



Directorate of Municipal Administration, Government of Odisha

Implementation of an Integrated
e-Governance Solution across all
Urban Local Bodies of Odisha

Drawing Manual – OBPAS - LAYOUT APPROVAL



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1. Introduction

1.1. Background

The Housing & Urban Development Department (H&UDD), Government of Odisha has ambitious plans to scale up e-governance across 113 Urban Local Bodies (ULBs) in the State of Odisha. It aims to enhance the citizen experience of public services by providing integrated, end-to-end services using a comprehensive State-wide Service Delivery Infrastructure. Online Building Permission System (OBPS) is one of the focus areas for the H&UDD to help all stakeholders and citizen get building plan approvals through end to end automation of the processes involved.

Online Building Permission System (OBPS) envisages complete automation of all processes related to building approval at Odisha. The Layout approval process involves private architects and town planners submitting Layout plans as per the approved byelaws of the state of Odisha. The layout approval follows series of departmental approvals in line with the byelaws of Odisha. All the processes and steps including calculation of fee, payment of fee, receipt of approval for the permission and certificates etc would be delivered online through an integrated one stop solution.

DIGIT - Online Building Permission System (OBPS) shall enable local government to bring in transparency, accountability and time-bound service for the public. With DIGIT - OBPS, professionals like architects, engineers, supervisors can seek permission for construction of a building for any Urban Local Body / District Town and Country Planning / Centre for Municipal Administration with a speedy, hassle-free and user-friendly procedure, online.

1.2. Salient features of Layout approval solution

- ***Software based verification of Layout drawings and details, for compliance with the various regulations defined in Odisha byelaws.***
- An overall transformation in the concept of conventional Layout approval scrutiny process.
- Minimizes the human interventions in.
- Facilitate online approvals of subplot layout approval.
- Improved transparency in the Layout approval process.
- Better precision in interpretations of the various rules.
- Facility for checking conformity with the rules of the plans and details prior to official submission.
- Only the rule complied plans and details can be officially submitted for permit application.

2. Guidelines for preparation of drawings

2.1. General guidelines

- All drawings shall be drawn in 1:1 scale, in meter, in model space.
- All required details as per this guideline shall be submitted in a single drawing, drawn in model space.
- The drawing shall be saved in .dxf format and to be uploaded for the rule validation.
- Detailed drawings (showing EIDP, Services and waste management) incorporating all specifics as per guidelines mentioned on Byelaws and documents listed in the OBPS portal, set to scale and paper size specified in the guidelines in pdf format. These pdf files are to be separately uploaded after .dxf file scrutiny.
- The drawings shall be prepared by matching the various entries in the drawings with the properties of layers of the supplied layer matrix.
- The layer template file, which can be downloaded along with these guidelines, contains all the layers which are used by the system and can be made use while creating .dxf. drawings required for rule validation.
- Wherever details are to be furnished as dimensions, these are to be incorporated using dimension tools and shall not be exploded/edited.
- Wherever one or more polygons/ dimensions/ lines/ depicting different parameters are required to overlap, it shall be ensured that, no gaps/ spaces are left in between.
- The use of layers/ Texts/ color conventions specified by these guidelines to designate a parameter shall be restricted to that entity only and shall not be used elsewhere in the drawing.
- The drawing may get aborted if it does not adhere to the guidelines mentioned in the document.

2.2. Drawing Preparation Format to be followed

- All details shall be furnished using closed polygon with polylines, lines, texts, dimensions etc. to be incorporated in layers, index colors as specified in this guideline.
- It is instructed to the architects to keep all the layers and details in the drawing as per Bye Laws standards. Over and above this, prepare drawing for features scrutiny in dxf format as per this drawing manual. The layers drawn for Auto Scrutiny should be drawn overlaid/Superimposed on top of the base drawing. It is recommended to freeze the layers that may not be relevant while preparation of drawing.

2.3. Unit Settings in Drawing

System accepts drawing in unit - **Meter**

Put drawing unit length type - **Decimal**

Put drawing unit angle type – **Decimal Degrees**

Put dimension style unit formal - **Decimal**

Use precision – **0.00**

Deviation from above mentioned settings will get the drawing rejected by the scrutiny system.

