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BA COMPUTER GAMES DESIGN

ENVIRONMENT DESIGN

Environment Prototyping ('Whiteboxing')



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Environment Design

Art Target / Diorama Examples



ENVIRONMENT DESIGN

Environment Prototyping ('Whiteboxing')

Art Target / Diorama (examples)





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Art Target / Diorama (examples)



Thunderbird 1 Launchbay / BERT RUITER // www.bert-ruiter.nl



ENVIRONMENT DESIGN

Environment Prototyping ('Whiteboxing')

Art Target / Diorama



Desert Oasis



afermiforslund.wix.com/portfolio

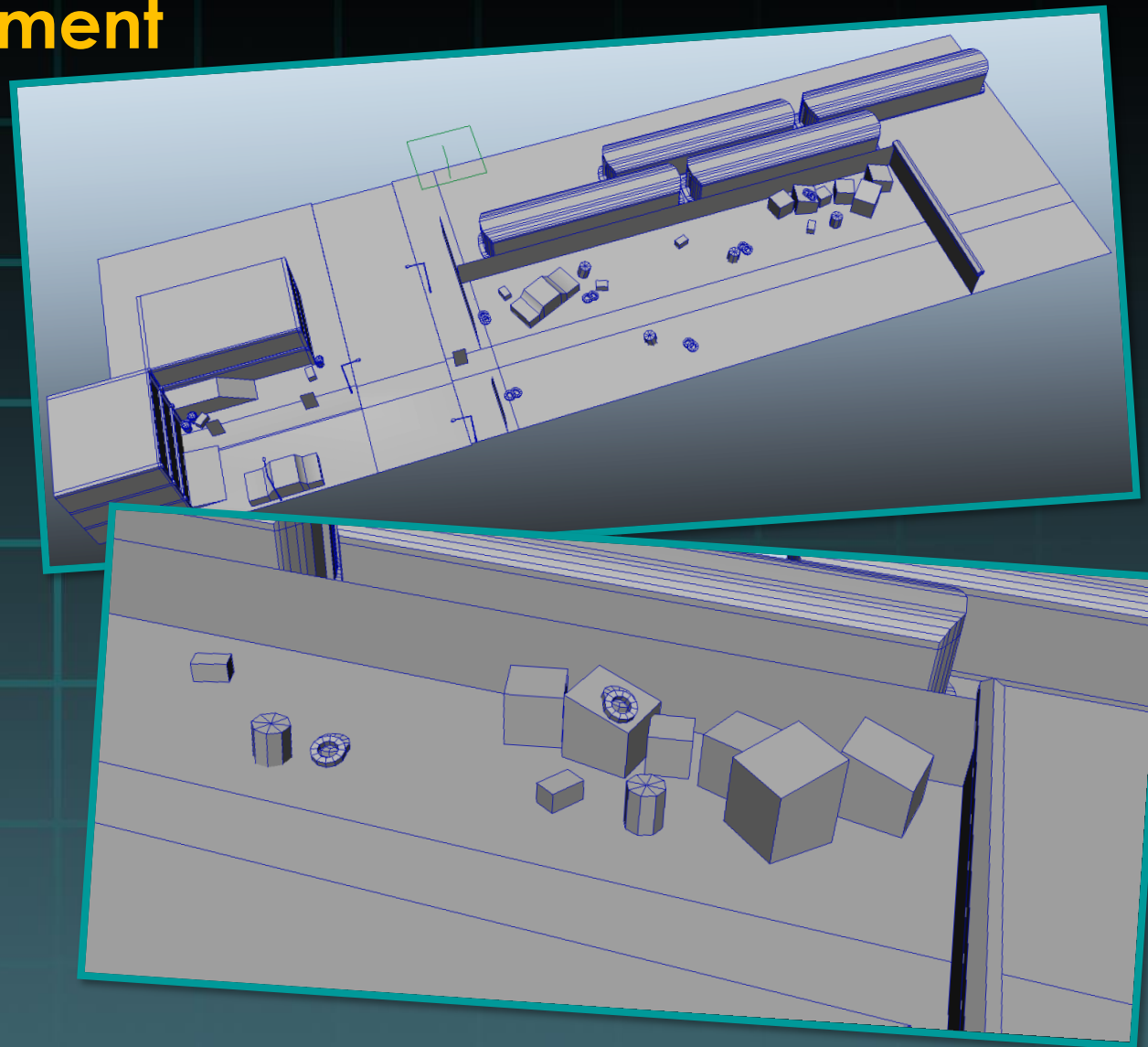


'Whiteboxing' a Game Environment

This is a **ROUGH** layout of your diorama!

