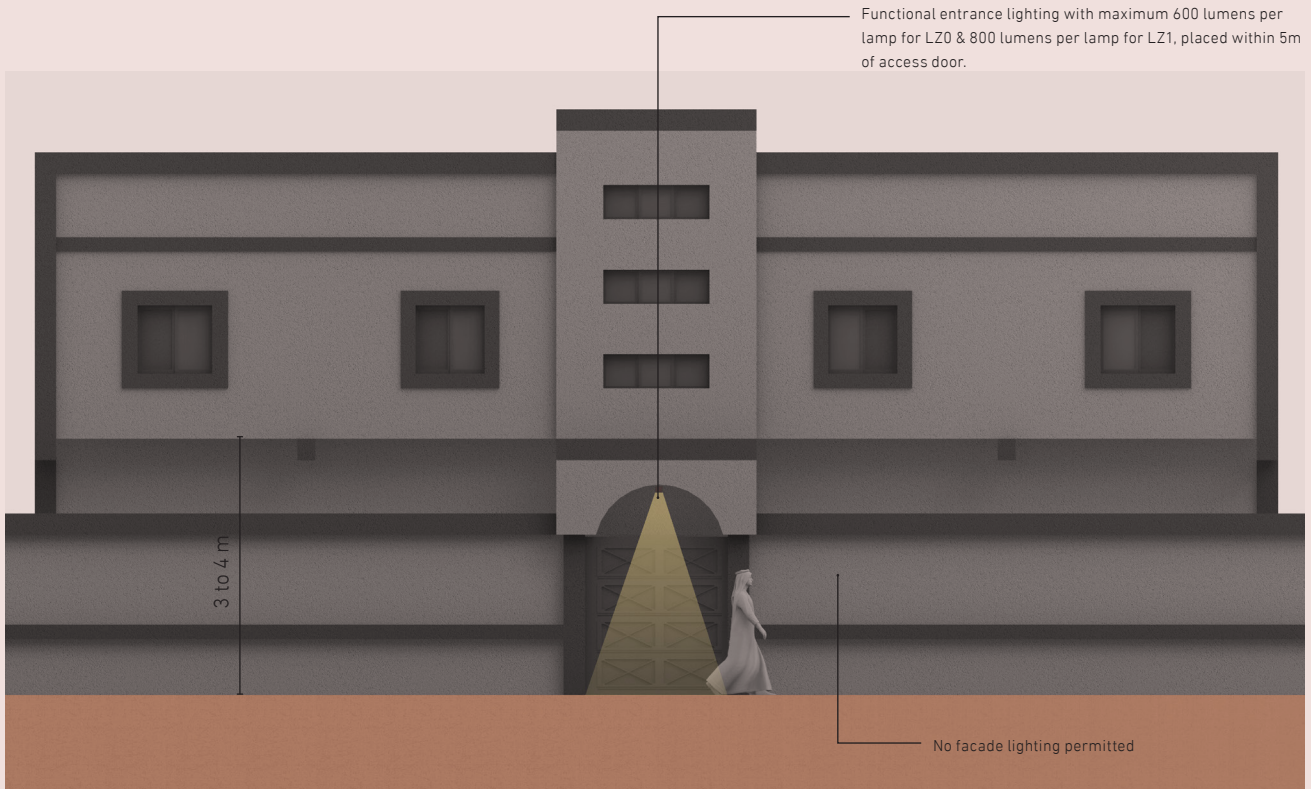
These allowances are optional (not mandatory), meaning that only lumens specifically used for an allowance may be counted towards it. If the luminaires provided for an allowance do not consume all of the permitted lumens, the unused lumens may not be used elsewhere.

- a. Building Entrances & Exits:** This allowance is per door. To use this allowance, luminaires must be within 5m of the door.
- b. Building Facades:** This allowance is lumens per unit area of an illuminated building facade. To use this allowance, luminaires must be aimed at the facade and capable of illuminating it without obstruction or excessive light spill
- c. Sales or Non-Sales Canopies:** This allowance is lumens per unit area for the total area within the edge of the canopy. To qualify for this allowance, luminaires must be located under the canopy, and the canopy roof's transparency must not exceed 25%.
- d. Guard Stations:** This allowance is lumens per unit area of the guardhouse, plus 185m<sup>2</sup> per vehicle lane. To use this allowance, luminaires must be within two (2) mounting heights of a vehicle lane or the guardhouse.
- e. Outdoor Dining:** This allowance is lumens per unit area for the total illuminated hardscape of outdoor dining areas. To use this allowance, luminaires must be within 2m of the perimeter of the outdoor dining area.

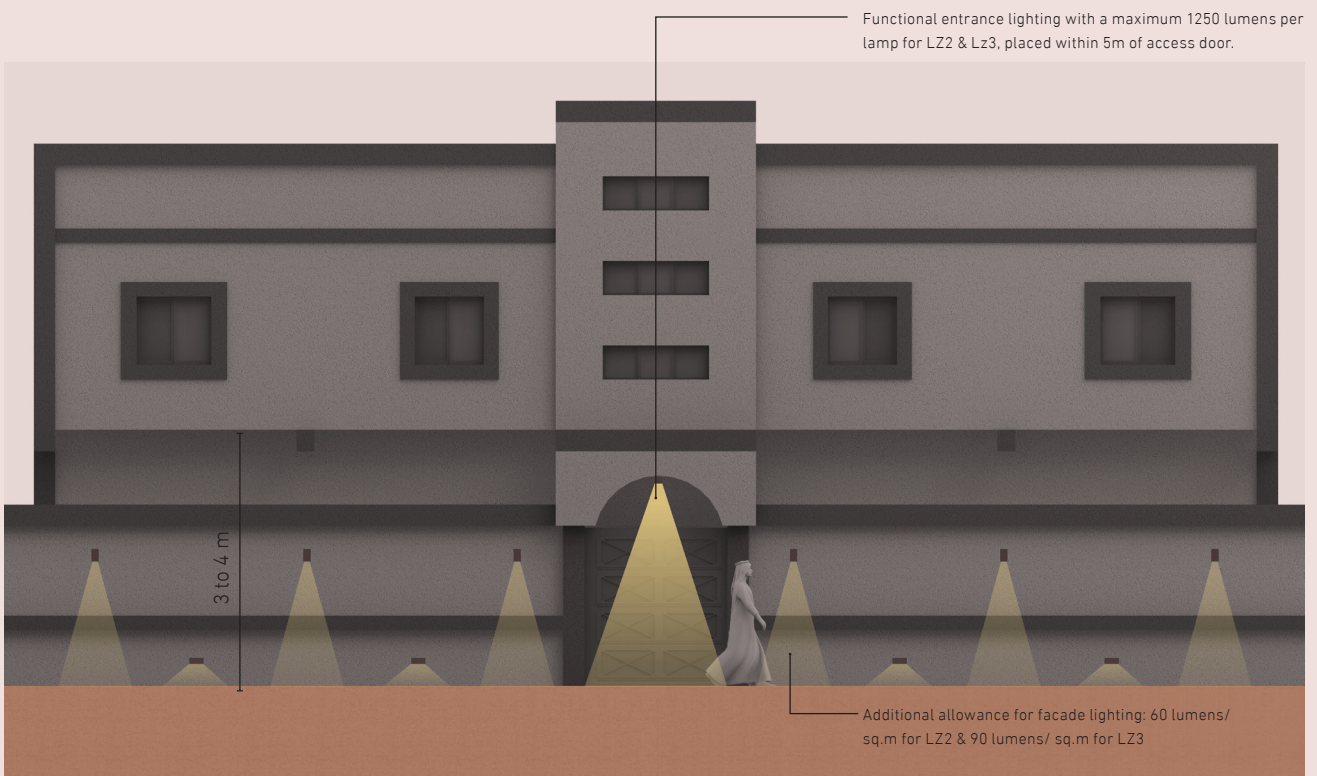
Table 8: Additional Lumen Allowance

ILLUMINATED ITEM	ADDITIONAL ALLOWANCES				UNITS
	LZ0	LZ1	LZ2	LZ3	
Building Entrances & Exits	400	1000	2000	3000	Lumens
Building Facades	0	0	60	90	Lumens / m <sup>2</sup>
Sales/Non-Sales Canopies	0	30	60	90	Lumens / m <sup>2</sup>
Guard Stations	0	60	120	180	Lumens / m <sup>2</sup>
Outdoor Dining	0	10	60	80	Lumens / m <sup>2</sup>

## 2.8 Light Intensity Requirements in Lighting Zones (Residential Example)



**Figure 17:** Lighting for residential buildings (with boundary wall) in LZ0 and LZ1



**Figure 18:** Lighting for residential buildings (with boundary wall) in LZ2 and LZ3

Note: This graphic representation is only to illustrate the lighting zone requirements. All Calculations (as per section 2.10) must be done on an individual property/building basis.

## 2.9 Light Intensity Requirements in Lighting Zones (Commercial Example)



Figure 19: Lighting for commercial buildings in LZ0 & LZ1



Figure 20: Lighting for commercial buildings in LZ2 & LZ3

Note: This graphic representation is only to illustrate the lighting zone requirements. All Calculations (as per section 2.10) must be done on an individual property/building basis..



2.9.1

To assess a building's site lumen allowances (see Table 7), follow the steps below to calculate the maximum permitted lumens for the building and compare them against the building's current lumen level.

- i. Calculate the maximum lumen allowance for the building by:
  - a. measuring the outdoor area that is illuminated in m<sup>2</sup>;
  - b. multiplying that area by the figure shown in row B of Table 7 for the respective lighting zone in which the building is located; and
  - c. adding the total outcome to the figure shown in row A of Table 7 for the respective lighting zone in which the building is located to determine the total building allowance;
  - d. The illuminated items listed in Table 8 are eligible for additional allowances, which can be added to the total building allowance.
- ii. Calculate the lumens produced by the building's existing outdoor lighting by:
  - e. checking the light fittings, lamps, or lamp housings to identify the lumen amount for each light source; and
  - f. multiplying the lumen output by the number of lights of that type. If there is more than one type, the lumen values for each type must be added together to obtain the building's total lumen amount.
- iii. Determine whether the existing outdoor lighting is permitted by:
  - a. comparing the calculated figure for the building in (ii) above with the total building allowance in (i) above. If the figure for the building is higher than permitted, the number of light units must be reduced or the light sources replaced with ones having a lower lumen output.



## 2.10 Lighting Installation Case Study

2.10.1 Working example of the methodology specified in 2.9.1 for a building located in LZ2.

### Example: Residential Building

Light Zone: LZ2

Total Plot Area: 150m<sup>2</sup>

**Step 1A:** To calculate the site lumen allowance: see Table 7 for values.

Allowance A (Base Allowance): LZ2: 7,000 base lumens

A = 7,000 lumens

Allowance B (Area Lumens): 27 lumens per m<sup>2</sup>, LZ2 allowance

B = 27 X 150m<sup>2</sup> (occupiable area) = 4,050 lumens

Total: 7,000 + 4,050 = 11,050 lumens (site lumen allowance)

**Step 1B:** To calculate additional special-use lumens: see Table 8 for values

Allowance C: 2,000 lumens per entrance (LZ2 allowance)

C = 2000 X 1 (number of entrances on the project) = 2,000 lumens

Allowance D: 60 lumens per m<sup>2</sup> of illuminated facade, LZ2 allowance

D = 60 X 40m<sup>2</sup> (size of the project's illuminated facade) = 2,400 lumens

Allowance E: 60 lumens per m<sup>2</sup> of sales canopy space (LZ2 allowance)

E = 60 X 8m<sup>2</sup> (size of the sales canopy on the project) = 480 lumens

Allowance F: 180 lumens per m<sup>2</sup> of the guardhouse area (LZ2 allowance)

