



**PERFORMANCE AGREEMENT BETWEEN  
THE SECRETARY  
AND  
THE DIRECTOR  
DEPARTMENT OF ENGINEERING  
SERVICES (DES), MINISTRY OF WORKS  
AND HUMAN SETTLEMENT**

**(July 1, 2014 – June 30, 2015)**

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## **Preamble**

The Performance Agreement is entered into between the Secretary, Ministry of Works and Human Settlement and the Director, Department of Engineering Services (DES).

The objectives of this Performance Agreement are:

- a) To establish clarity and consensus about annual priorities for the Department of Engineering Services consistent with the 11<sup>th</sup> Five Year Plan document, and Government's new priorities;
- b) To make the DES fully responsible for driving implementation and delivering the results against the annual priorities;
- c) To provide an objective and fair basis for evaluating the Director's overall performance at the end of year;

The Performance Agreement represents an important accountability mechanism for inculcating a performance-based culture at all levels of government.

**NOW THEREFORE**, the parties hereto agree as follows:

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## **Section 1: Vision, Mission and Objectives**

### **Vision**

*A professional organization excelling in planning, designing and implementation of high quality, cost effective, safe and sustainable infrastructure through preservation & promotion of traditional Bhutanese architecture and innovative leadership.*

### **Objectives**

**The following are the objectives of the Department:**

1. To preserve and promote traditional architecture in buildings
2. To promote value engineering through development and enforcement of appropriate construction policies, guidelines, manuals, standards, and codes
3. To provide effective and efficient engineering services and technical backstopping in all infrastructure development (building, water supply and sanitation facilities and trail bridges
4. To build technical and managerial capacity of all technical personnel at both central and local governments under the purview of DES.
5. To lead in research and development to generate construction technologies that maintains synergy between technology, environment and cultural values.
6. To develop and promote disaster resilient construction technologies to reduce and prevent natural disaster impacts (earthquake, cyclone, fire etc.) and adopt internationally accepted technologies and principles in disaster risk reduction.
7. To ensure access to adequate potable water supply in all Thromdes and DzongkhagThroms in collaboration with Local Governments.
8. To provide sustainable sanitation facilities inclusive of sewerage and solid waste disposal in all Thromdes and DzongkhagThroms in collaboration with Local Governments.
9. To understand the vulnerability of the community to flooding and manage the flood risk through "engineered construction of flood defenses system"
10. To ensure overall execution and implementation of Urban Infrastructures projects ( Water Supply, Sanitation and Roads) through provision of Technical and Managerial support to Project Implementing Unit ( PIUs)

## Section 2: Key Objectives, Weights, Actions and Success Indicators

SL. No.	Objectives	Weight	Actions	Success Indicators	Unit	Weight	Target				
							Excellent (100%)	Very Good (80%)	Good (60%)	Fair (40%)	Poor(20%)
1	<b>To preserve and promote traditional architecture .</b>	5	Create awareness on traditional architecture	No of engineers /architects trained on traditional architecture	No	3	40	30	20	15	<15
			Survey, design, drawings, estimation and tendering of Baazam	Baazams surveyed, designed	No	2	3	2	1	-	0
2	<b>To promote value engineering through development and enforcement of appropriate construction policies, guidelines, manuals, standards, and codes.</b>	10	Issue guidelines, rules and regulations, and standards	Guideline published	No	5	3	2	1	0	0
			Publish Annual Bhutan Schedule of Rates (BSR)	Annual BSR published	No.	5	1	-	-	0	0
3	<b>To provide effective and efficient engineering services and technical backstopping in all infrastructure development (building, water supply,sanitation facilities and trail bridges).</b>	15	Review and approve building drawing and design proposals	Building drawing and designs approved	%	4	100	90	80	70	<60
			Provide professional engineering services to the royal and important national projects.	Professional engineering services provided to national projects	%	4	100	90	80	70	<60
			Property valuation of buildings infrastructures for any government acquisition	No of property valuation completed	%	0.5	100	90	80	70	<60
			Development of Regional Hubs and other towns	Provide professional engineering services for the development of Regional Hubs' and towns' infrastructure	No.	2	3	2	1	-	-
			Promotion of private lab facilities for basic tests.	Number of private engineering labs promoted	No.	1	2	1	-	-	-
			Promotion of local construction materials	No. of local materials successfully promoted	No.	1	1	-	-	-	-
			Survey, design, procure parts for trail bridges	Trail bridges surveyed and designed.	No.	2	20	15	12	10	<10
			Major maintenance of trail bridges in Dzongkhags	Major maintenance services provided to Dzongkhags	%	0.5	100	90	80	70	60
4	<b>To build technical and managerial capacity of all</b>	8	Provide technical and managerial trainings to	Engineers	No.	5	60	50	40	30	<20

