

3D MODEL SUBMISSION REQUIREMENTS

WHEN DO I NEED TO SUBMIT A 3D DIGITAL MODEL?

You will need to submit a 3D model for a development application, amended plan, or application for amendment that is:

- A new building or amendment of a building within the Gosford City Centre or Terrigal Bowl area, and
- Building having 3 stories or more.

WHAT IS THE 3D DIGITAL MODEL USED FOR?

The supplied 3D Digital Models will be loaded into the Central Coast Council 3D Digital Model and will be used for detailed development assessment.

An assessment may include:

- Compliance with building envelope controls and building height
- Shadowing impacts at any date and time
- The relationship of the proposed building to adjacent built or other proposed development
- The relationship of the proposed building to adjacent public space
- View impact assessment from both private and public domain
- The character of the spaces created by the cumulative effect of development

SPECIFICATIONS

The purpose of the specifications is to ensure that the 3D Digital Models which are submitted to Council are:

- Visually and geometrically accurate to allow precise assessment by development assessment officers
- Reside in the correct co-ordinated spatial location in the Central Coast Council 3D Digital Model (GDA94 MGA Zone 56)

Format

All 3D Digital Models should be supplied in SketchUp (v8) format (*.skp) and Collada format (*.dae). The supplied models shall contain all the respective texture images). Other file formats may be considered if they can be accurately loaded into the 3D model.

Working units

The model must be drawn or exported in metres and at 1:1 scale. Models are assumed to be scaled in metres in all axis. Architectural models are typically modelled in mm, failing to check for this prior to exporting from the source software will result in incorrectly scaled models in Council's 3D solution.

Models should always be checked for floating point precision errors (rounding errors) after export if the units are rescaled, this will be readily identifiable if the model geometry appears to move unexpectedly.

Object centre

Ensure that the model is drawn from an origin of 0, 0, 0 and is not georeferenced in space directly.

Model orientation

The model must be drawn with the correct orientation relative to North.

Model location

Provide the co-ordinated XYZ insertion point of the model in georeferenced space (GDA94 MGA Zone 56).

Reference points

Two reference points must be included expressed in Reduced Levels (RLs) based on Australian Height Datum (AHD). These points should be annotated in the 3D Digital Model at:

- the street frontage; and
- the highest point of the building

Level of detail

The building 3D Digital Model should only consist of the exterior geometry that will be considered as part of the shadow casting and form analysis including accurate placement of:

- glazing,
- balconies (including glass balustrades),
- roof pitches,
- terraces,
- roof services

Please exclude all internal and unseen geometry such as

- internal stairs, walls, doors or furniture
- people, vehicle or vegetation

Single sided faces

For the most efficient rendering, most 3D applications will only render the front face of a polygon, this is also referred to as “back face culling”. When back face culling is enforced, only the outward facing normal of a model are rendered, while all inward facing normal are culled from the scene.

Image Textures

3D Digital Model surfaces should be made up of either all textured surfaces or all coloured surfaces, not both.

All faces of a textured 3D Digital Model must have an appropriate image applied. Textures should not include any shadows.

All textures must be in JPEG or PNG format, texture dimensions should be kept to a minimum with an ideal texture size being no larger than 512 x 512 pixels.

File naming conventions

Naming conventions used should be clearly defined in the documentation submitted with the model.

QUESTIONS

Should you have questions concerning the submission of a 3D Digital Model please contact Council's Geospatial Information Services on 1300 463 954 or email

CHECKLIST FOR DIGITAL 3D MODEL SUBMISSION

Please ensure you have read the "Specifications" and that the 3D Digital Model adheres/includes the following:

- Sketchup/DAE file format
- Unit in metres
- Insertion Point Coordinates
- Enough details for accurate shadow casting
- No internal features shown (internal wall, doors, stairs, etc)
- Textured or coloured 3D digital model (not both)
- Correct north orientation and origin / axis (0 ,0, 0) at object
- 3D digital model supplied on CD or USB.