F = 180 X 0m<sup>2</sup> (there are no guardhouses on the project) = 0 lumens

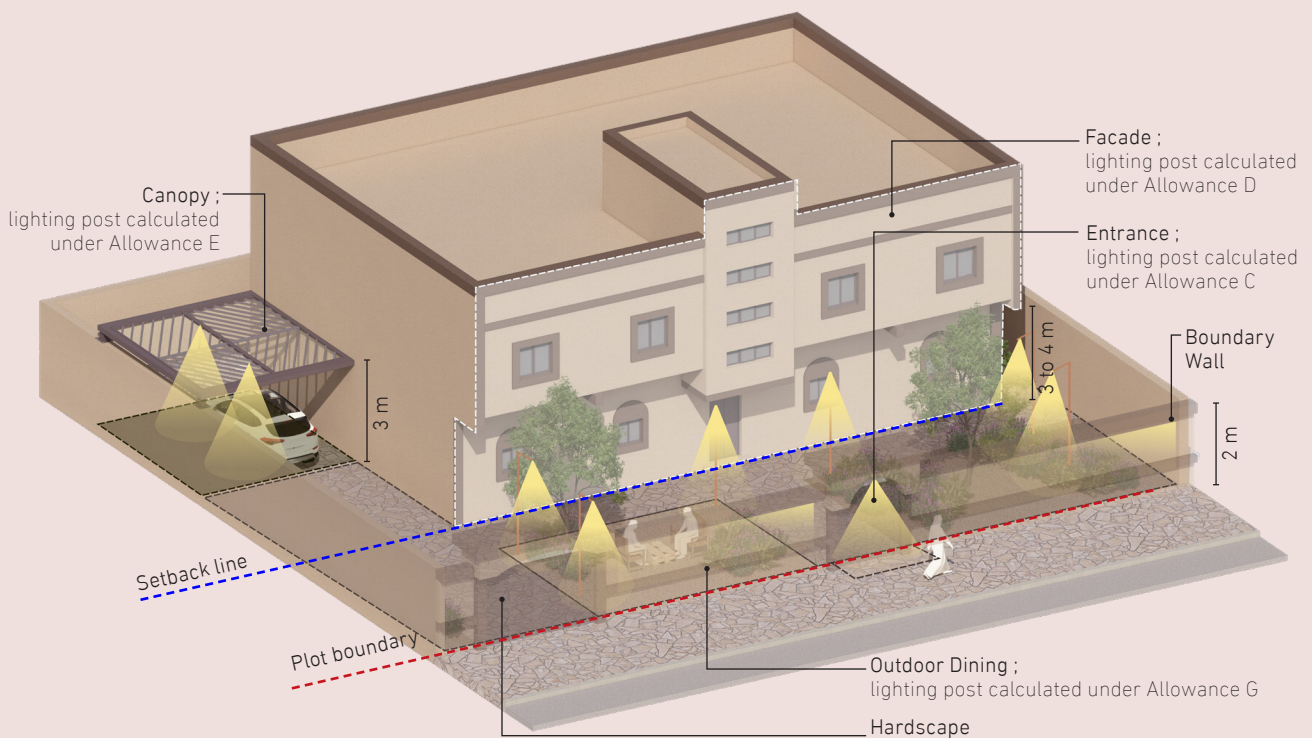
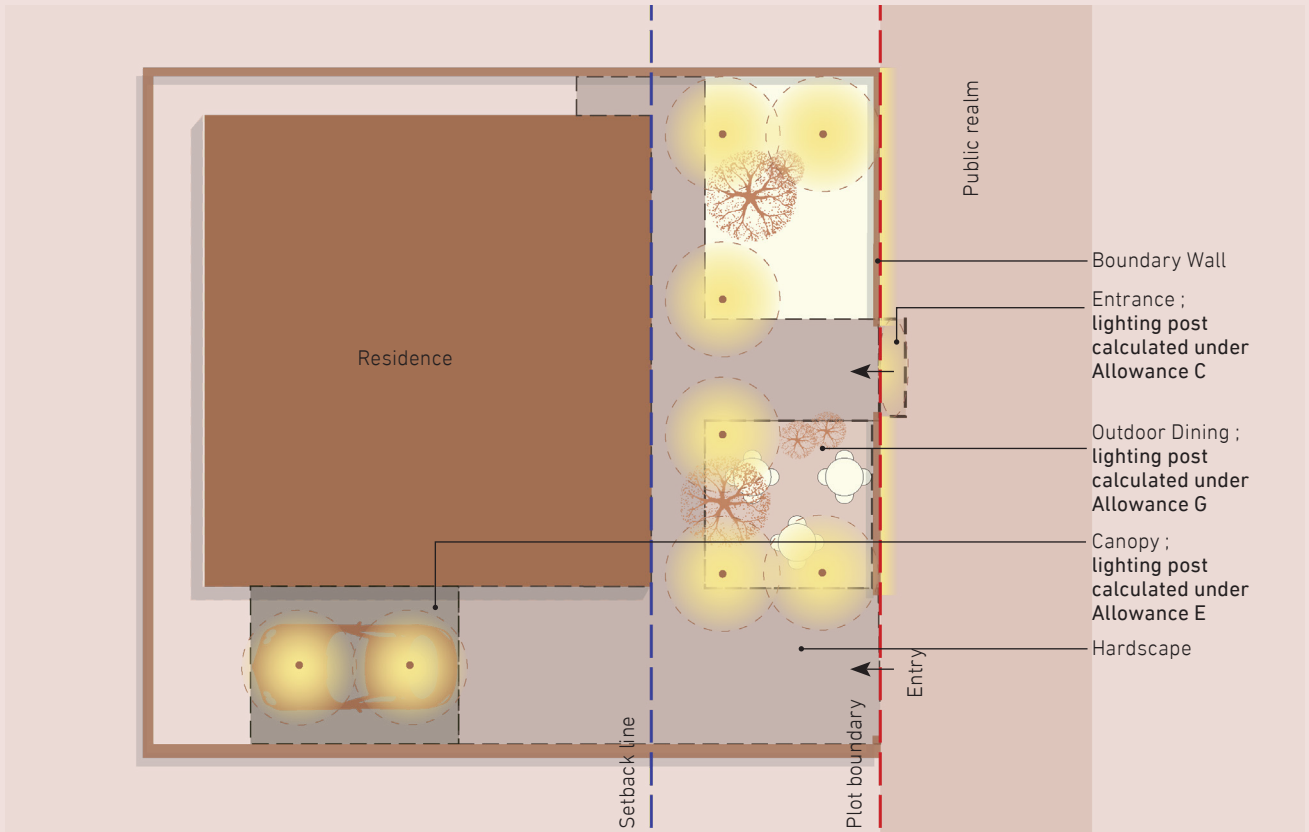
Allowance G: 60 lumens per m<sup>2</sup> of outdoor dining area (LZ2 allowance)

G = 60 X 25m<sup>2</sup> (size of the outdoor dining area) = 1,500 lumens

A maximum of three (3) special-use allowances is permitted per project.

For this project, the three (3) highest lumen allowances shall be selected; therefore, allowances C, D, and G shall be retained.

**The retained special-use permitted allowances are:** C (2,000 lm), D (2,400 lm), G (1,500lm)



**Figure 21:** Working Example of Site Lumen Allowances - Residential Building

Example: **Residential Building**

**Step 2:** Calculate project lumens for each light design.

Table 9: Project Luminaire Table

FIXTURE TYPE	DESCRIPTION	INITIAL LUMENS	NUMBER OF FIXTURES
Type 1	Light Pole	1,200 lm	6
Type 2	Recessed Downlight	960 lm	2
Type 3	Wall Sconce	720 lm	1
Type 4	Linear Wall Light	450 lm/m	10m

Using the information provided in the project layout sample on the left and in Table 9: Project Luminaire Table (above), as well as the allowances calculated in Steps 1A and 1B, Table 10: Sample Project Compliance can be filled out.

Table 10: Sample Project Compliance

LIGHTING ZONE	LZ2			
SITE ALLOWANCE	PERMITTED			
Allowance A+B	11,050 Lumens			
(3) SPECIAL USE ALLOWANCES*	PERMITTED	APPLICABLE LUMINAIRES AND QUANTITY	TOTAL LUMENS	TOTAL LUMENS ABOVE ALLOWANCE
<b>Allowance C:</b> Building Entrances or Exits	<b>2,000 lm</b>	<b>Type 3: (1)</b>	<b>720 lm</b> (720lm x 1)	<b>0 lm above</b> (2,000 - 720 = 1,280 unused or "lost" lumens)
<b>Allowance D:</b> Building Facades	<b>2,400 lm</b>	<b>Type 4: (10m)</b>	<b>4,500 lm</b> (450lm x 10m)	<b>2,100 lm above allowance</b> (2,400 - 4,500 = -2100)  Add to Total Lumens Used Count at Compliance Check
<b>Allowance G:</b> Outdoor Dining	<b>1,500 lm</b>	<b>Type 1: (3)</b>	<b>3,600 lm</b> (1,200lm x 3)	<b>2,100 lm above allowance</b> (1,500 - 3,600 = -2,100)  Add to Total Lumens Used Count at Compliance Check
ALL OTHER LUMINAIRES**	LUMINAIRES LUMENS	QUANTITY	PROCESS	TOTAL LUMENS
Type 1	1,200 lm	(3)	(1,200 x 3)	3,600 lm
Type 2	960 lm	(2)	(960 x 2)	1,920 lm
Type 3	720 lm	(0)	(720 x 0)	0 lm
Type 4	450 lm/m	(0)	(450 x 0)	0 lm
<b>Total</b>				<b>5,520 lm</b>
	SITE ALLOWANCE	TOTAL LUMENS USED	TOTAL OVER/ UNDER	PASS/FAIL
Compliance Check***	<b>11,050 lumens</b>	<b>9,720 lm</b> (2,100 + 2,100 + 5,520)	<b>1,330 lm Under</b> (11,050-9,720)	<b>Pass</b>



**Note\*** Only three (3) allowances may be selected. This sample project has been prepared to retain the three (3) allowances with the largest permitted lumen values. The allowances are optional (not mandatory), as shown in Table 8. For Allowance C, any permitted but unused extra lumens are forfeited.

**Note\*\*** Luminaires that do not apply to the three (3) selected allowances are calculated here. In this project, this includes fixtures in the canopy and hardscape area located outside the boundaries of the outdoor dining area, entrances, and illuminated facades.

**Note\*\*\*** In the final compliance check, the sum of all lumens exceeding the three (3) permitted special-use allowances and the total lumens of luminaires not applicable to the special-use allowances is calculated; this sum is then subtracted from the base allowance calculated in Step 1 (summarized at the top of the table). If the difference is positive, the project passes, as here; if negative, the project fails, and the applicant must find ways to reduce project lumens.





# Section 3

## Specific Technical Guide



### 3.1 Decorative Lighting and Landscape Lighting

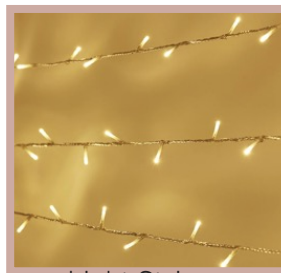
- 3.1.1 Decorative or landscape lighting is not permitted in zone LZ0.
- 3.1.2 Decorative or landscape lighting must comply with all the requirements set out in Section 2 - General Lighting Requirements.
- 3.1.3 Decorative lighting is not permitted at or above the roof line of a building, as per Figures 23 and 25.
- 3.1.4 The use of color-changing lights, moving/flashing lights, or projection is not permitted.
- 3.1.5 The use of colored light is only permitted as determined by the Commission.
- 3.1.6 Rope strings or festoons that emit light in all directions are not permitted.
- 3.1.7 Festoon lighting is permitted provided that lamps are capped to block all upward light and the individual lamp lumens are below 100lm.
- 3.1.8 Light strings are permitted provided that they are rated at less than 0.5W/m and the installation is linear. Wrapping trees with festoons, light strings, or LED tapes is not permitted.
- 3.1.9 Lighting must comply with the requirements and controls for lighting curfew as detailed in Section 2.3 for the respective lighting zone in which the building is located.
- 3.1.10 Landscape and decorative lighting must be fitted with shielding as outlined in Table 11.
- 3.1.11 Lighting fixtures such as light and rope strings are not permitted in LZ1; only fixtures with shielding are permitted there, regardless of the total lumen output.
- 3.1.12 In LZ2 and LZ3, shielding is mandatory only when the lumens exceed 300lm. Examples of decorative lighting are included in Figure 22.



Rope String



Festoon Lighting



Light Strings



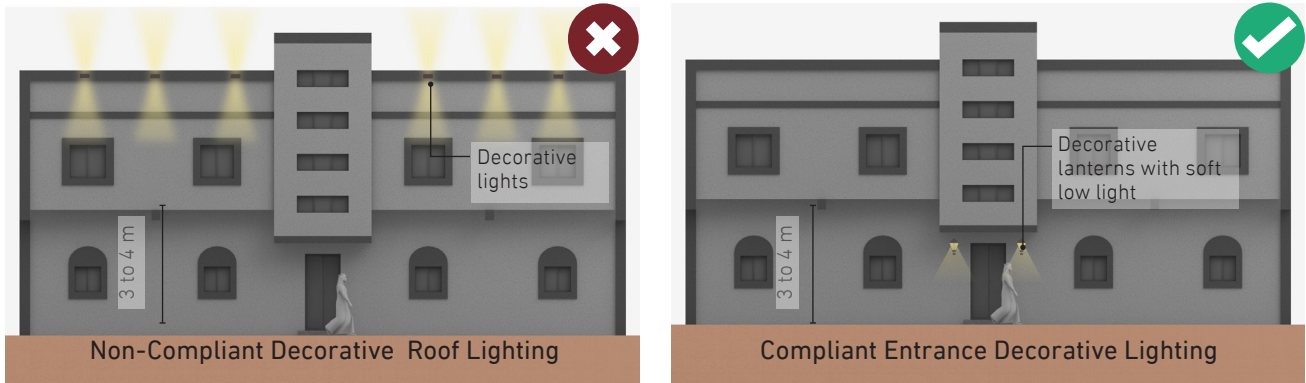
LED Tape

**Figure 22:** Examples of Decorative Lighting Types

Table 11: Shielding Requirements for Landscape and Decorative Lighting

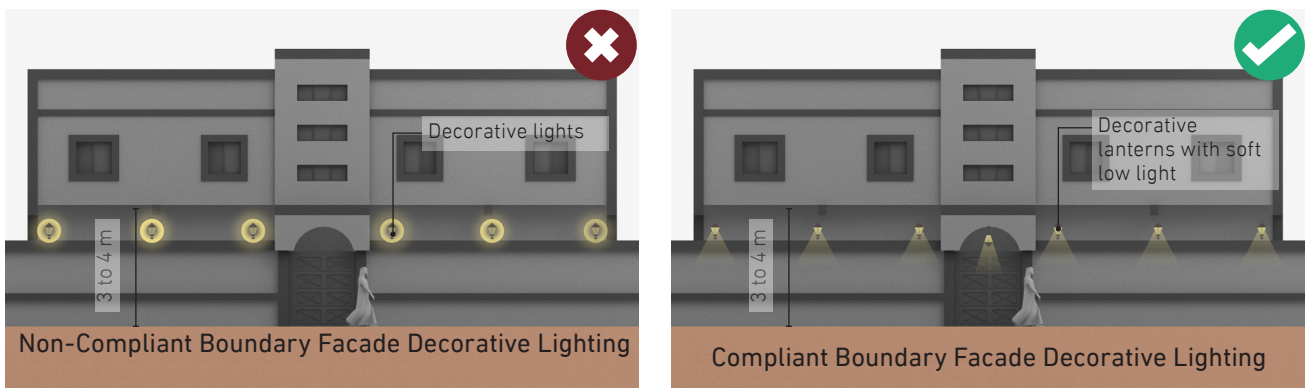
LAMP LUMEN	TYPE OF SHIELDING REQUIRED			
	LZ0	LZ1	LZ2	LZ3
<300lm	Not permitted	Cut off or Full cut off	Unshielded	Unshielded
>300lm	Not permitted	Cut off or Full cut off	Cut off or Full cut off	Cut off or Full cut off