2.4. Layers for drawing preparation

S.No	Feature	Layer Name	Drawing guidelines	Layer Code	Drawing Requirement
Layers to be drawn on the site plan					
1	Land Boundary	LAND_BOUNDARY	Draw as Polygon around the plot boundary	As per the Land use	Mandatory as per rule
2	Sub plot	SUB_PLOT_n	Draw as Polygon around the Particular sub plot to demarcate the area of the sub plot	As per Sub - Occupancy type	Mandatory as per rule
			Draw a dimension to show the abutting road width.	As per Sub - Occupancy type	Mandatory as per rule
3	Revenue plot in Sub plot	SUB_PLOT_n_RV_PLOT_N	Draw as Polygon around the Particular revenue plot part of the sub plot to denote the revenue plot area occupied by the sub plot	01	Mandatory as per rule
4	Access road to the site	ACCESS_ROAD	Draw as Dimension to denote the width of the access road to the site	01	Mandatory as per rule
5	Internal Junctions	INTERNAL_JUNCTIONS	Draw as closed polygon to denote the junction points of internal road	02	Mandatory as per rule
6	Internal Road	INTERNAL_ROADS_RESIDENTIAL	Draw as dimension to denote the length of the internal road	As per the Internal Road width	Mandatory as per rule
7	Cul-de-sac	CUL_DE_SAC_n	Draw as dimension to denote the length of the Cul-de-sac	01	Mandatory as per rule
8	Plantation	PLANTATION_TREECOVER	Draw polygon to denote the number of trees to be planted.	01	Mandatory as per rule
9	On site solid waste management	ONSITE_SWM	Draw polygon to denote the size of the solid waste management system	01	Mandatory as per rule
10	North Direction	NORTH_DIRECTION	Draw polyline for north direction	7	Mandatory as per rule
11	Affected Land area	LAND_BOUNDARY_DEDUCT	CDP proposed drain affected area Draw polygon on	01	Optional as per design

			site plan outlining the affected area		
			CDP proposed water body affected area Draw polygon on site plan outlining the affected area	02	Optional as per design
			CDP proposed road affected area Draw polygon on site plan outlining the affected area	03	Optional as per design
			Road widening area Draw polygon on site plan outlining the affected area	04	Optional as per design
			Area left for restricted area Draw polygon on site plan outlining the affected area	05	Optional as per design

2.5. Layer color as per occupancy type

S.No	Occupancy	Sub-plot use type	Color Code
1	Sub-Plot	Internal road area	01
2	Sub-Plot	Open spaces	02
3	Sub-Plot	Public utilities	03
4	Sub-Plot	Community Facilities	04
5	Sub-Plot	Public transport uses	05
6	Sub-Plot	Residential	06
7	Sub-Plot	Affordable Plot	07 or 08
8	Sub-Plot	Commercial	10
9	Sub-Plot	Industrial	11
10	Sub-Plot	Institutional	12
11	Sub-Plot	Farmhouse	13
12	Sub-Plot	Country Homes	14

2.6. Layer color as per Land Use type

S.No	Land use type	Color Code
1	Open Space Use Zone	01
2	Transportation use	02
3	Agricultural and forest use zone	03
4	Water bodies use zone	04
5	Special heritage zone	05
6	Environmentally sensitive zone	06
7	Residential Use Zone	07
8	Retail Commercial and Business use zone	08
9	Wholesale commercial use zone	09
10	Industrial Use Zone	10
11	Public and semi -public use zone	11
12	Utility and service use zone	12

2.7. Layer color as per Internal Road width

S. No	Occupancy type	Road width	Color Code
1	Residential	6m wide	01
		9m wide	02
		12m wide	03
		15m wide	04
		18m wide	05
		24m wide	06
2	Non-residential	6m wide	01
		9m wide	02
		12m wide	03
		15m wide	04
		18m wide	05
		24m wide	06