	<b>technical personnel at both 12central and local governments under the purview of DES.</b>		engineers and technicians.	Technicians/ artisans/others	No.	3	60	50	40	30	<20
5	<b>To lead in research and development to generate construction technologies that maintains synergy between technology, environment and cultural values.</b>	8	Study of viable modern & traditional technology for sustainable infrastructure development	Viable construction technology identified	No	5	1	-	-	-	0
			Revive traditional construction technology	Good traditional construction techniques documented	No	3	1	-	-	-	0
6	<b>To develop and promote disaster resilient construction technologies to reduce and prevent natural disaster impacts (earthquake, cyclone, fire etc.) and adopt internationally accepted technologies and principles in disaster risk reduction.</b>	11	Assess risks of earthquake disasters in the country	Risk assessment formats developed and assessments carried out.	No.	4	2	1	-	-	0
			Introduce and pilot appropriate retrofitting techniques	Number of buildings piloted	No.	4	2	1	-	-	0
			Study and assess fire/cyclone damage	Past damages studied	No.	1	1	-	-	-	0
			Initiate fire and cyclone safe construction guidelines.	Fire and cyclone safe construction guidelines issued	%	2	100	80	60	40	<35
7	<b>To ensure access to adequate potable water supply in all Thromdes and DzongkhagThroms in collaboration with Local Governments.</b>	12	Develop comprehensive database of water supply infrastructure for performance monitoring software	Performance monitoring system developed for water supply infrastructure.	No.	2	4	3	2	1	0
			Develop water master plan for new towns which have approved structural plan by DHS	Water master plan developed for Paro and Sarpang towns	No	2	2	1	0	0	0
			Develop water safety plans for all urban water supply schemes.	Water safety plans developed for all urban towns	No.	5	9	8	7	6	<5
			Provide professional services to Dzongkhags and Thromdes for development of Water infrastructures	Professional services provided to Dzongkhags and Thromdes for development of Water infrastructures	%	3	100	80	60	40	<40
8	<b>To provide sustainable sanitation facilities inclusive of sewerage and solid waste disposal in all Thromdes and DzongkhagThroms in collaboration with Local Governments.</b>	8	Develop comprehensive database of sanitation infrastructures for performance monitoring software	Performance Monitoring system developed for sanitation infrastructure.	No.	2	4	3	2	1	0
			Formulate sanitation master plan	City Sanitation Plan developed	No.	2	2	1	0	0	0
			Develop appropriate programs for sustainable sanitation systems in small towns	Programs for sustainable sanitation systems for small towns developed	No.	2	3	2	1	0	0
			Provide professional services to Dzongkhags and Thromdes for development of Sanitation infrastructures	Professional services provided to Dzongkhags and Thromdes for development of Sanitation infrastructures	%	2	100	80	60	40	<40

9	<b>To understand the vulnerability of the community to flooding and manage the flood risk through “engineered construction of flood defenses system</b>	8	Undertake flood risk assessment studies and generate flood hazard maps and plan appropriate mitigation measure	Dzongkhag wise Master Plan for flood risk management developed	No.	2	5	4	3	2	1
			Develop national database on Flood Prone Areas	National database developed	%	1	50	45	40	35	<30
			Planning, designing and implementation of Flood Protection System	Flood Protection systems constructed	No.	3	6 (50% each)	5	4	3	<2
			Provide professional engineering services to dzongkhags and thromdeys	Professional services provided	%	2	100	90	80	70	<60
10	<b>To ensure overall execution and implementation of Urban Infrastructures projects (Water Supply and Sanitation and Roads) through provision of Technical and Managerial support to Project Implementing Unit (PIUs)</b>	5	Coordinate and monitor infrastructure development projects.	North Thimphu Thromde Project (WB)	%	1.0	100	80	60	40	<40
				South Thimphu Thromde Project (ADB)	%	1.0	100	80	60	40	<40
				P/ling Thromde Project	%	1.5	100	80	60	40	<40
				S/Jongkhar Thromde Project	%	1.5	100	80	60	40	<40
<b>Mandatory Objectives</b>											
11	<b>To implement National Integrity and Anti-Corruption Strategy</b>	10	To carry out exercises using integrity promotion tools like Corruption Risk Management (CRM) and Integrity Diagnostic Tools (IDT)	CRM and IDT conducted	%	10	1	0	0	0	0

