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ROYAL GOVERNMENT OF BHUTAN
MINISTRY OF WORKS & HUMAN SETTLEMENT
THIMPHU: BHUTAN

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CIRCULAR

The issue of unauthorized attic construction on buildings has been a serious concern as its construction was not allowed not only for the aesthetic reasons, but also because they were neither adequately designed nor built for human habitation. However, a number of factors including socio-economic factors, shortage of developable land and housing in urban areas, optimal use of spaces and investment, and the prevalence of attics on the existing buildings called for reconsideration of the attic issue. Therefore, the government has approved the regularization of attics with the objectives of preserving and promoting the traditional architecture of Bhutan, providing adequate and economical housing and ensuring safe and livable dwelling units.

The Attic Rules 2009 is intended to fulfill the above-stated objectives. The Rules prescribes the minimum standards to guide the construction of attics on new buildings and for addition of new attics on the existing buildings. Further, in view of the fact that the proposed rules or any other policies cannot be effectively enforced without first adequately addressing the issue of the existing attics, the Rules contain a chapter on the regularization of the existing attics. It is expected that with proper implementation, the Attic Rules 2009 would address the issue of both the existing and new attics.

The Rules shall be effective from the date of issue of this circular. Therefore, all concerned agencies and individuals are advised to follow and implement the Attic Rules 2009 strictly and in keeping with the intention of its contents. Any failure or inappropriate implementation of the Rules by the respective municipalities and their officials shall constitute an administrative lapse and shall be treated as such.



Yeshey Zimba
(Zhabtog Lyonpo)

Copy to:

1. All Dasho Dzongdags.
2. The Executive Secretary, Thimphu City Corporation.
3. The Thrompon, Phuntsholing City Corporation.



THE ATTIC RULES 2009

**ROYAL GOVERNMENT OF BHUTAN
MINISTRY OF WORKS AND HUMAN SETTLEMENT**

April 2009

FOREWORD

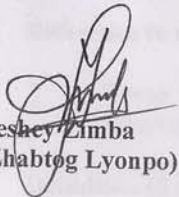
The traditional architecture of Bhutan is one of its most unique characteristics. It is significant not only for its physical forms but also for the traditional beliefs and social customs associated with it. It, therefore, is a matter of pride that our architecture has largely been preserved in its true essence. However, 'modernization' of materials and methods of construction has brought about its own impact on architecture. Our buildings and built forms increasingly appear at odds with our traditional setting.

The issue of unauthorized attic construction on our buildings, especially in urban areas, has been a serious concern for the municipalities, the ministry and the government. The construction of attics was not allowed not only for the aesthetic reasons, but also because they were neither adequately designed nor built for human habitation. Despite the regulations against it, the construction and use of attics has continued for various reasons.

Observations and studies have shown that attics have been and can be constructed on traditional buildings. Other factors including socio-economic factors, shortage of developable land and housing in urban areas, realizing optimum use of spaces and investment, and the prevalence of attics on the existing buildings called for reconsideration of the attic issue. Therefore, the government had approved the regularization of attics with the objectives of preserving and promoting the traditional architecture of Bhutan, providing adequate and economical housing and ensuring safe and livable dwelling units.

It is against this backdrop, the government has approved the Attic Rules 2009. The Rules are mainly intended to guide the construction of attics on new buildings and for addition of new attics on the existing buildings. However, in view of the fact that the proposed rules or any other policies cannot be effectively enforced without first adequately addressing the issue of the existing attics, the Rules contain a chapter on the regularization of the existing attics. It is expected that with proper implementation, the Attic Rules 2009 would address the issue of both the existing and new attics.

Any policy or rules can succeed only to the extent it is effectively and properly implemented. Therefore, all concerned agencies and individuals are advised to follow and implement the Attic Rules 2009 in its true spirit and in keeping with the intention of its contents. It is to be noted that any failure or inappropriate implementation of the Rules by the respective municipalities and their officials shall be considered an administrative lapse and shall be treated as such.



Yeshey Zimba
(Zhabtog Lyonpo)

THE ATTIC RULES 2009

The Ministry of Works and Human Settlement hereby frames rules for construction and occupation of attics as follows:

CHAPTER 1

PRELIMINARY

Title, extent and commencement

1. These Rules shall:
 - (a) Be called the Attics Rules 2009.
 - (b) Extend to the whole of the country.
 - (c) Come into force from the day of notification by the Ministry of Works and Human Settlement.

Objectives

2. The objectives of these Rules are to:
 - (a) Regulate the construction of attic and ensure that they are fit for human habitation in terms of, but not limited to, design, construction, safety, comfort and health and sanitation standards.
 - (b) Ensure the aesthetics and proportions of traditional architecture.

Reference to other rules

3. These Rules shall be referred to in conjunction with the prevailing building rules, urban development plans and development control regulations as applicable.