Decorative Lighting Example of a Residence without a Boundary Wall



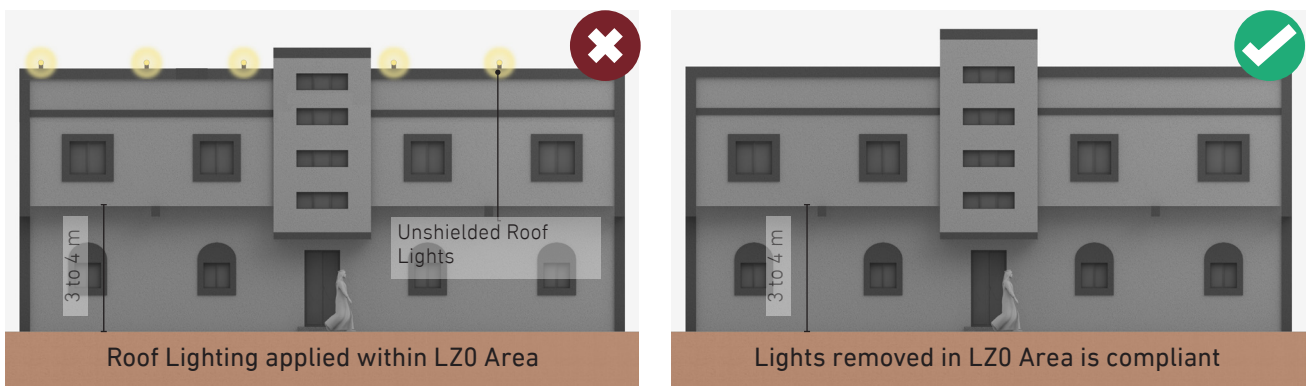
**Figure 23:** Decorative lighting must not allow any upward light, cause glare, or be excessively bright.

Decorative Lighting Example of a Residence with Boundary Wall



**Figure 24:** Shielded decorative lanterns with a soft, low light to prevent any upward light.

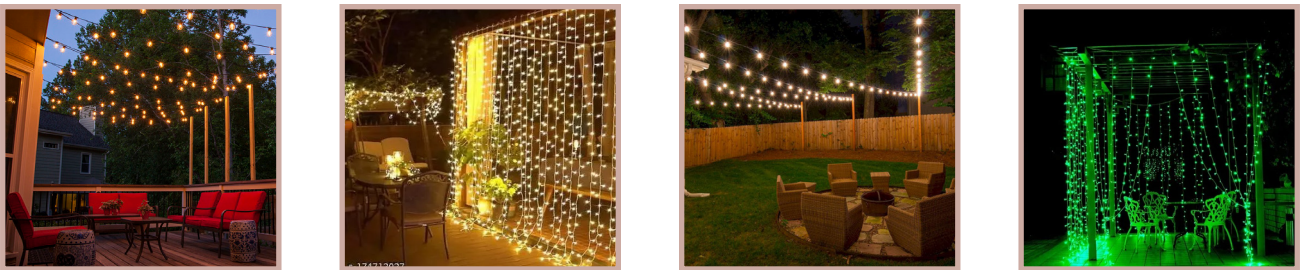
Decorative Lighting Example of a Residence without a Boundary Wall



**Figure 25:** As a general rule, outdoor lighting is not permitted in LZ0.

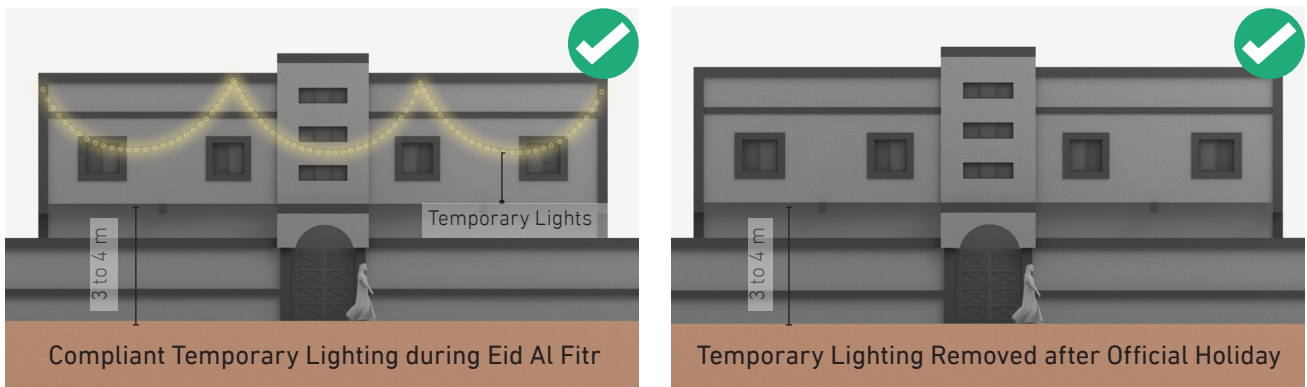
## 3.2 Temporary Lighting

- 3.2.1 Temporary lighting (see Figure 26 for examples) may be operated during official holidays. Lighting installed for Ramadan and Eid Al-Fitr is exempt from requirements related to curfew periods.
- 3.2.2 Aside from government-announced official holidays, the Commission may, at its discretion, approve other temporary lighting.
- 3.2.3 Temporary lighting shall not be permanently installed on buildings (See Figure 27).



**Figure 26:** Examples of Temporary Lighting Fixtures.

### Example of a Residence with Boundary Wall

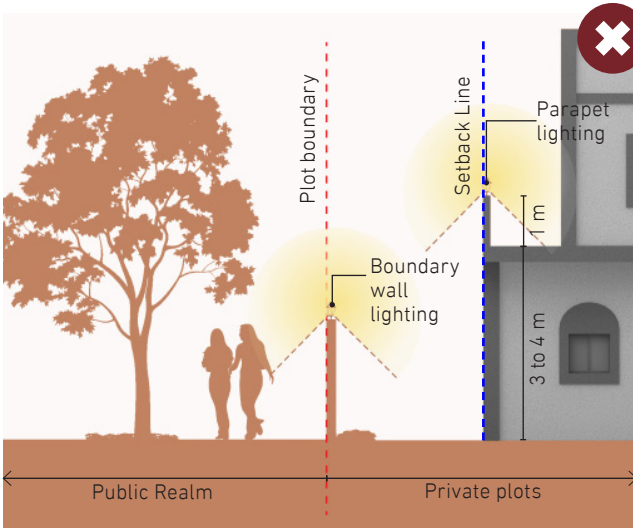


**Figure 27:** Temporary shielded hanging lanterns with a soft, low light to prevent any upward light.

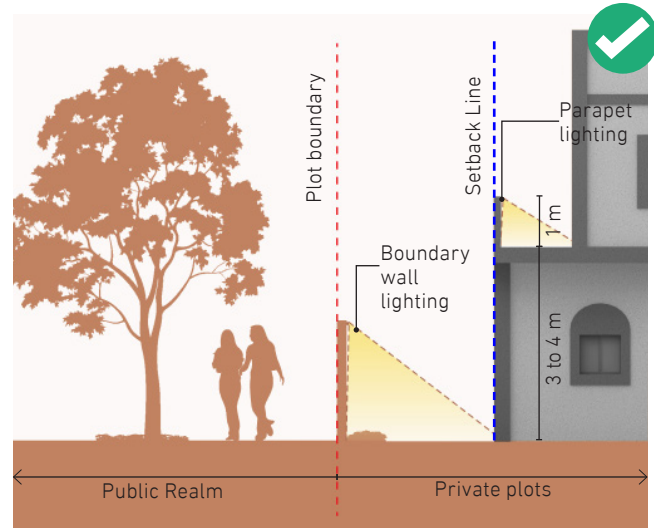
### 3.3 Roof Terraces

3.3.1 On-plot outdoor lighting includes all external lighting within the property boundary, including parapet/roof-top walls lighting and outdoor gardens lighting.

3.3.2 All on-plot outdoor lighting must be installed behind a parapet or wall to ensure it remains invisible from outside the property (see Figures 29 and 30).

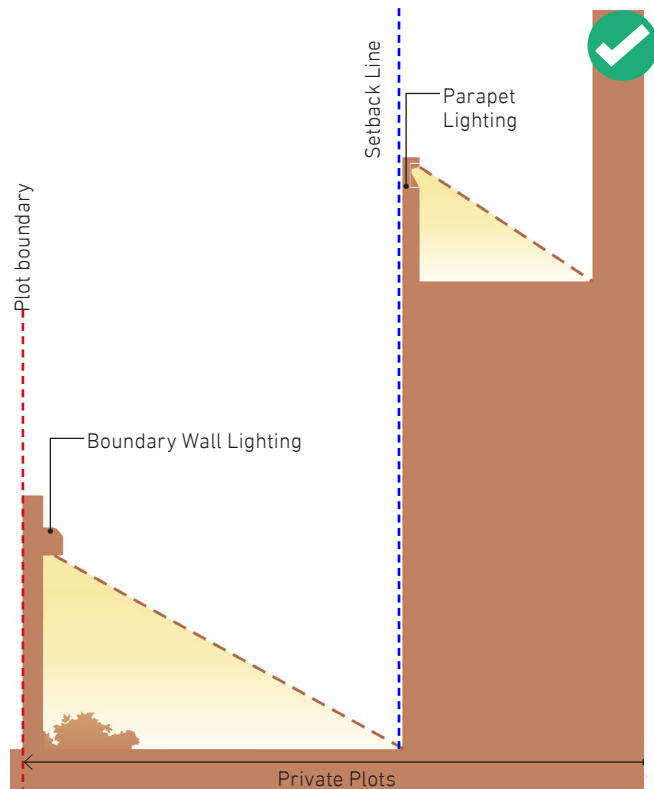


**Figure 28:** Example of unacceptable lighting installed on parapets and walls.



**Figure 29:** Example of acceptable lighting installed on parapets and walls.

#### Roof Terrace Example of a Residence with Boundary Wall



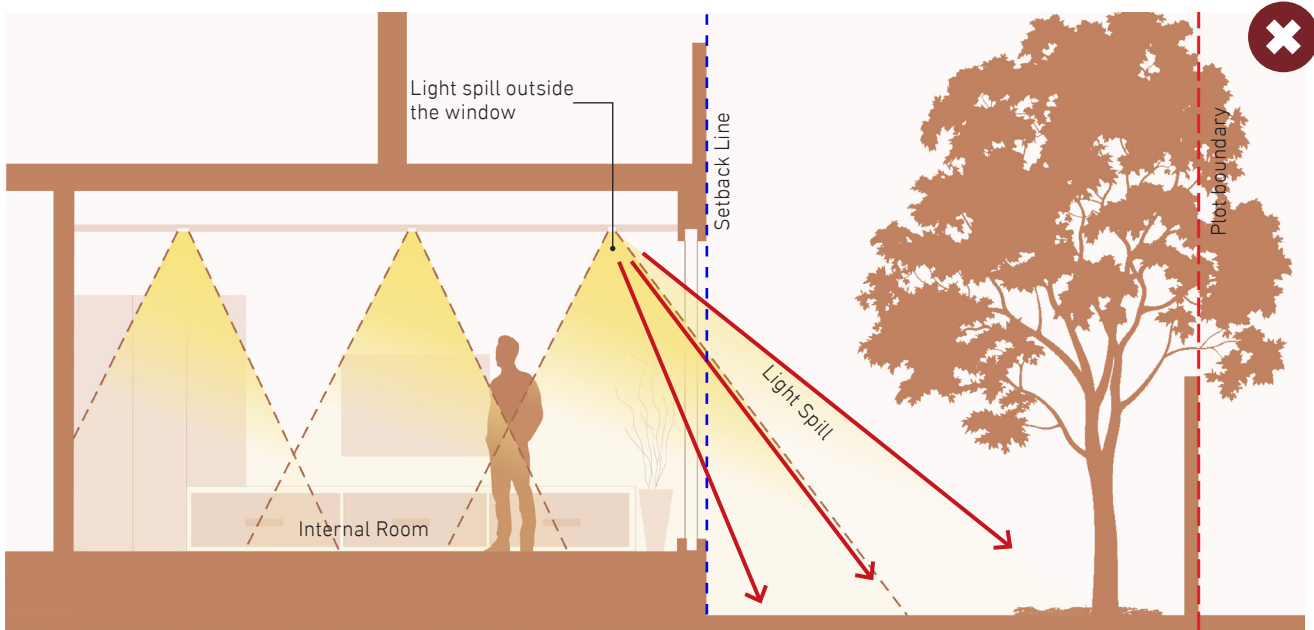
**Figure 30:** Lighting shall not be visible along the roofline or the boundary wall.