### Section 3: Trend values of the success indicators

Objective	Actions	Success Indicator	Unit	Actual Value for FY 12/13	Actual Value for FY 13/14	Target for FY 14/15	Projected Value FY 15/16	Projected Value FY 16/17	Projected Value
									FY 17/18
<b>To preserve and promote traditional architecture.</b>	Create awareness on traditional architecture	No of engineers /architects trained on traditional architecture	No			40	40	40	
	Construction of Bazams in the Dzongkhags to preserve traditional architecture	Baazams surveyed, designed	No			3	3	3	
		Bazams constructed	No				2	3	4
<b>To promote value engineering through development and enforcement of appropriate construction policies, guidelines, manuals, standards, and codes.</b>	Issue guidelines, rules and regulations, and standards	Guidelines published	Nos	0		3	2	1	0
	Publish Annual Bhutan Schedule of Rates (BSR)	Annual BSR published	Nos	1	1	1	1	1	1
	Provide professional engineering services to the royal and important national projects.	Professional engineering services provided to national projects	%			100	100	100	100
	Property valuation of buildings infrastructures for any government acquisition	No of property valuation completed	%		-	100	100	100	100
	Development of Regional Hubs and other towns	Provide professional engineering services for the development of Regional Hubs' and towns' infrastructure	No.			3	0	0	0
	Promotion of private lab facilities for basic tests.	Number of private engineering labs promoted	No.			2	-	1	-
	Promotion of local construction materials	No. of materials promoted	No.			1	1	1	1
	Survey, design, procure parts for trail bridges	Trail bridges surveyed and designed.	No.		5	20	22	10	-
	Major maintenance of trail bridges in Dzongkhags	Major maintenance services provided to Dzongkhags	%		-	100	100	100	100



<b>To build technical and managerial capacity of all technical personnel at both central and local governments under the purview of DES</b>	Provide technical and managerial trainings to engineers and technicians.	Engineers trained	No.			60	60	60	60
		Technicians/ artisans/others	No.			60	60	60	60
<b>To lead in research and development to generate construction technologies that maintains synergy between technology, environment and cultural values.</b>	Study of viable modern & traditional technology for sustainable infrastructure development	Viable construction technology identified	No.	0	0	1	1	1	1
	Revive traditional construction technology	Good traditional construction techniques documented	No	0	0	1	1	1	0
<b>To develop and promote disaster resilient construction technologies to reduce and prevent natural disaster impacts (earthquake, cyclone, fire etc.) and adopt internationally accepted technologies and principles in disaster risk reduction.</b>	Assess risks of earthquake disasters in the country	Risk assessment formats developed and assessments carried out.	No.	0	0	2	1	2	1
	Introduce and pilot appropriate retrofitting techniques	Number of buildings piloted	No.	0	0	2	1	2	0
	Study and assess fire cyclone damage	Past damages studied	No.	0	0	1	0	1	0
	Initiate fire and cyclone safe construction guidelines.	Fire and cyclone safe construction guidelines issued	No	0	0	1	0	1	0
	Develop comprehensive database of water supply infrastructure for performance monitoring software	Performance monitoring system developed for water supply infrastructure.	Nos	0	0	4	5	7	4
<b>To ensure access to adequate potable water supply and sanitation facilities in all Thromdes/Dzongkhags/Throms</b>	Develop water master plan for new towns which have approved structural plan by DHS	Water master plan developed for Paro and Sarpang towns	Nos	0	0	2	2	2	2
	Develop water safety plans for all urban water supply schemes.	water safety plans developed for all urban towns	Nos	0	11	9	0	0	0
	Develop comprehensive database of sanitation infrastructures for performance monitoring software	Performance Monitoring system developed for sanitation infrastructure.	Nos	0	0	4	5	7	4