Used for trying different ideas, spacing/scaling or composition

Keep it simple – speed and scale are what you're trying to achieve here!



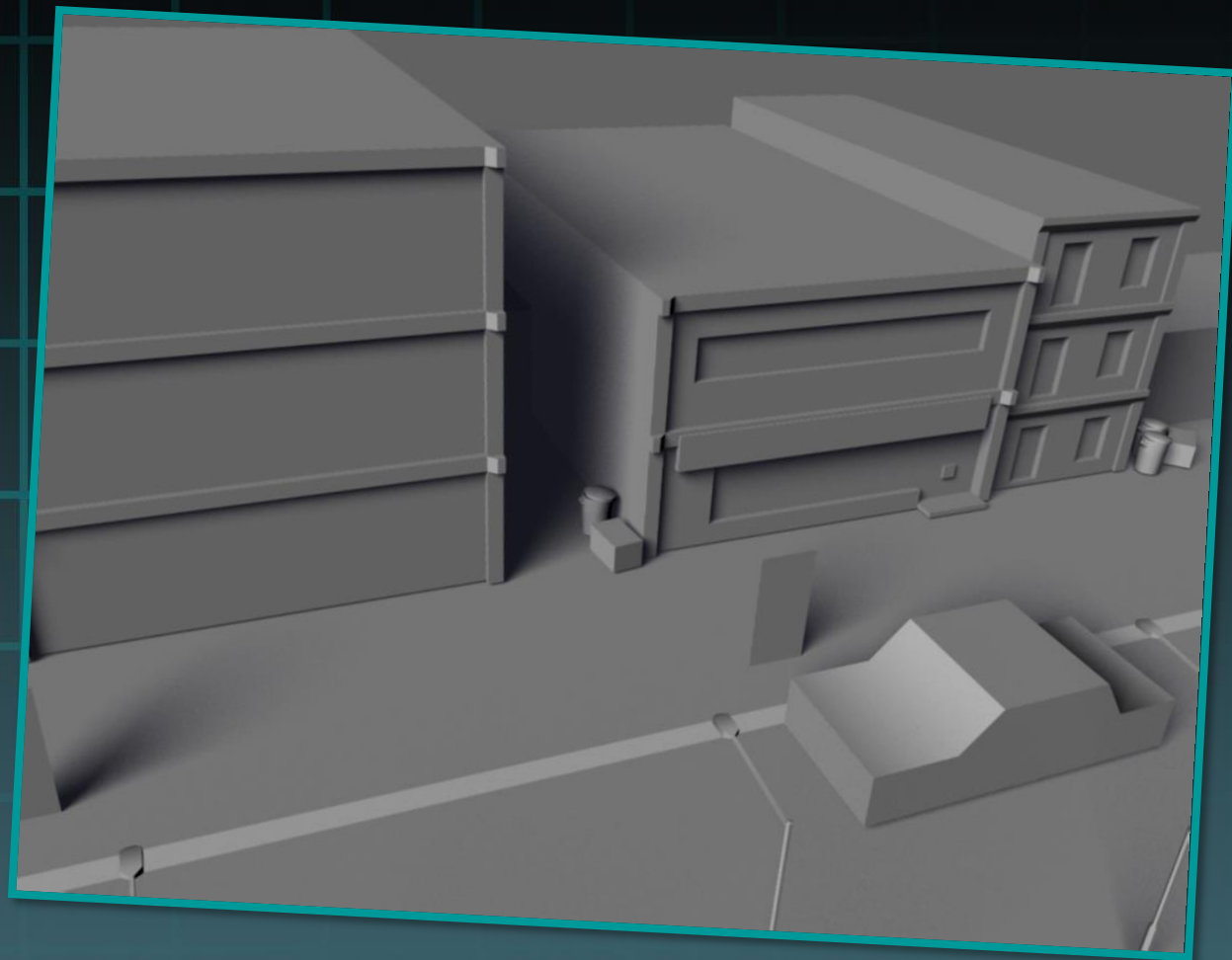


'Whiteboxing' a Game Environment

Detail is **not** important.