### 3.4 Internal Lighting

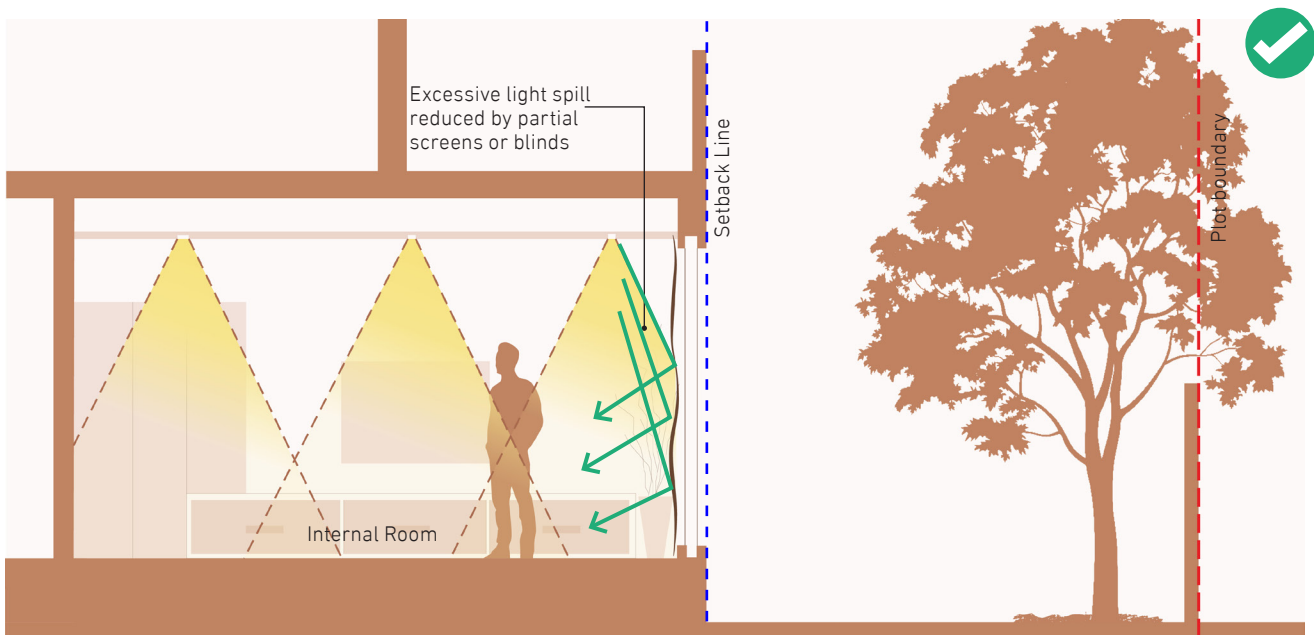
3.4.1 Internal lighting must comply with the light spill requirements set out in Section 2.6.

3.4.2 If the light spill or glare from internal residential lights is excessive, partial screens or blinds must be used (see Figures 31 and 32).

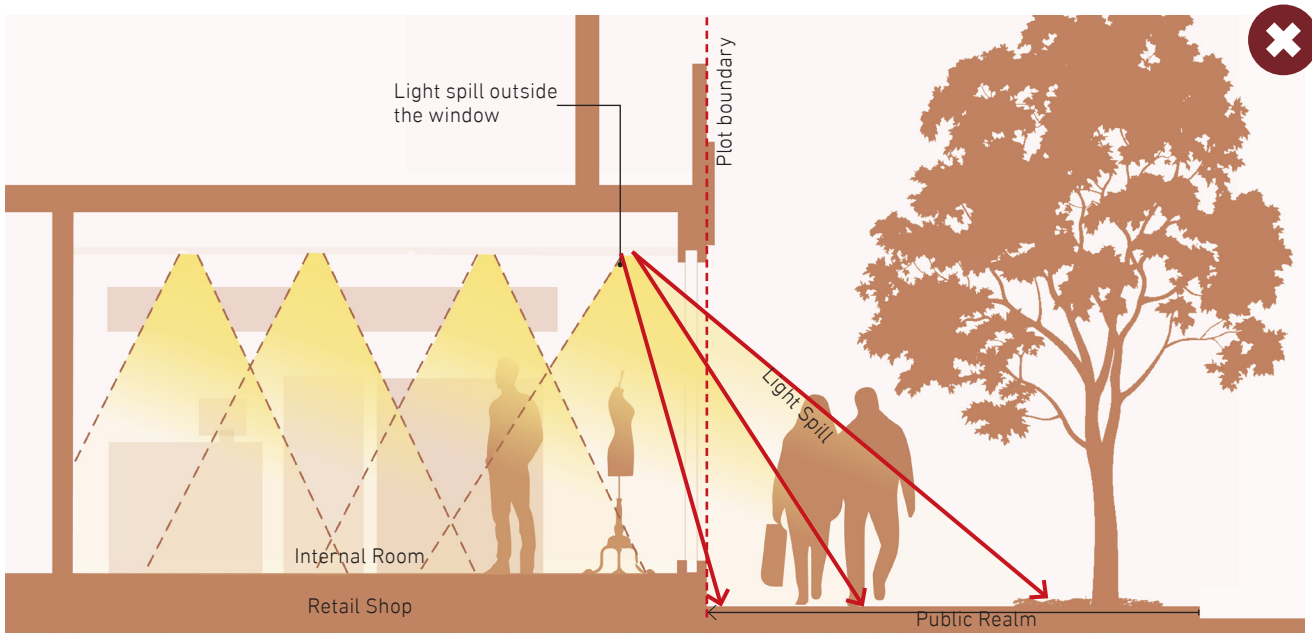
3.4.3 Internal display lighting of commercial buildings must be directed so as to prevent any light spill outside of the building (see Figures 33 and 34).



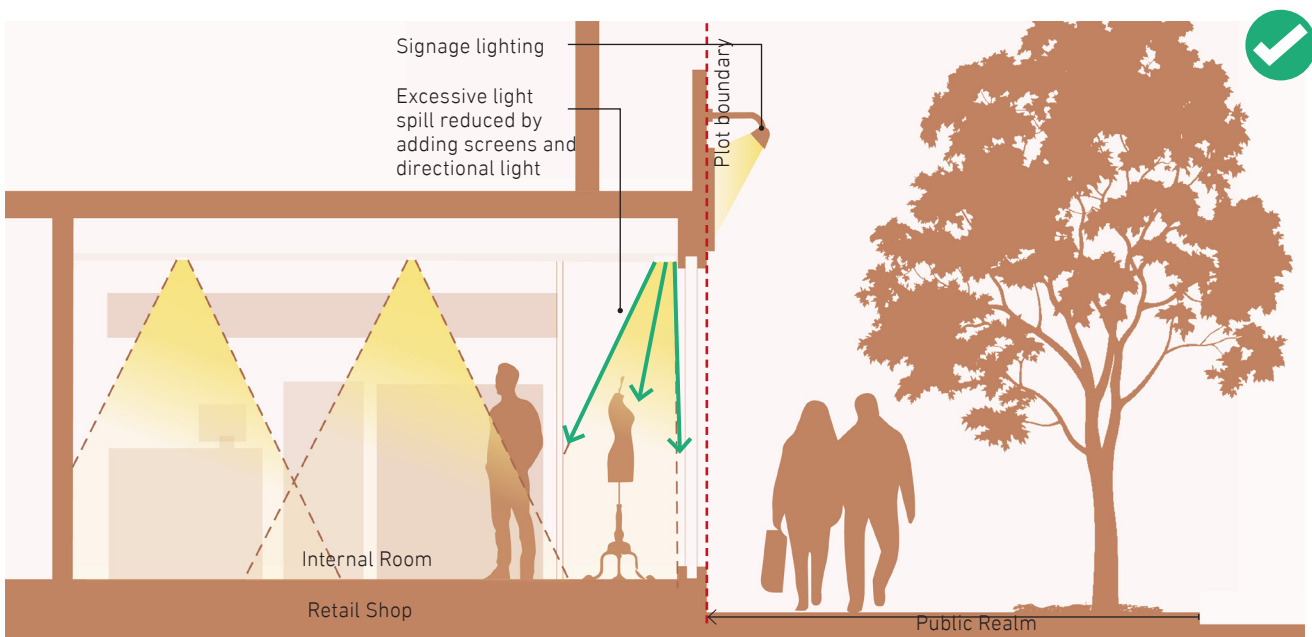
**Figure 31:** Internal light spill outside the room through the openings, such as windows.



**Figure 32:** Partial screens or blinds used to reduce excessive light spill outside the room.



**Figure 33:** Outward-directed internal lighting through windows is not permitted.



**Figure 34:** Retail premises' window lighting must not contribute to external light spill into the public realm.

### 3.5 Walkways

3.5.1 Walkway lighting must comply with the maximum permitted illuminance level for the lighting zone in which it is located (see Table 12 below).

3.5.2 Walkway lighting in LZ0 and LZ1 must only be lit when necessary for safety and wayfinding, with a maximum mounting height of 1m only. Light poles shall not be used unless required for safety and security, as determined by the Commission. LZ2 and LZ3 walkways are permitted to use light poles (see Table 13 for the maximum permitted heights).

Table 12: Illuminance Levels for Walkways

LIGHTING ZONES - MAXIMUM ILLUMINANCE LEVELS (LUX)				
	LZ0	LZ1	LZ2	LZ3
Average	3	3	5-7	5-7
Minimum	0	0	1	1

Table 13: Mounting Heights for Lighting Fixtures

Pole or building mounted lights	4m
Ground mounted lights (bollards or similar)	1m

As a rule, lighting must be placed at a minimum of 2.5 times the height of the light pole. For example, a 4m light pole shall be offset by 10m between fixtures, whilst a 1m light bollard shall be offset by 3.5m between fixtures.

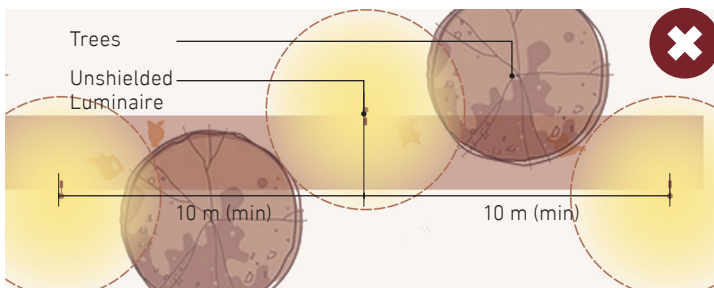


Figure 35: Excessive light spill from walkway lighting is not permitted.

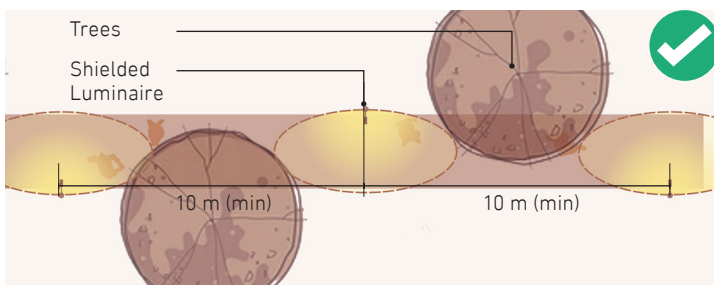
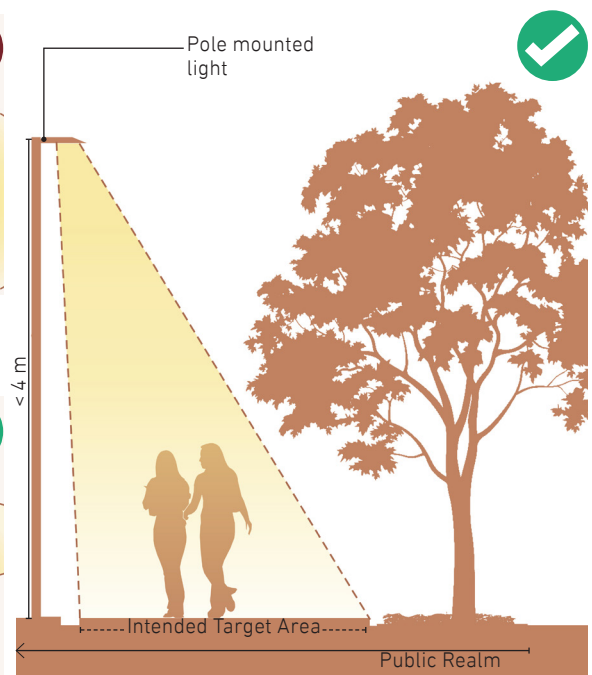


Figure 36: Walkway lighting must minimize excessive light spill outside the walkway by directing it to the intended target area.



## 3.6 Signage Lighting

- 3.6.1 Signage lighting is not to be used within LZ0 unless permitted by the Commission.
- 3.6.2 Light sources used for signage lighting must comply with the requirements laid out in Section 2.1.1 with respect to color temperature, color rendering, and efficacy.
- 3.6.3 All light sources must be concealed or shielded, either integrated within the sign or installed above and aimed downward onto the sign.
- 3.6.4 Lighting must be even across the illuminated part of the sign without significant hotspots, and it must be controlled to prevent light spill beyond the sign.
- 3.6.5 The use of colored light is not permitted.
- 3.6.6 Signages that incorporate video display screens, moving images, or flickering light sources are not permitted within AlUla County.
- 3.6.7 Signage lighting must comply with the lighting curfew periods set out in Section 2.3
- 3.6.8 The illuminance level of the signage must be within the limits laid out in Table 14.
- 3.6.9 In LZ1, the maximum luminous or illuminated surface of a sign must not exceed 5m<sup>2</sup>. In LZ2 and LZ3, it must not exceed 18.6m<sup>2</sup>.