<b>To provide sustainable sanitation facilities inclusive of sewerage and solid waste disposal in all Thromdes and DzongkhagThroms in collaboration with Local Governments.</b>	Formulate sanitation master plan	Sanitation Master Plan developed	Nos	0	0	2	2	2	2
	Develop appropriate programs for sustainable sanitation systems in small towns	Programs for sustainable sanitation systems for small towns developed	Nos	0	3	3	0	0	0
<b>To understand the vulnerability of the community to flooding and manage the flood risk through “engineered construction of flood defenses system</b>	Undertake flood risk assessment studies and generate flood hazard maps and plan appropriate mitigation measure	Dzongkhag wise Master Plan for flood risk management developed	No.	0	0	5	5	5	5
	Develop national database on Flood Prone Areas	National database developed	%	0	0	50	50	0	0
	Planning, designing and implementation of Flood Protection System	Flood Protection systems constructed	No.	1	0	3	3	4	3
<b>To ensure overall execution and implementation of Urban Infrastructures projects (Water Supply and Sanitation and Roads) through provision of Technical and Managerial support to Project Implementing Unit (PIUs)</b>	Coordinate and monitor infrastructure development projects.	Thimphu Thromde Project	%	100	100	100	100	100	100
		P/ling Thromde Project	%	100	100	100	100	100	100
		S/Jongkhar Project	%			100	100	100	100
		Dagana Project	%	100	100	100			
<b>To implement National Integrity and Anti-Corruption Strategy</b>	To carry out exercises using integrity promotion tools like Corruption Risk Management (CRM) and Integrity Diagnostic Tools (IDT)	CRM and IDT conducted	%	0	0	1	1	1	1

#### Section 4: Description, definition and measurement of success indicators

SI. No.	Success Indicator	Description	Definition	Measurement	General Comments
1	Publication of guideline.	Guideline is quick technical reference book for the construction of standard structures like retaining walls		Nos.	
2	Training of building inspectors.	Training of building inspectors will have different aspects required to be checked during the construction of buildings		Nos.	
3	No of professional services provided.	Professional services includes design, estimates and tender documents for important national projects		%	adhoc
4	Design document for urban infrastructure development for Nganglam and Kanglung	This will indicate the planning and design documents prepared for the development of urban infrastructure for Regional hubs		%	adhoc
5	Existing scenario studied	Studies through survey of construction industry quality managements		No of industries and construction companies surveyed	
6	Quality assurance guidelines developed	Improved quality assurance guidelines which will specify the quality assurance criteria		No of checklists /guidelines/ manuals developed	
7	Stone masonry guidelines developed	Earthquake resistant construction guideline for stone masonry which includes different parameters of earthquake resistant construction		1 guideline/manual	
8	Confined masonry guidelines developed	Earthquake resistant construction guideline for confined masonry		1 guideline/manual	
9	Number of private engineering labs supported	Technical support and business feasibility advice to Private lab facilities for basic tastings		No of private firms	
10	No of houses built using CSEB material in new towns.	No of houses built using CSEB material in new towns.		No of CSEB houses	
11	No of CLC manufacturer supported and established in target region.	No of CLC manufacturers supported in target regions.		No of manufacturer for CLC	
12	Number of Dzongkhags/ contractors trained	Engineers and contractors in Dzongkhags		No of engineer /contractors	
13	Number of Dzongkhags/engineers/masons/homeowners trained	No of engineers/local artisans/home owners in Daongkhags trained		No of engineers/masons/homeowners	
14	Viable construction technology identified	Available technology outside which is feasible in Bhutan		No of viable technology	
15	Viable green technology identified	Relevant and practical green technologies applicable		No of viable green technology	