2.8. Layer Plan Info

S.NO	Description	Key	Expected response format
1	Name of architect/ Town planner responsible for drawing preparation	ARCHITECT_OR_TECHNICAL_PERSON_NAME = name	Full Name
2	Is project purely for affordable housing	IS_PROJECT_COMING_UNDER_AFFORDABLE_HOUSING_SCHEME=NO/YES	Write YES or NO
3	If the adjacent plot is land locked or not	ADJACENT_LAND_LOCKED_PLOTS=YES/NO	Write YES or NO
4	If adjacent plot is landlocked, is public road to it is provided through the plot.	IS_PUBLIC_THOROUGHFARE_PROVIDED_ON_ONE_SIDE_OF_THE_LAND_IF_ADJACENT_LAND_LOCKED_PLOTS_ARE_PRESENT=YES/NO	Write YES or NO
5	The access road to the plot and storm water drainage	IS_ACCESS_ROAD_TO_THE_SITE_AND_STORM_WATER_DRAIN_PROVIDED=YES/NO	Write YES or NO
6	If the subdivision is done for industrial estate	IS_PROJECT_FOR_SUB_DIVISIONAL_LAYOUTS_FOR_INDUSTRIAL_ESTATES=NO/YES	Write YES or NO
7	For Industrial plot minimum width of plot	MINIMUM_PLOT_WIDTH_IN_CASE_THE_LAYOUT_IS_FOR_INDUSTRIAL_ESTATES=Numeric value/NA	Numeric value with decimal
8	If the plot is divided among family members	IS_PLOTS_SUB_DIVIDED_AMONGST_MEMBERS_OF_A_FAMILY=NO/YES	Write YES or NO
9	If the plot is specifically for EWS category	IS_THE_LAYOUT_FOR_ECONOMICALLY_WEAKER_SECTIONS=NO/YES	Write YES or NO
10	Reservation of land in case layout for residential	20_PERCENTAGE_OF_RESIDENTIAL_AREA_MEANT_FOR_EWS_OR_LIG_WILL_BE_USED_FOR_AFFORDABLE_HOUSING_PURPOSE_OR_FOR_SUB_PLOT_PURPOSE=A/S	Write A or S
11	If Project needs RERA registration	IS_PROJECTS_REQUIRED_TO_BE_REGISTERED_UNDER_THE_REAL_ESTATE_ACT_2016=NO/YES	Write YES or NO
12	Possession Plot Area	POSSESSION_PLOT_AREA_M2	Numeric value with decimal
13	Internal road verification	IS_THE_INTERNAL_ROAD_OF_THE_LAYOUT_OPEN_ENDED_UPTO_THE_PROPERTY_LINE	Write YES or NO
14	Final plot in a Town Planning Scheme	IS_THE_PLOT_A_FINAL_PLOT_IN_A_TOWN_PLANNING_SCHEME_PREPARED_BY_DEVELOPMENT_AUTHORITY	Write YES or NO

Frequently asked questions (FAQ)

Q1. How and in which order do we create the Layers?

A1. For easier understanding follow the bellow steps,

- Create the Land Boundary first
- Create all the required Sub plots.
- Now create the revenue plots for each sub plot. Take one sub plot, create all the required revenue plots for that sub plot and then move to the next one.
- Provide other necessary data such as access road and internal road etc.
- Check and confirm that the subplots and other details satisfy the byelaws.

Q2. What are the necessary checks before submitting the Drawing.

A2 The fallowing checks can be conducted either before scrutiny or after the scrutiny failed to ensure correct drawing.

- Total Plot area to be equal to the sum of total Sub plot area.
- Total revenue plot area to be equal to total sub plot area.
- Color code of sub plots to check if correct color code is provided for the Open space and other utility areas required as per bye law.

Q3. How does system calculate fee for Layout?

A3. System calculates fee based on the drawing using following layers:

- **Fee for development of land** – This will be calculated based on the Plot Area layer with color as 01.
- **Shelter fees and Security Deposit** - Security will be calculated based on the total plot area depending on the applicability. Shelter fee will be calculated as per the deficit area of reserved land for affordable housing.

Open space exemption fee - will be applicable for the deficit of the 5% of land area reserved for open space as applicable in project.

Open space and community facility exemption fee – will be applicable for the deficit of the 5% of land area reserved for Community facilities as applicable in Project.

Q4. How should I start with the drawing preparation?

A4. Complete the drawing as per standards and guidelines required by Bye Laws. The drawing should be completed as submission drawing formats. Use drawing scale 1:1 only. During or before preparation of drawing, make the UNITS settings - **Meter** and length type **Decimal** in the software (e.g. AutoCAD). Length type in primary units of dimension style shall be updated to Decimal.

Copy and Paste the Plan Info and required layers from the Drawing Template (provided in the resource section) and follow guidelines in the Drawing manual to start drawing preparation for Auto-scrutiny.

Q5. What should I do if my drawing is ‘not accepted’?

A5. One can open the .dxf file, that was uploaded for scrutiny, in the drafting software that was used for drawing preparation (eg. Autocad) make the modifications in the drawing as per the scrutiny report. After update of drawing, one can resubmit the drawing for scrutiny.

Q6. In which format the drawing shall be saved for scrutiny?

A6. Drawing shall be saved in .dxf format only.