Table 14: Maximum Signage Illuminance Levels

LIGHTING ZONES - MAXIMUM ILLUMINANCE LEVELS (CD/M <sup>2</sup> )				
	LZ0	LZ1	LZ2	LZ3
0 - 5 m <sup>2</sup>	0	25	100	100
5.1 - 18.6 m <sup>2</sup>	0	0	100	100

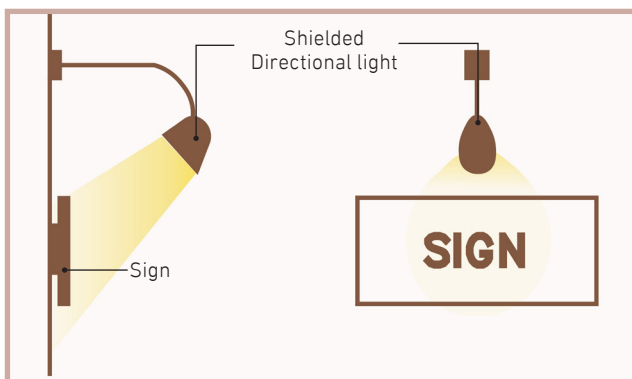


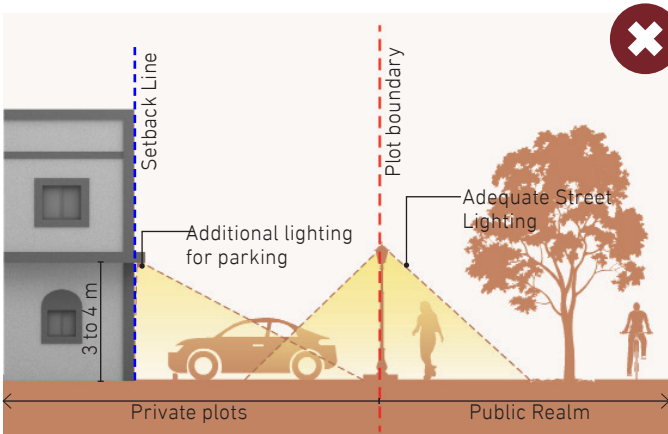
Figure 37: Illumination Direction



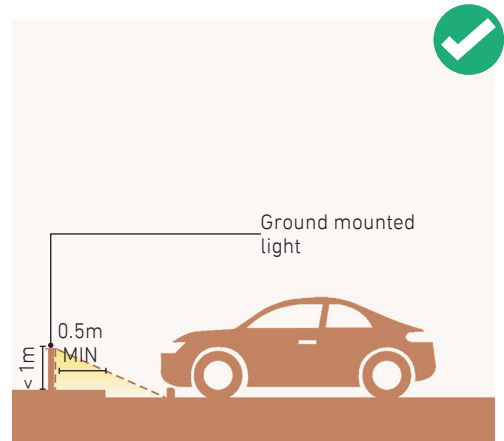
Figure 38: Examples of Signage Illumination

### 3.7 Parking Lots

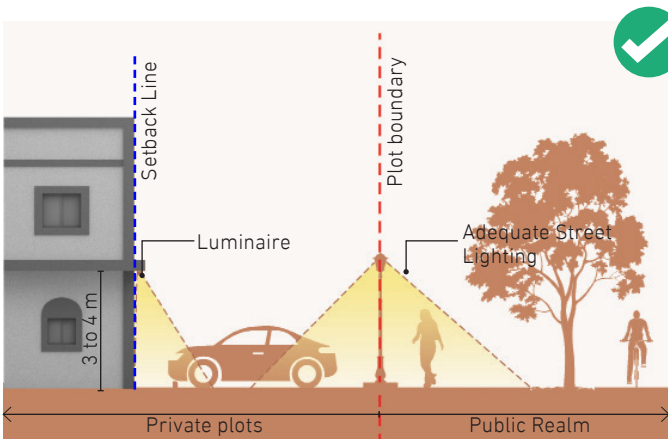
- 3.7.1 Private parking lots for residential and commercial properties, or street parking immediately adjacent to any of these properties, shall only be illuminated when necessary for safety or wayfinding, such as identifying entrances or exits.
- 3.7.2 Where a parking lot is adequately illuminated by street lighting or other lighting adjacent to the property, no additional lighting may be added (see Figures 39 and 40).
- 3.7.3 The acceptable light level for safety shall be as determined by the Commission
- 3.7.4 Parking lot lighting in LZ0 and LZ1 shall only use ground-mounted light fixtures with a mounting height not exceeding 1m (see Figure 41).
- 3.7.5 For parking lots in LZ2 and LZ3, pole-mounted light fixtures are permitted. However, poles shall be the minimum practical height and shall not exceed 4m (see Figure 42).
- 3.7.6 Automobile workshop yards that can also serve as parking areas must be illuminated to a level suitable for safe working. All light fixtures must be cutoff or full cutoff and mounted horizontally to prevent unwanted light spill or upward light. Lighting must only be used when work is being performed.



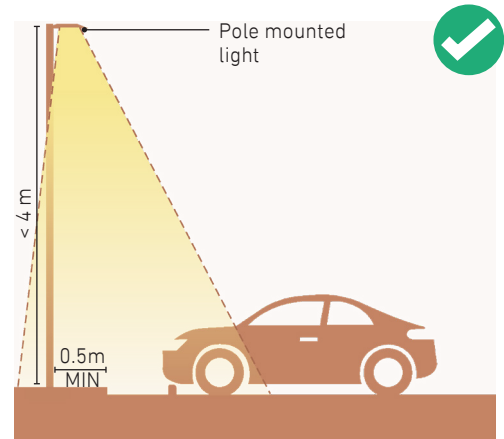
**Figure 39:** Additional lighting is not permitted if the parking lot is adequately illuminated by street lighting.



**Figure 41:** Permitted ground mounted lights for the parking lot in LZ0 and LZ1.



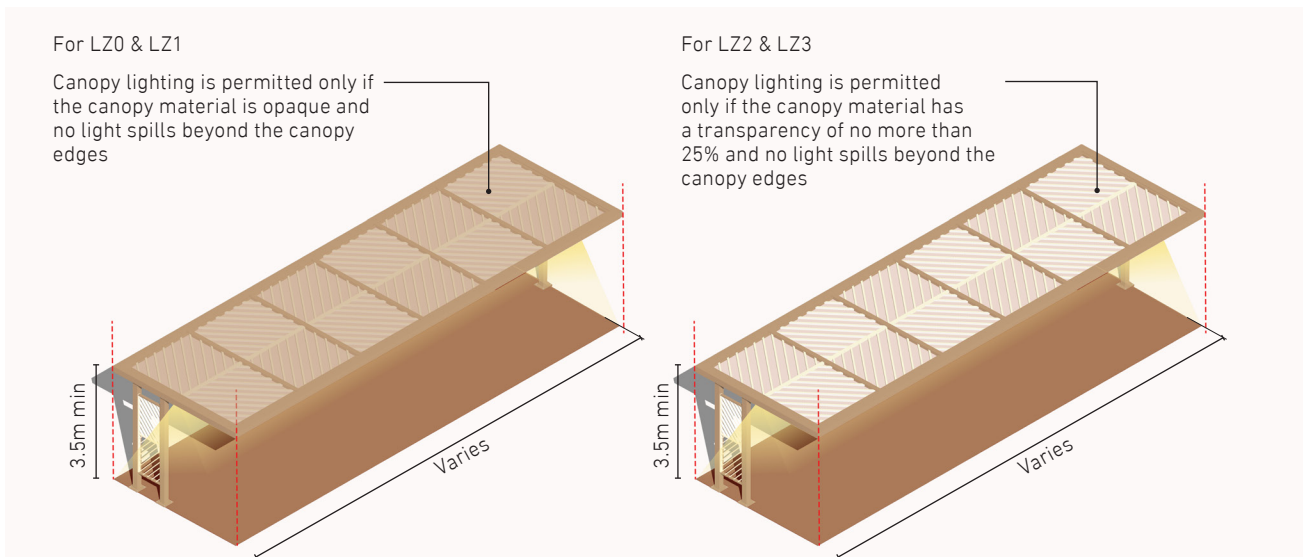
**Figure 40:** Parking lot adequately illuminated by street lighting.



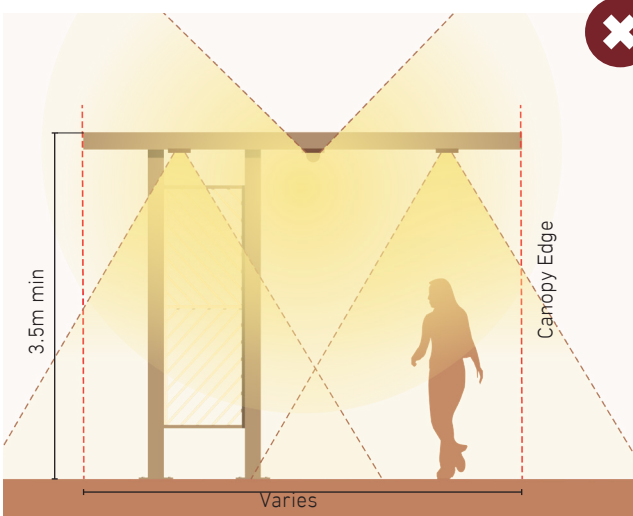
**Figure 42:** Permitted pole mounted lights for the parking lot in LZ2 and LZ3

## 3.8 Canopies

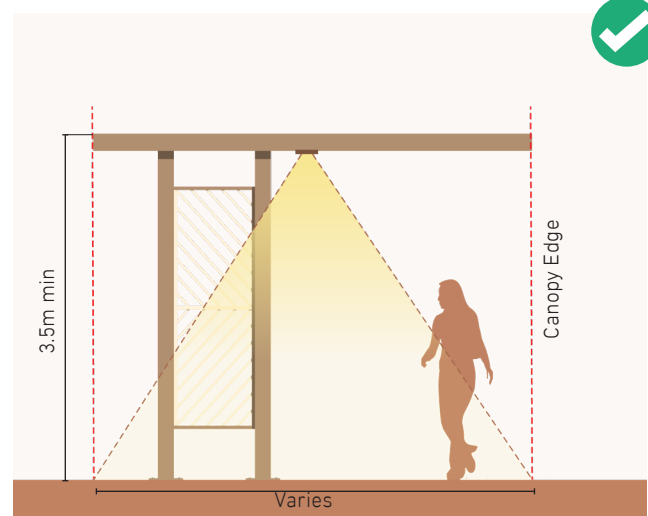
- 3.8.1 In LZ0 and LZ1, canopy lighting is permitted only if the canopy material is opaque and no light spills beyond the canopy edges (see Figure 43).
- 3.8.2 In LZ2 and LZ3, canopy lighting is permitted only if the canopy material has a transparency of no more than 25% and no light spills beyond the canopy edges (see Figure 43).
- 3.8.3 In all cases, light spill from canopies must be controlled to ensure that it is not visually obtrusive and does not create any reflected upward light (see Figures 44 and 45).



**Figure 43:** Canopy Lighting Requirements per Lighting Zone.



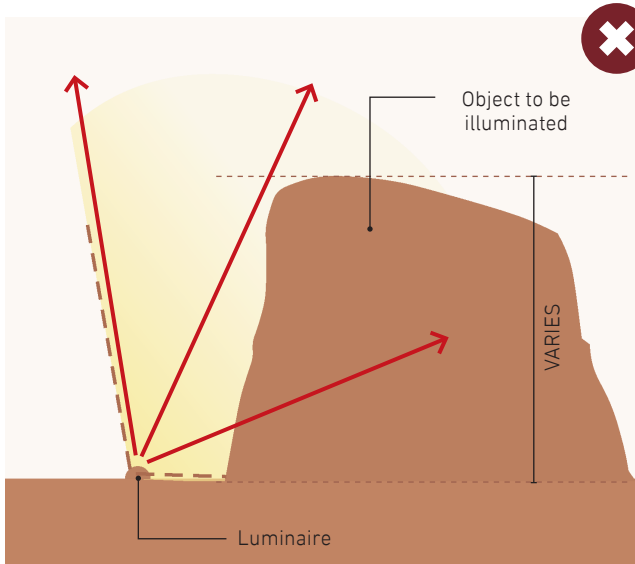
**Figure 44:** Example of Light Spill beyond the Canopy Edges



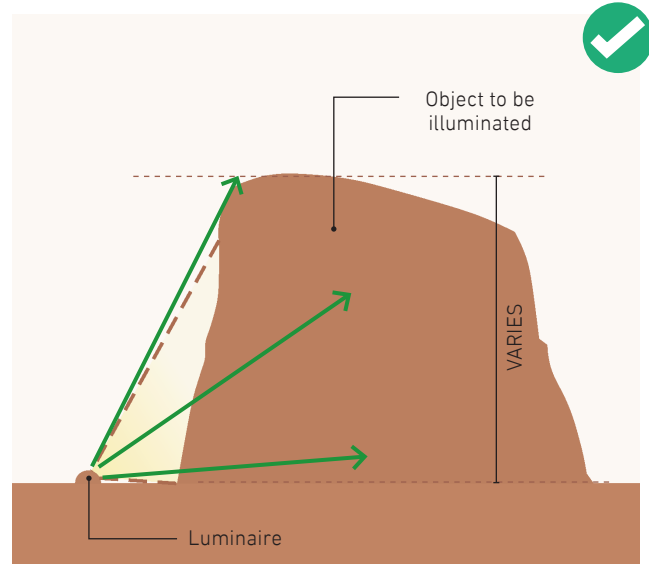
**Figure 45:** Example of lighting without Light Spill beyond the Canopy Edges

### 3.9 Adjustable Lights

- 3.9.1 Shielded directional floodlights, spotlights, or adjustable decorative lights may be installed to illuminate landscapes by angling such lights above the horizontal plane, provided that there is no light spill beyond the object being illuminated.
- 3.9.2 Adjustable lights must be firmly secured in position with locking devices tightened to prevent accidental misalignment that could cause light spill or upward light (see Figures 46 and 47).
- 3.9.3 Property owners must routinely inspect adjustable lighting to ensure it remains properly aimed.
- 3.9.4 Adjustable lighting may not be used in LZ0 or LZ1.