Definition of attics

4. For the purpose of these Rules the term attic shall mean a space created within the confines of the sloping roof and the top floor ceiling, which if designed for human habitation, shall fulfill the conditions prescribed in these Rules.

CHAPTER 2

PLANNING AND DESIGN

Permissible uses

5. The uses permissible in attics shall be as sanctioned in the urban development plan or the development control regulations as applicable.
6. The use of the attic floor shall be prioritized for lift machine rooms and other building services and only the remainder of the spaces, if any, shall be used for human habitation or other permissible uses.

Planning requirements

7. If attics are designed for human habitation, corresponding planning requirements like the parking spaces, water tank capacities, septic tank and soak pit capacities shall be included.

Minimum floor areas

8. The minimum widths and floor areas for all spaces shall be as per the prevailing building rules, urban development plans or the development control regulations as applicable.

Minimum room heights

9. The minimum (clear) heights for habitable rooms at the attic level shall be 1800mm with an average height of not less than 2100mm.

Permissible roof features

10. All constructions shall have traditional pitched roof and flat roofs shall not be permitted.
11. *Jamthog* and *lung-go* roofs shall be permitted above the main roof as per the Traditional Architecture Guidelines provided
 - a. The form and proportion of the building are maintained.
 - b. The vertical distance between the main roof and the *jamthog/ lung-go* roof shall not be more than 1000mm, beyond which the proposal shall be assessed by a panel of professionals.
12. Except for the roof features permissible as per the Traditional Architecture Guidelines, no other constructions/ projections shall be permitted above the roof profile.

Provisions for such requirements as water tanks or lift machine rooms shall be accommodated within the confines of the roof profile.

Roof slope/ angle

13. The angle of roof slope shall be as prescribed in the Bhutan Building Rules.

External prop heights

14. The height of outermost props, measured from the top floor slab or the ceiling to the bottom of the eave board shall be a maximum of 1200mm, where
 - a. The eave board shall not be more than 250mm high.
 - b. If exposed *dhingris*, as in traditional construction are provided, the increase in prop height shall be considered in which case the proposal shall be assessed by a panel of professionals.

External walls of the attic floor

15. The external walls of the attic floor shall not extend beyond the outer face of the external columns.

Balconies

16. Balconies, of any type, shall not be permitted at the attic level.

Roof cutouts

17. Roof cutouts, not exceeding 15% of the attic floor area shall be permitted, provided
 - a. They do not alter the roof profile.
 - b. They fulfill these Rules in all other aspects.

Traditional architectural features

18. The traditional architecture features and entitlements shall be as prescribed in the Traditional Architecture Guidelines.

Lighting and ventilation requirements

19. Where natural lighting and ventilation are not adequate, they shall be supplemented with such arrangements as sky lighting, artificial lighting and mechanical ventilation.
20. Dormer windows shall be permitted provided the roof slopes do not exceed the angles prescribed in the Bhutan Building Rules.

Insulation requirements

21. The design and construction of attics shall include acoustic, sound and heat insulation adequate for human habitation and as required by relevant building code and standard practices.

Fire safety and emergency exit requirements

22. Fire safety and emergency exit requirements shall be as per the prevailing building rules, building codes or the development control regulations as applicable.

CHAPTER 3

APPLICATION AND APPROVAL

Drawing and approval requirements

23. The design and drawings for attics, including architectural, structural, electrical, water supply and sanitation, shall be submitted, processed and approved together with the main building drawings.
24. Proposals for addition of attics on existing buildings shall include proper plans incorporating the attic with the main building.

Preparation and certification of drawings

25. Municipality shall accept and process only the proposals prepared and signed by:
 - a. The registered architects for architectural drawings,
 - b. The civil engineers with at least two years of professional experience for structural drawings and,
 - c. The electrical engineers with at least two years of professional experience for electrical drawings.
26. The water supply and sanitation drawings may be prepared and signed either by architects or engineers with relevant registration and/ or practical experience.

CHAPTER 4

EXISTING ATTICS

Regularization of existing attics

27. If an owner desires, he/she shall be permitted to regularize the existing attic provided he/she:

- a. Incorporates, where necessary, basic standard of fire safety, lighting, ventilation and insulation.
 - b. Pays penalty as per clause 33 of these rules.
28. If an owner regularizes an existing attic in fulfillment of the conditions in clause 27, he/she shall be responsible for the structural integrity and general safety of his/her property and shall be fully liable in case of any untoward eventuality.

Procedure for regularization

29. An owner desiring to regularize an existing attic shall make an application to the municipality along with a copy of the as-built drawings (architectural) based on which the municipality, after verification at site, shall recommend the basic standards to be incorporated where necessary.
30. Based on the recommendation and on his/her own and/ or his/her designers' assessment, he/she shall submit the proposed rectification drawings to the municipality.
31. Considering that the regularization is processed on the strength of owner's application, the municipality shall neither insist on structural drawings nor be liable for, if any, structural failure.
32. The municipality shall collect the penalty amount and issue Occupancy Certificate only after site inspection and verifying that all rectifications have been incorporated as per the endorsed application.