16	Technology transfer through capacity building in dzongkhags	Viable identified technology promotion through pilot projects		No of Dzongkhags piloted	
17	Documentation of good traditional construction techniques	Good old traditional technology documentation		1 document	
18	Development of assessment formats	Pre and post earthquake vulnerability assessments		No of Assessment Formats	
19	Number of buildings piloted	Public buildings pilot retrofitting		No of buildings	
20	Past damages studied	Cause and shortcomings identification form past damages		Study Report	
21	Fire safety construction guideline developed	Ground works for development of guidelines for fire damages to buildings		1 Draft Guideline	
22	Windstorm/cyclone safety construction guideline developed	Ground works for development of guidelines for windstorms.		1 Draft Guideline	
23	Undertake Flood Risk assessment studies and generate flood hazard maps and plan appropriate mitigation measures	A detailed flood risk analysis will be carried out and flood hazard maps will be generated. This would ultimately lead to Master Plan for flood protection infrastructure		Master plan for each Dzongkhag	
24	Develop National Database on Flood Prone Areas	Detailed information for flood prone areas will be compiled		Dzongkhag-wise Database	
25	Planning, design and implementation of Flood Protection Systems	Construction projects for alleviation of flood risk and land reclamation		Projects	
26	Performance monitoring system developed	Computerized information and management/ monitoring facility		Nos.	
27	Water and Sanitation Master Plan developed	Assessment of resources and supply demand (present and projected), appropriate infrastructure and investment plan, comprehensive master plan developed		Nos.	
28	WSP developed	a comprehensive risk assessment and risk management approach that encompasses all steps in water supply from catchment to consumer		Nos.	
29	Developed programs for sustainable sanitation for small towns	Mapping of sanitation facilities, create demand, identify decencies and recommendation for appropriate technology/solutions		Nos.	
30	<b>Corruption Risk Management (CRM) tool</b>	It is a tool to assess the risk of corruption in the management			
31	<b>Integrity Diagnostics (ID) tool</b>	Tool to assess the integrity of individual officer			

*Flood Master Plan: A document, which will have information on flood risk assessment along with hazard maps. It will also include details of structures required, their locations to alleviate flood risks for every settlement.*

*Flood Database: National level database with information on past and present flood prone areas with photographic evidences in the country.*

**Section 5: Specific performance requirements from other ministries/agencies**

Location Type	Organization Type	Organization Name	Relevant Success Indicator	What is your requirement from this organization	Justification for this requirement	Please quantify your requirement from this Organization	What happens if your requirement is not met
Central	Department	DDM	Pre and post earthquake vulnerability assessments	Project coordination and fund sourcing s for all disaster management works	DDM is the focal disaster management agency under the Disaster Management Act 2013		Direct alternative fund sourcing shall be explored.
Central	Ministry	MoEA	Private testing lab facilities, CSEB houses, CLC brick industries	Fast track licensing and business financial assistance	Local material industries promoted through CSM Industries		Promotion of cottage and small industries for local construction materials will be hampered.
Central	Autonomous	BSB	Private testing lab facilities, CSEB houses, CLC brick industries	Fast track certifications for local prospective business in construction materials	Certification involves thorough cross checking and ensures quality production, which is at par with international standards. This could be relaxed for local small industries.		Delay in establishment of local construction material manufacturers and hence delay in combating import of construction materials
Dzongkhags	Local Government	Dzo Adm,	No of engineers and local artisans in Dzongkhags	Coordination support and good participations	Overall community capacity building can only be achieved through proper coordination and participation from Dzongkhags		Capacity building of community to be resilient against disaster is compromised.
Central	Department	DHMS	Partially	Hydrological and Meteorological Data	Needed for Flood Modelling		We have to build our own Hydro-Met Stations to achieve our goals
Central	Commission	NEC	most of the indicators	Environmental clearances	Environmental clearance is required for most of the activities		delay the implementation of the project

Central	Commission	RCSC	Water and Sanitation indicators	Placement of required Human Resources	Human Resource is require for implementation of all activities		Will be difficult to implement the activities
Central	Ministry	Ministry of Finance	Water and Sanitation indicators	Budget	Budget is required for all the activities		Will be difficult to implement the activities
Local	Dzongkhags and Thromdes		Water and Sanitation indicators	Implementation of Planned activities	Implementing Agencies		Will be difficult to implement the activities
Central	Central Department	DHS	Water and Sanitation indicators	Development of Urban Plans	Urban plans required for development of water and sanitation infrastructure		
Central	Commission	ACC	Corruption Risk Management tool and Integrity Diagnostics tools	Training on use of these tools	Officers are not aware		

Whereas,

I, the Director, Department of Engineering Services, commit to the Secretary, the Government and the people of Bhutan to deliver the results described in this annual performance agreement.

I, the Secretary, commit to the Director, Department of Engineering Services, on behalf of the Government and the people of Bhutan, to provide the necessary support and resources for delivery of the results described in this annual performance agreement.

SIGNED:



30.6.14.

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Dr. Sonam Tenzin  
Secretary, Ministry of Works & Human Settlement

\_\_\_\_\_  
Date



\_\_\_\_\_  
Tenzin  
Director, Department of Engineering Services

30/6/2014

\_\_\_\_\_  
Date