**Figure 46:** Light spill from adjustable lighting beyond the object being illuminated is not permitted.

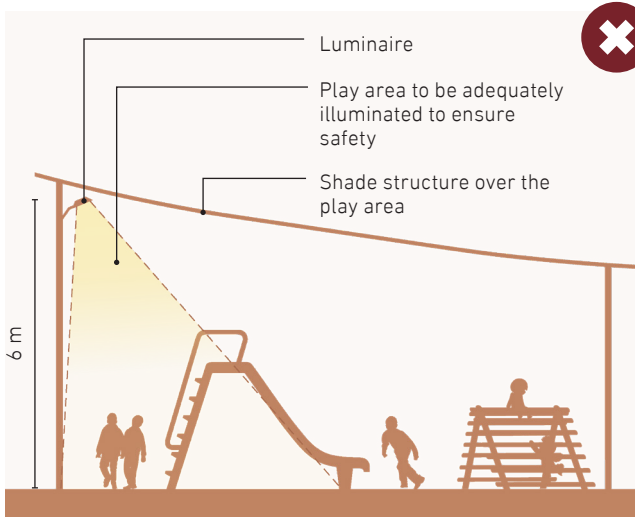


**Figure 47:** Adjustable lighting with no light spill beyond the object being illuminated.

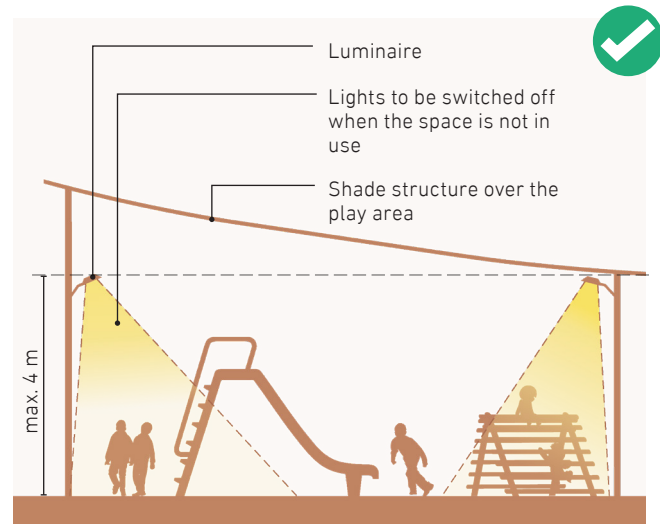
## 3.10 Schools and Mosques

### 3.10.1 Schools

- Outdoor play areas and semi-enclosed spaces in schools must be illuminated to a level sufficient to ensure safety and security.
- Lighting for such areas must only operate when the space is in use; otherwise, the lighting must be dimmed or turned off, while keeping only access routes illuminated for safety.
- Mounting heights of light poles must not exceed 4m, and pole-mounted lights must be well-shielded to prevent direct view of the light source from adjacent areas (see Figures 48 and 49).



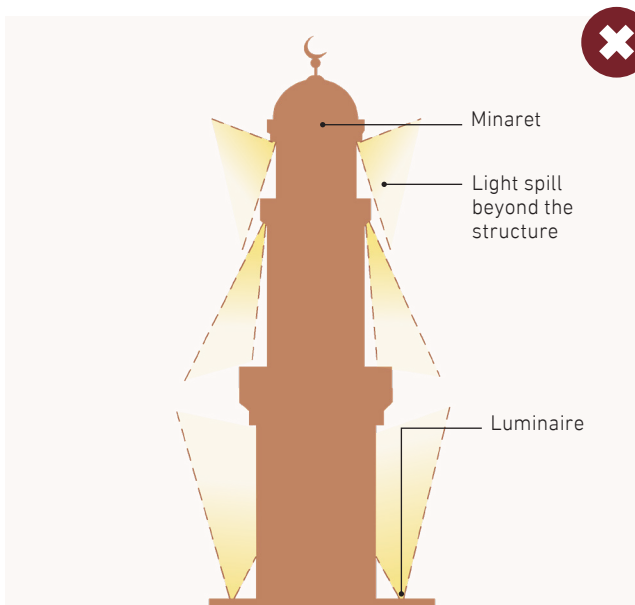
**Figure 48:** Example of bad lighting for outdoor play areas.



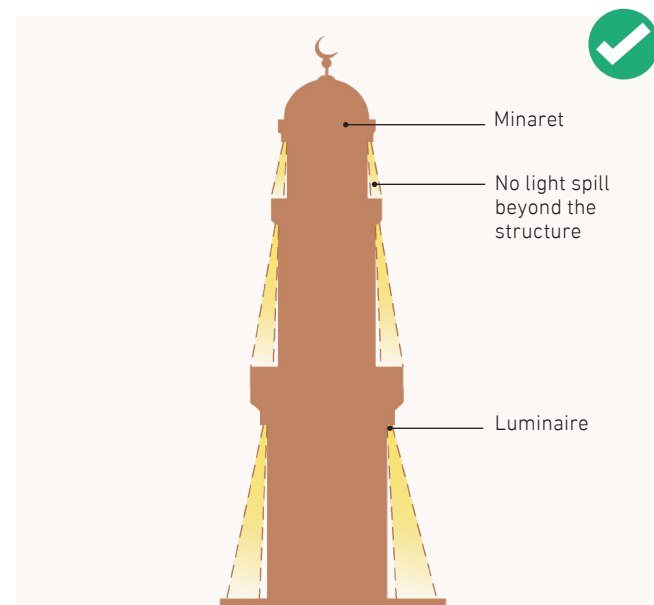
**Figure 49:** Example of good lighting for outdoor play areas.

**3.10.2 Mosques**

- a. Minaret lighting shall be provided only by concealed or well-shielded luminaires so that no light spills to adjacent areas. Exposed light sources are not permitted (see Figures 50 and 51).
- b. Minaret lighting must comply with the requirements set out in Section 2.1. The use of colored lights is not permitted on mosque structures.
- c. For small mosques, the light intensity requirements detailed in Table 5, Row B, shall apply. For other mosques, the requirements laid out in Table 5, Row D shall apply.



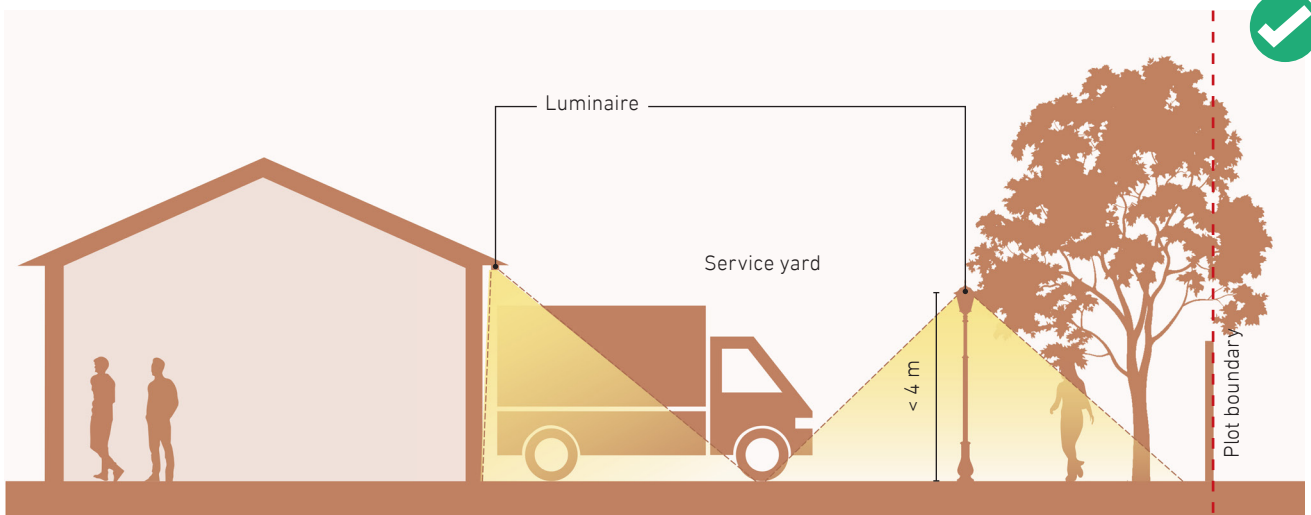
**Figure 50:** Example of minaret lighting with light spill.



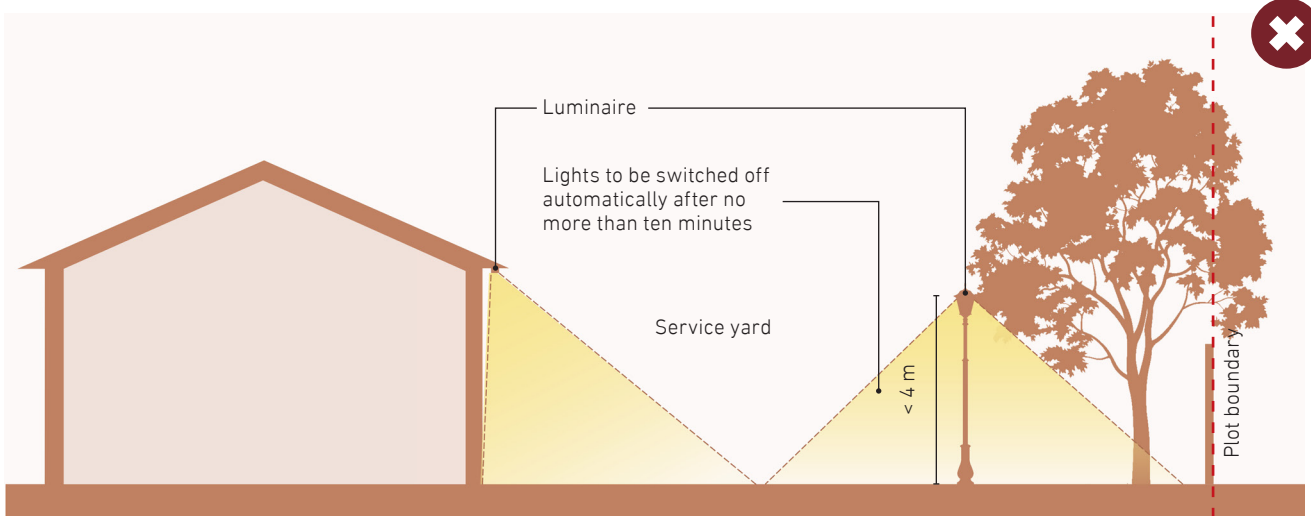
**Figure 51:** Example of minaret lighting without light spill.

### 3.11 Service Yards

- 3.11.1 Service yard lighting must be operated only when the yard is in use. At other times, lighting for safety and security purposes may be provided by motion-sensor control, provided it automatically switches off after no more than 10 minutes (see Figures 52 and 53).



**Figure 52:** Service yard lighting shall only operate when the yard is in use.



**Figure 53:** It is not permissible to leave the lights in the service yard on when the yard is not in use.





# Section 4

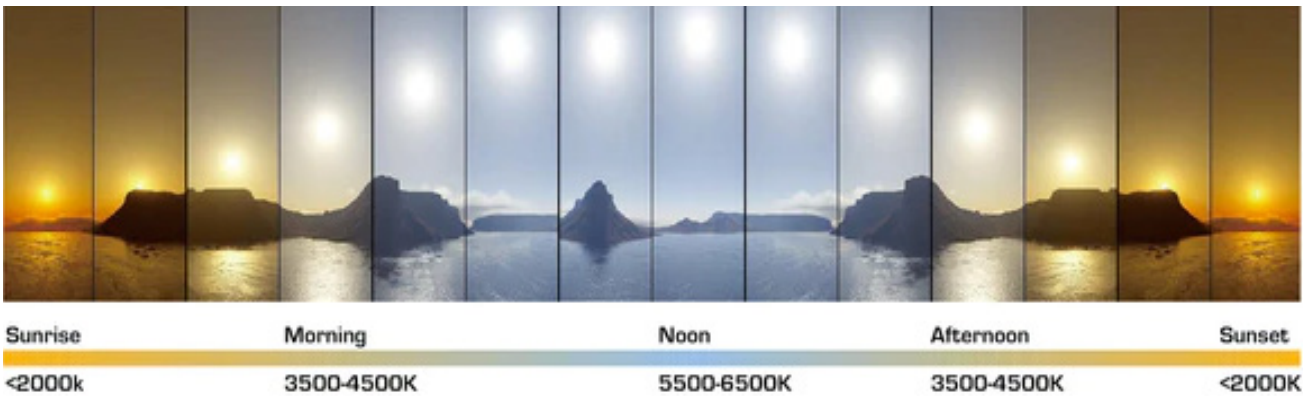
## Definitions of Terms Used in this Guide



## 4.1 Definitions

**4.1.1 Color Rendering Index (CRI)** A metric indicating how accurately a light source reveals the colors of objects in comparison to daylight..

**4.1.2 Color Temperature (CT or CCT)** The warmth or coolness of a light source, with warmer light being more amber and cooler being more blue, and is measured in Kelvin (K).



**4.1.3 Lighting Curfew Periods** The time periods defined by the Commission during which all outdoor light sources must be switched off or dimmed.

**4.1.4 Decorative Lighting** Outdoor lighting that is primarily for aesthetic purposes and is not used as functional lighting or for safety and security purposes.

**4.1.5 Existing Building** A building that is constructed within ALUIa County. It can include residential, commercial, or other land-use typologies as per the masterplan’s assigned category. It does not necessarily have to be occupied.

**4.1.6 Facade Lighting** The illumination of the exterior of a building

**4.1.7 Full Cut-Off Lighting** A lighting fixture that directs all light, including reflected light, below the horizontal plane, with no light emitted above it.

