# Technical Advisory Note
## for 3D Digital Model Submissions

The purpose of this advisory note is to provide technical guidance for submitting 3D digital models for planning applications to the Department of Environment, Land, Water and Planning (DELWP).

### Technical specifications

The 3D digital models need to be provided in FBX format. The following guidelines and settings apply to all models:

- The base units must be in metres
- The height, as a Z value, must be used in accordance with the Australian Height Datum (AHD)
- If georeferenced, use the MGA 94-55 coordinate system
- If not georeferenced, models need to be provided as object-centered, having both the origin and pivot point at 0,0,0. A plan must also be provided that indicates applicable offsets from the title boundary if the model does not occupy the entire site
- Rotation must be in accordance with the cadastral alignment
- Only the external building envelope is to be provided. Internal layouts must be deleted
- Please ensure that there are no missing or displaced parts of the model after export (except those that are intentionally removed)
- A model that is over 3 million triangles on export must also be packaged with a lower detail version (less than 100,000 triangles)

### Polygons

- All unnecessary features must be removed from the model, especially internal features, spherical or tubular objects and overly complex features
- Redundant and duplicate polygons, lines or textures must also be removed
- Models should be exported as a shell, where walls and glass panels are made into a full 3D form
- Models must have only single-sided faces that do not overlap, and normals facing outward
- A single face with no additional polygons should replace internal, external and side faces
- Highly complex external features such as vegetation should be removed or simplified and replaced with billboard style vegetation models

### Textures

- All textures must be in JPG, TIFF, PNG or TGA format
- Texture pixel dimensions should be multiples of two. A maximum texture size for a single building is 2048 x 2048 pixels
- Wherever possible, texture dimensions should be kept to a minimum with an ideal texture size being no larger than 512 x 512 pixels
- Texture names should only contain A-Z and 0-9 characters. Spaces, symbols and other characters are not supported
- The model must be purged of all unused texture and object links

### File naming and conventions

Models must be named according to the site address, file export date and model type ('Prop' or 'Aprvd'). e.g.

218-242_LittleCollinsSt_20150722_Prop.fbx

Ensure that the site address is clearly provided. Please note that street addresses can be misleading.

### Delivery

Models are to be provided to the appropriate planner in the Development Approvals and Urban Design Team. Digital files may be delivered by email if files are smaller than 5MB. If files are larger than 5MB, it is recommended to use an internet-based file sharing service such as Dropbox or Hightail, and send the link to the email address below. Alternatively, files may be provided in CD or USB format.

For any technical queries please contact:

David Sowiński
Senior Urban Designer
(03) 83925501
david.sowinski@delwp.vic.gov.au

As part of the formal referral process, 3D model submissions will also be provided to the City of Melbourne using the same technical requirements as described in this Advisory Note.

*Note: As per the Government and industry requirements, by submitting the model you grant, and warrant that you are authorised to grant, the State of Victoria and the City of Melbourne free of charge a sub-licensable, irrevocable, non-exclusive worldwide licence to use the model for any planning related purposes. Further, you indemnify the State of Victoria and City of Melbourne against any loss, damage, claim, action or expense which the recipient (including its officers, employees and agents) suffer as a direct result of a breach of this warranty.*

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