Transitional period

33. A transitional period of three years from the date of adoption of these Rules shall be granted with a penalty cum regularization fee of:
- a. 10% of the cost of construction of the attic for regularizations within the first year,
 - b. 15% of the cost of construction of the attic for regularizations within the second year, and
 - c. 20% of the cost of construction of the attic for regularizations within the third year.
34. Any existing attic not regularized within three years from the adoption of these Rules shall be considered deviations under the rules for new attics.

Penalty for regularization of existing attics

35. For the purpose of calculation of penalties,
 - a. The cost of construction of an attic shall be derived by the Plinth Area Method as per the prevailing Bhutan Schedule of Rates, and
 - b. All existing attics shall be considered to have been completed in the year of adoption of these Rules.

CHAPTER 5

DEVIATIONS AND PENALTY

Deviations and unauthorized constructions

36. Deviation from the approved plan shall require prior approval from the implementing authority and shall be approved only if it is in conformity to these Rules.
37. Upon detection of an unauthorized deviation:
 - a. Work stop and rectification notices shall be issued for immediate compliance.
 - b. This shall be followed by a second visit the following day. If there is progress in deviated works (instead of rectification), a second notice noting the observations and warning of possible disconnection of the water services shall be served.
 - c. If work progress is again observed on the third day, the water services to the premises shall be disconnected and the owner shall be informed that the electricity shall be disconnected within the next 48 hours.
38. If a deviation is in conformity to these Rules and the owner submits an application for regularization, it shall be considered for regularization upon payment of a penalty calculated as per the following formula:

Amount = Built-up area of the attic x 1 x (unit area cost of construction, based on the prevailing Bhutan Schedule of Rates).

Demolition

39. If a deviation is not in conformity to these Rules and/or if the owner fails/ refuses to rectify, the municipality shall initiate a case for demolition as per the provisions of Bhutan Building Rules, urban development plan and development control regulations as applicable and shall be demolished by the municipality at the owner's risks/costs.
40. Internal deviations which do not have structural implications shall be approved after resubmission of as-built drawings.

Reconnection of services

41. Services disconnected as per clause 37 shall be restored only after rectification/regularization of the deviations and upon payment of an additional reconnection fee.

CHAPTER 6

MISCELLANEOUS

Delivery of notices

42. Any one or a combination of the following actions by the municipalities shall constitute delivery of the notices to the construction owner, provided the action taken is immediately recorded and reported to the municipal management:
 - a. A written instruction issued to the owner or his/her representative at the site or the work supervisor,
 - b. A verbal instruction communicated to the owner or his/her representative at the site or the work supervisor,
 - c. Disconnection of essential services.

Occupancy Certificate

43. Occupancy Certificate shall be a precondition for human habitation and provision of regular service connections and shall be issued by the municipalities only after proper verification of the construction site.

Change of use

44. Prior approval shall be obtained for a change of use of an attic failing which penalty calculated as per clause 37 of these Rules shall be imposed.

Panel of professionals

45. For the purpose of clauses 11(b) and 14(b), the Implementing or the Competent Authority, as applicable, may appoint a panel of professionals consisting of:
 - a. The Chief Urban Planner of the municipality or the department/ ministry as the case may be.
 - b. The Chief Architect of the municipality or the department/ ministry as the case may be.
 - c. The Structural Engineer of the municipality or the department/ ministry as the case may be.

- d. A member of the Royal Bhutan Institute of Architects.
 - e. The design architect and the engineer if required.
46. If the application is being assessed by the municipality, there shall be a representative from the department/ ministry and vice versa.
47. The Implementing Authority and/ or the Competent Authority may also invite one or two experts and researchers from relevant fields to sit on the panel.

Demolition squad

48. When a demolition becomes necessary for rectification of an unauthorized deviation as per clause 39 of these rules, the demolition squad shall consist of representatives from Implementing Authority, Bhutan Power Corporation and Royal Bhutan Police or any other agencies whose representation may become necessary.

Review and revision

49. These Rules may be reviewed and revised by the Ministry of Works and Human Settlement as and when deemed necessary or upon submission of such a requirement.

Definitions

50. Unless the context clearly requires otherwise:
- a. **Competent Authority** means the ministry in charge of the urban affairs.
 - b. **Deviation** means any departure from the approved documents, irrespective of the degree of change.
 - c. **Floor area** means the total area of the floor including the area of walls.
 - d. **Habitable room** means a room used for living purposes and shall not include kitchen, bathroom, water-closet or store room.
 - e. **Implementing Authority** means the Municipality or the City Corporation.
 - f. **Jamthog roof** means a roof feature comprising of a raised gable roof over the main roof of same length.
 - g. **Lung-go roof** means a raised roof feature like the *jamthog* but does not extend to the full length of the main roof.
 - h. **Occupancy certificate** means an official document issued by the implementing authority certifying that the building is safe and fit for occupation.