**4.1.8 Functional Lighting** Outdoor lighting for safety, security, or other functional purposes.



- 4.1.9 Geographical Boundaries** AlUla County; the heritage and cultural sites located in Khaybar County and Al-Muazzam Fort; the heritage, historical, and cultural sites located in Tayma County that are added to the jurisdiction of the Commission pursuant to the Royal Order No. 25741, dated 09/05/1442H; and any sites outside the Commission's current jurisdiction that may be added thereto at a later stage.
- 4.1.10 Glare** Lighting entering the eye directly from outdoor lighting or indirectly from reflective surfaces that causes visual discomfort, reduced visibility, or light pollution.
- 4.1.11 Illuminance** The amount of light falling onto or illuminating a given surface area.
- 4.1.12 Instructions** Means these Outdoor Lighting Technical Instructions and its appendices.
- 4.1.13 Landscape Lighting** Outdoor lighting used for the illumination of any exterior landscape feature, such as planted vegetation, green spaces, water, or geological features.
- 4.1.14 LED** A light-emitting diode that delivers an efficient light source.
- 4.1.15 Lighting Zone** An area specified by the Commission that has designated outdoor lighting requirements based on the sensitivity of the local environment to artificial light at night.
- 4.1.16 Light Intensity** A measure of the amount of light falling on a surface and measured in either lumens per square foot (footcandles) or lumens per square meter (lux).
- 4.1.17 Light Pollution** Any adverse effect of outdoor lighting, including, but not limited to, glare, light spill, sky glow, and other detrimental impacts of light on the nocturnal environment.
- 4.1.18 Light Source** The LED within a light fitting, a light bulb, or a lamp.

4.1.19	<b>Light Spill</b>	Light that falls outside the area it is intended to illuminate.
4.1.20	<b>Lumen</b>	The measure of the brightness of a light source.
4.1.21	<b>Lumen Allowance</b>	The amount of light permitted for a particular building type based on the total output of light fittings.
4.1.22	<b>Lux</b>	The standard unit of measurement for light intensity, defined as one lumen per square meter.
4.1.23	<b>Outdoor Illuminated Space</b>	The exterior space at the premises that is used and illuminated during the hours of darkness.
4.1.24	<b>Outdoor Lighting</b>	Lighting installed inside or outside the plot boundary of a building, whether attached to poles, building structures, the ground, or any other location; and any associated lighting installations.
4.1.25	<b>Temporary Lighting</b>	Non-permanent outdoor lighting used for a limited duration in connection with public events or national holidays. Also known as seasonal lighting.
4.1.26	<b>The Commission</b>	Means the Royal Commission for ALUa.



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# Appendix A Lighting Zone Maps and Table



## A.1 Village Lighting Zones

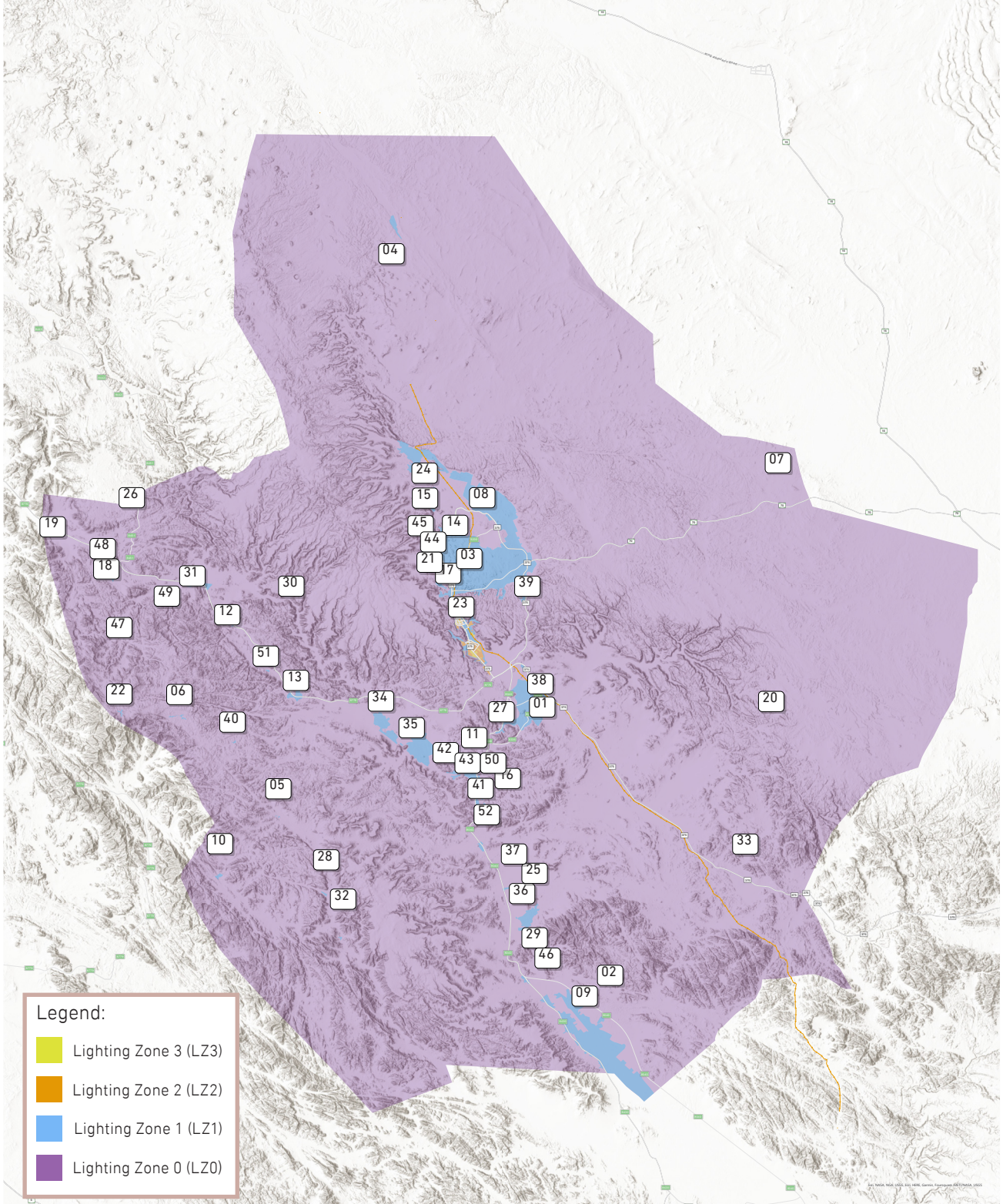
A.1.1 For the purposes of this document, the following villages shall fall within the lighting zones assigned thereto:

Table 15: Village Lighting Zones

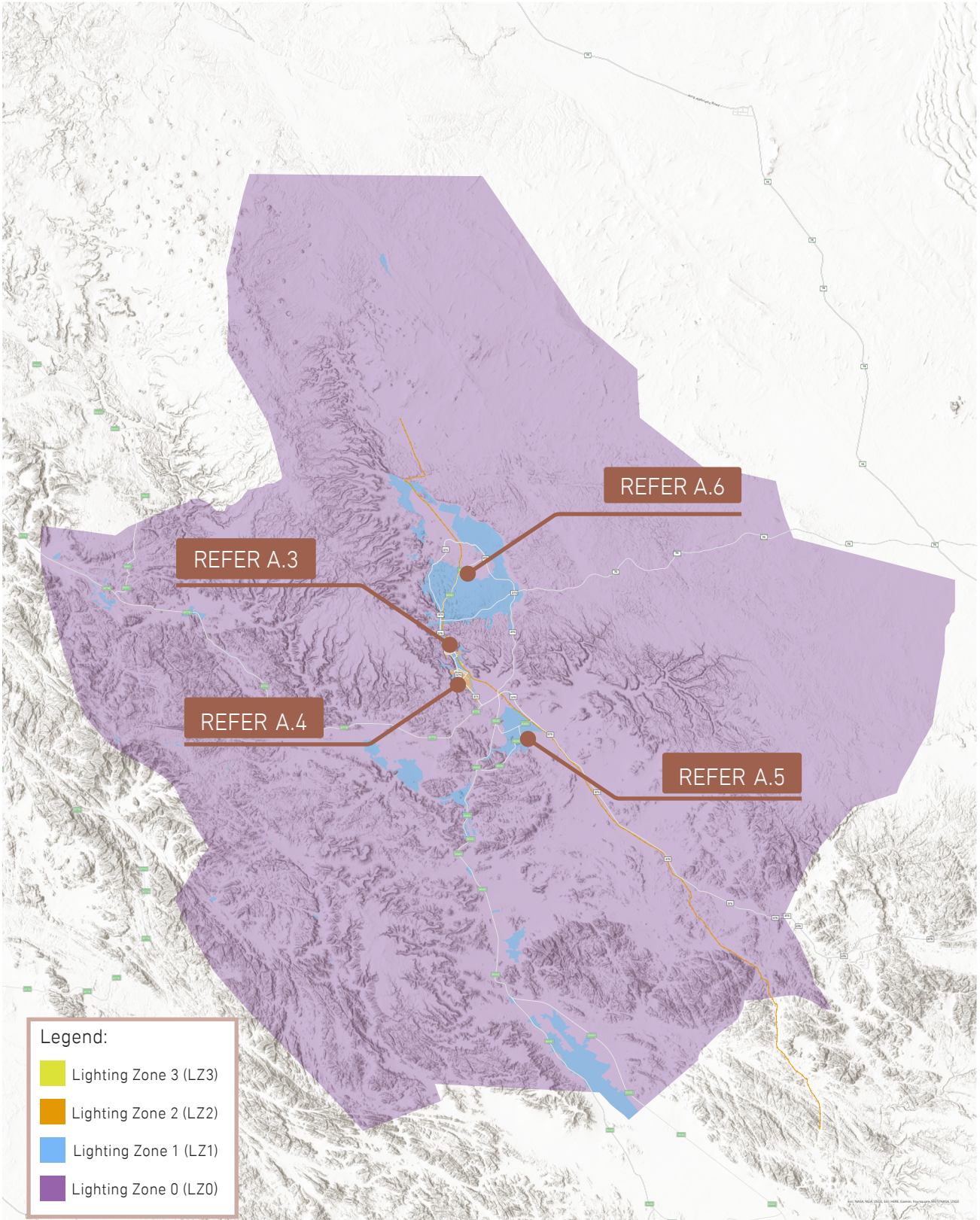
NO.	VILLAGE	LIGHTING ZONE	NO.	VILLAGE	LIGHTING ZONE
01	Abu Zara'eb	LZ1	29	Arar	LZ1
02	Al Ayn Al Jadidah	LZ1	30	Awarish	LZ1
03	Al 'Atheeb	LZ1	31	Blatah	LZ1
04	Al Briykah	LZ1	32	Bi'r Al Arak	LZ1
05	Al Falqah	LZ1	33	Dha'a	LZ1
06	Al Farsh	LZ1	34	Daf Rahal	LZ1
07	Al Hasah	LZ1	35	Fudala	LZ1
08	Al Hajr	LZ1	36	Jathiyuth	LZ1
09	Al Jadidah	LZ1	37	Masadir	LZ1
10	Jaydah	LZ1	38	Mughaira'a	LZ1
11	Al Khashiybah	LZ1	39	Qa' Al Haj	LZ1
12	Al Muqrh	LZ1	40	Qurm	LZ1, LZ2
13	Al-Maqrah Al- Abiyadh	LZ1	41	Qasiyb Abu Khariyt	LZ1
14	Al Milsin	LZ1	42	Qasiyb Abu Siyal	LZ1
15	Al Manqa'a	LZ1	43	Qasiyb Al-A'waj	LZ1
16	Al Marma	LZ1	44	Qraqr	LZ1
17	Al Shari'iyah	LZ1	45	Shalal	LZ1
18	Al Najil	LZ1	46	Sha'yb Arar	LZ1
19	Al Najd	LZ1	47	Sarar	LZ1
20	Al Qattar	LZ1	48	Al Kharkah	LZ1
21	Um Taliyhah	LZ1	49	Shawsa'a	LZ1
22	Al Ward	LZ1	50	Um Ghatiyah	LZ1
23	AlUla	LZ1, LZ2, LZ3	51	Al-Futh	LZ1
24	Tharbah	LZ1, LZ2	52	Waqiyr	LZ1
25	Katiyfah	LZ1, LZ2, LZ3			
26	Al Thiyyil	LZ1			
27	Al Wazab	LZ1			
28	Amahiyk	LZ1			



## A.2 Village Locations Map

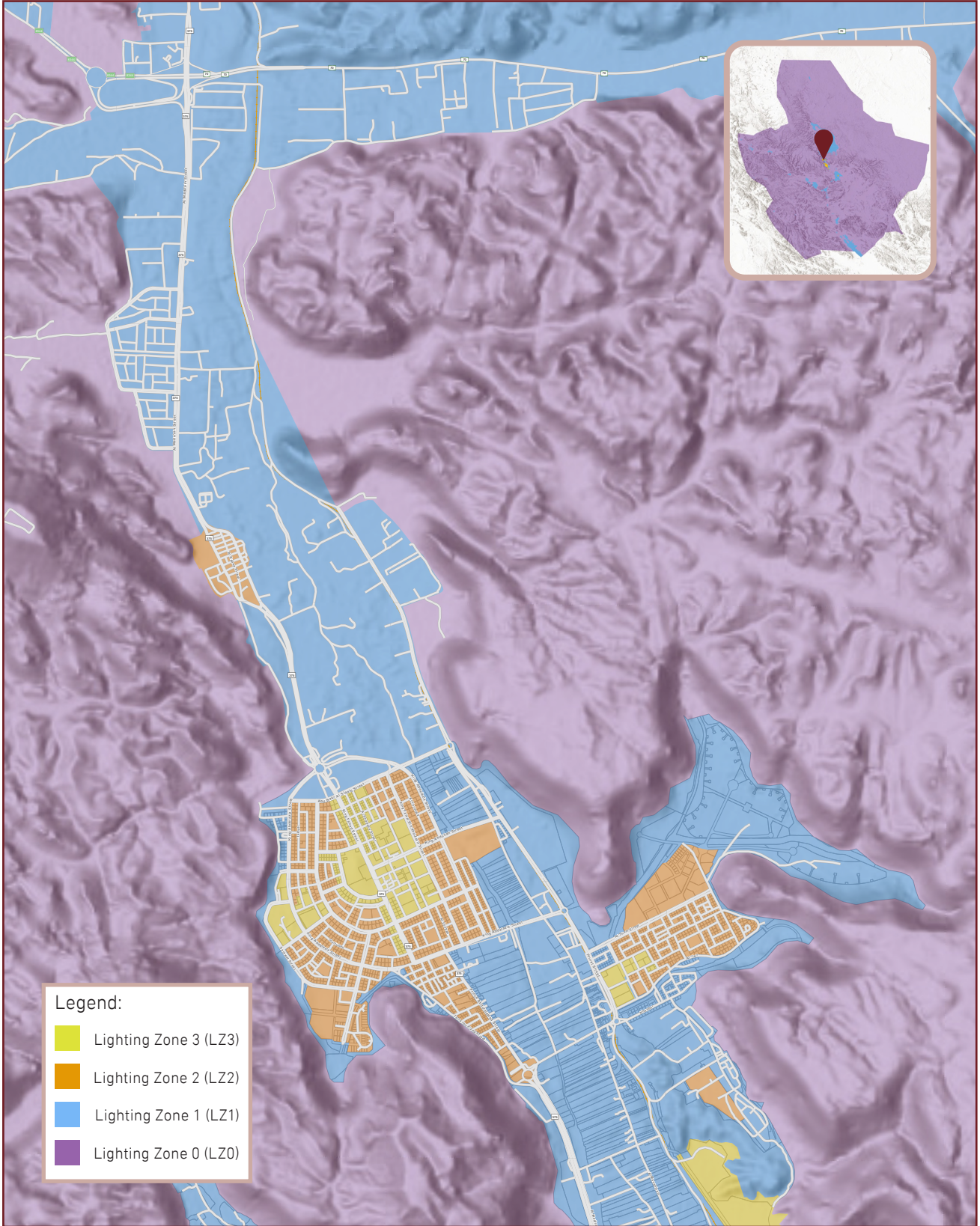


### A.3 County-Wide Map

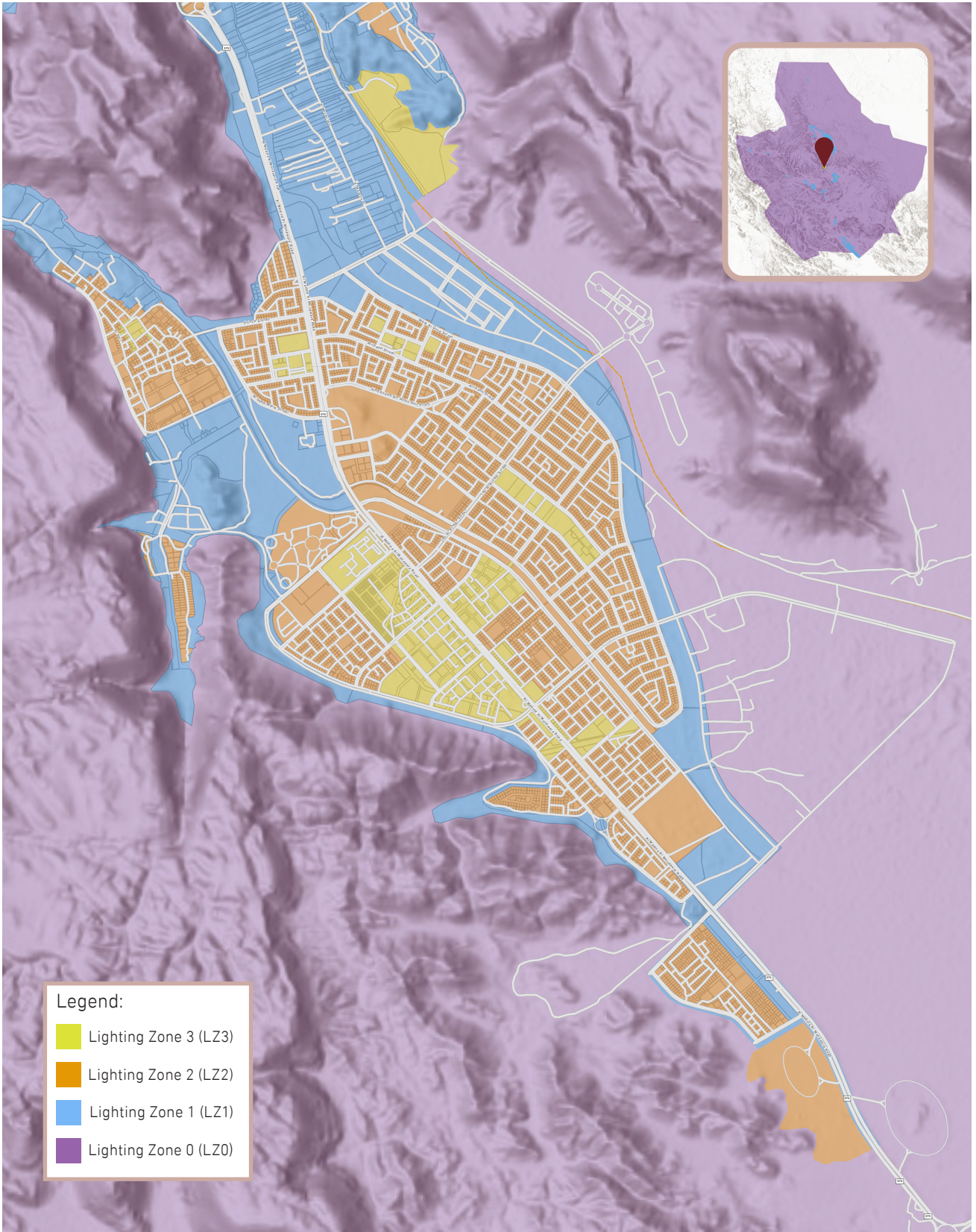




## A.4 ALUla Central, AlJadidah and Old Town Map

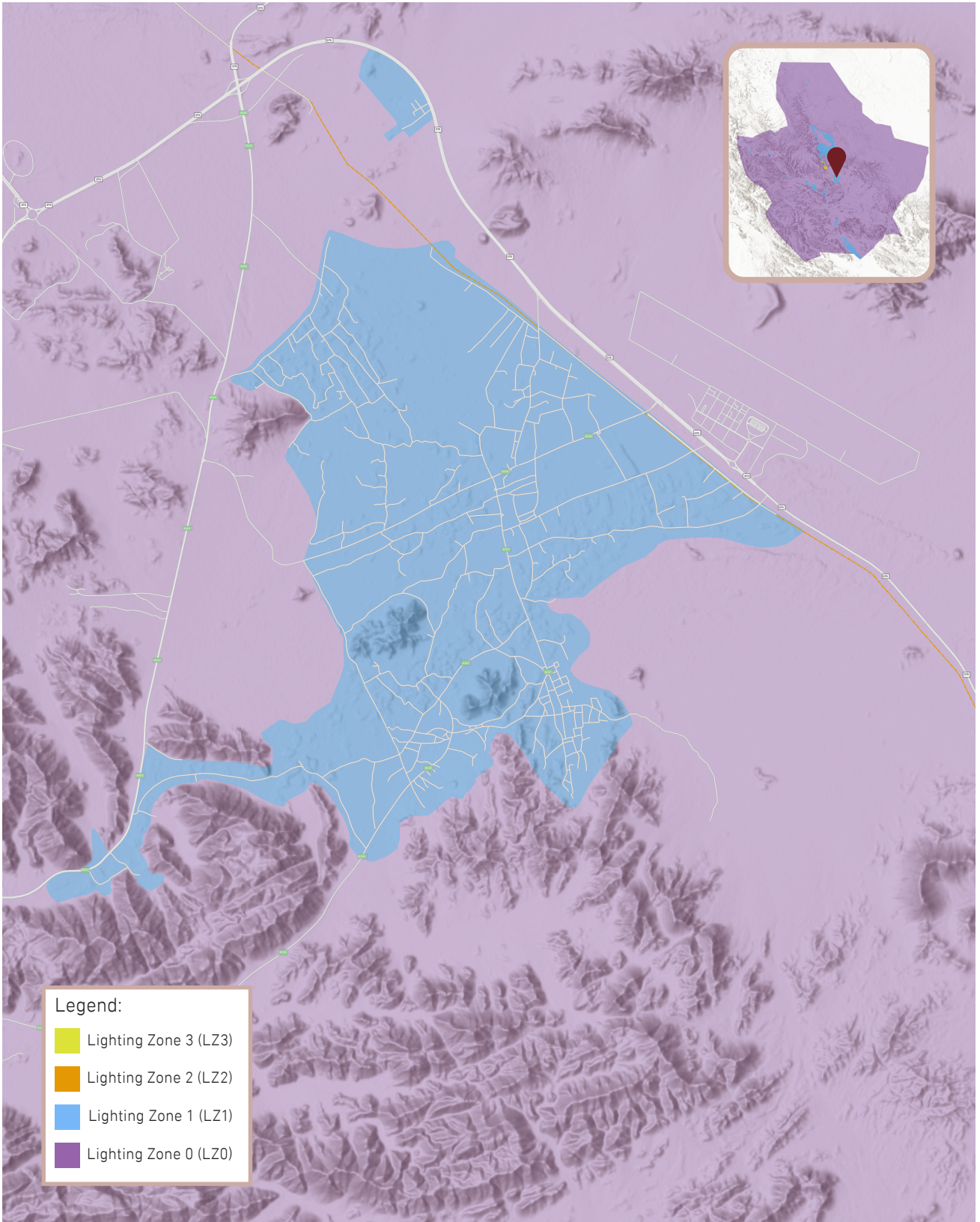


## A.5 AlUla South Map

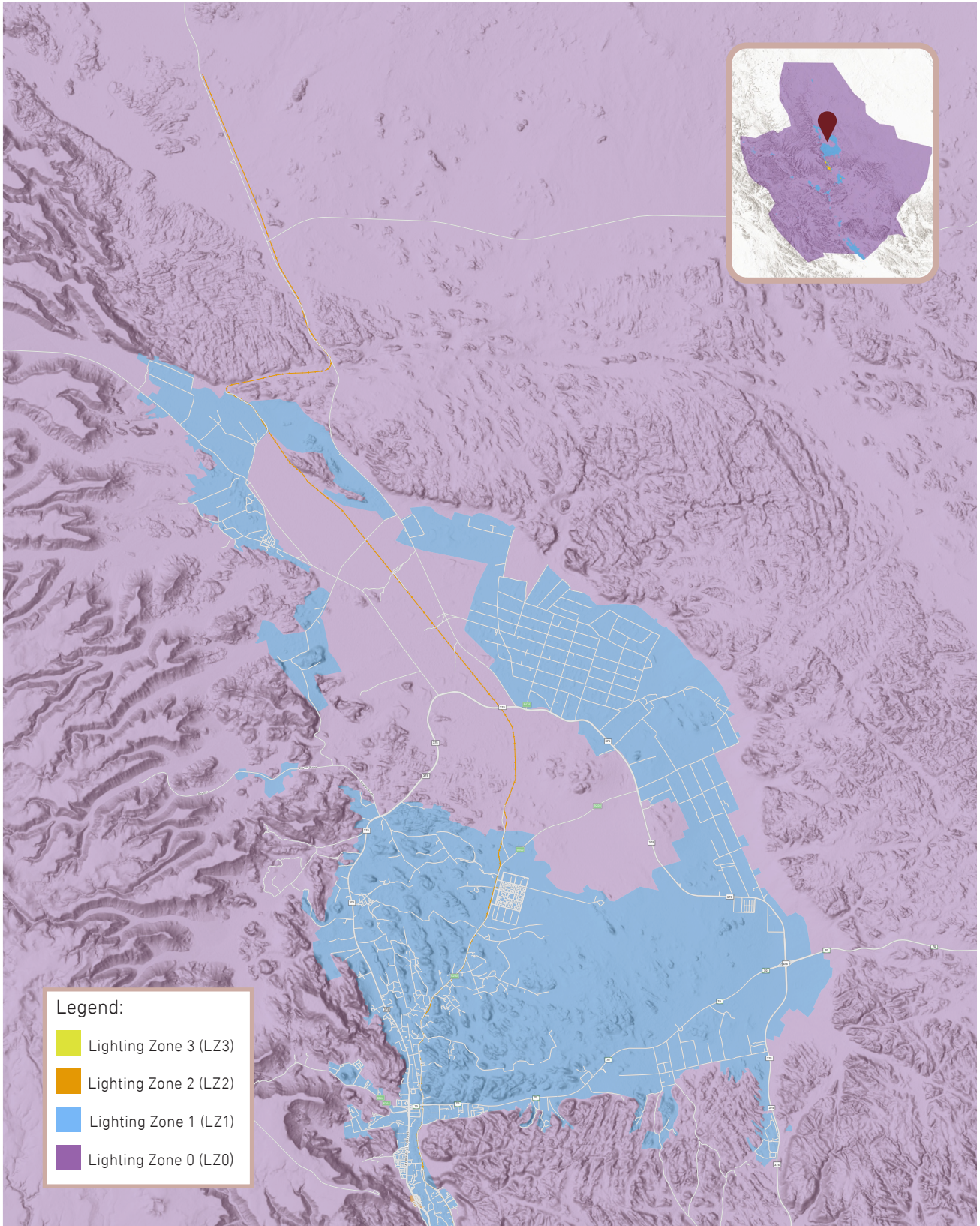




## A.6 ALUla County near Mughayra and the Airport Map



## A.7 Map of Local Plan 1 — Journey Through Time Map





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