This is just a quick way for you to visualise ideas – even **using basic shapes** will do.

Bit-by-bit you will **replace** the basic shapes with completed 3D assets.





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Environment Prototyping:

Working with references



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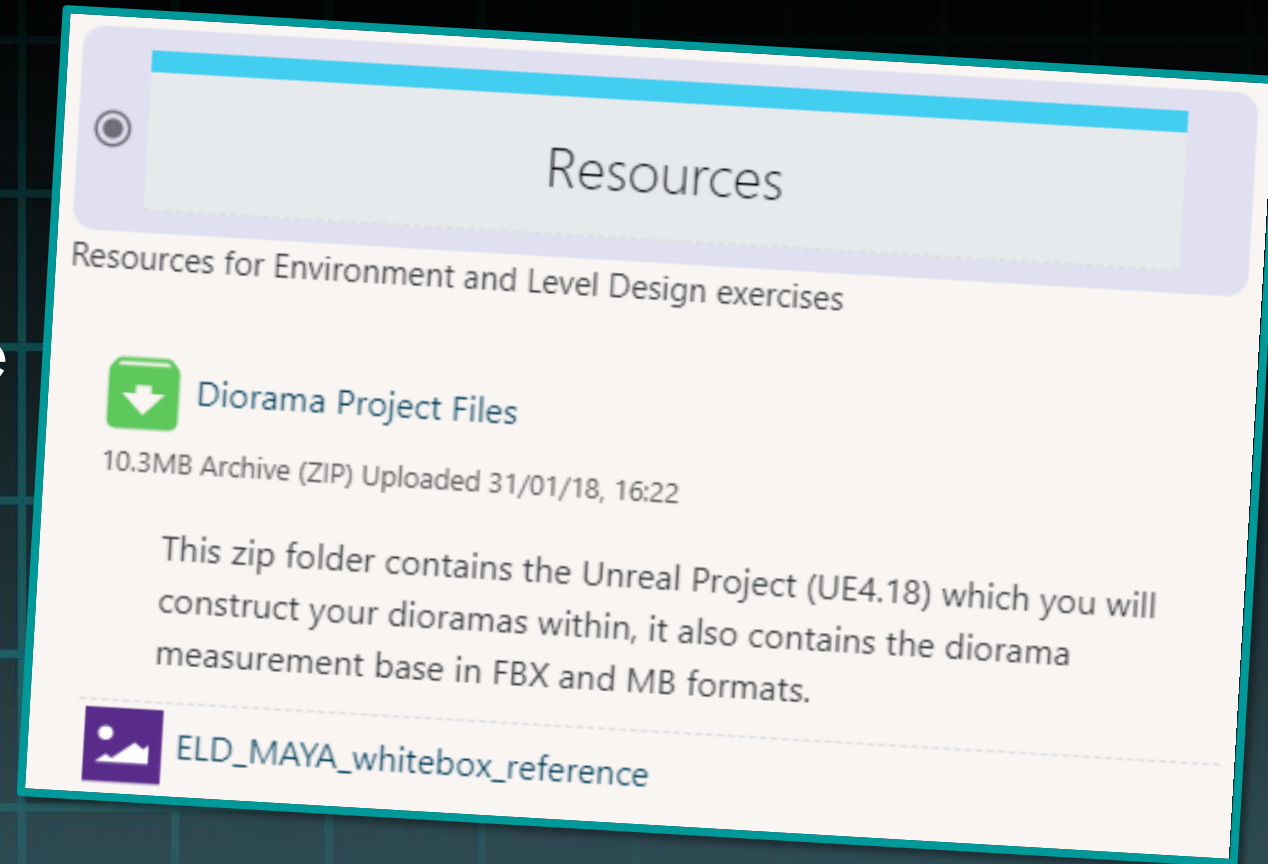
Working with references

Resources for this exercise are available on Moodle, under the 'Resources' tab of the Environment Design page.

You will need the following:

ELD_MAYA_whitebox_reference

Save this locally.



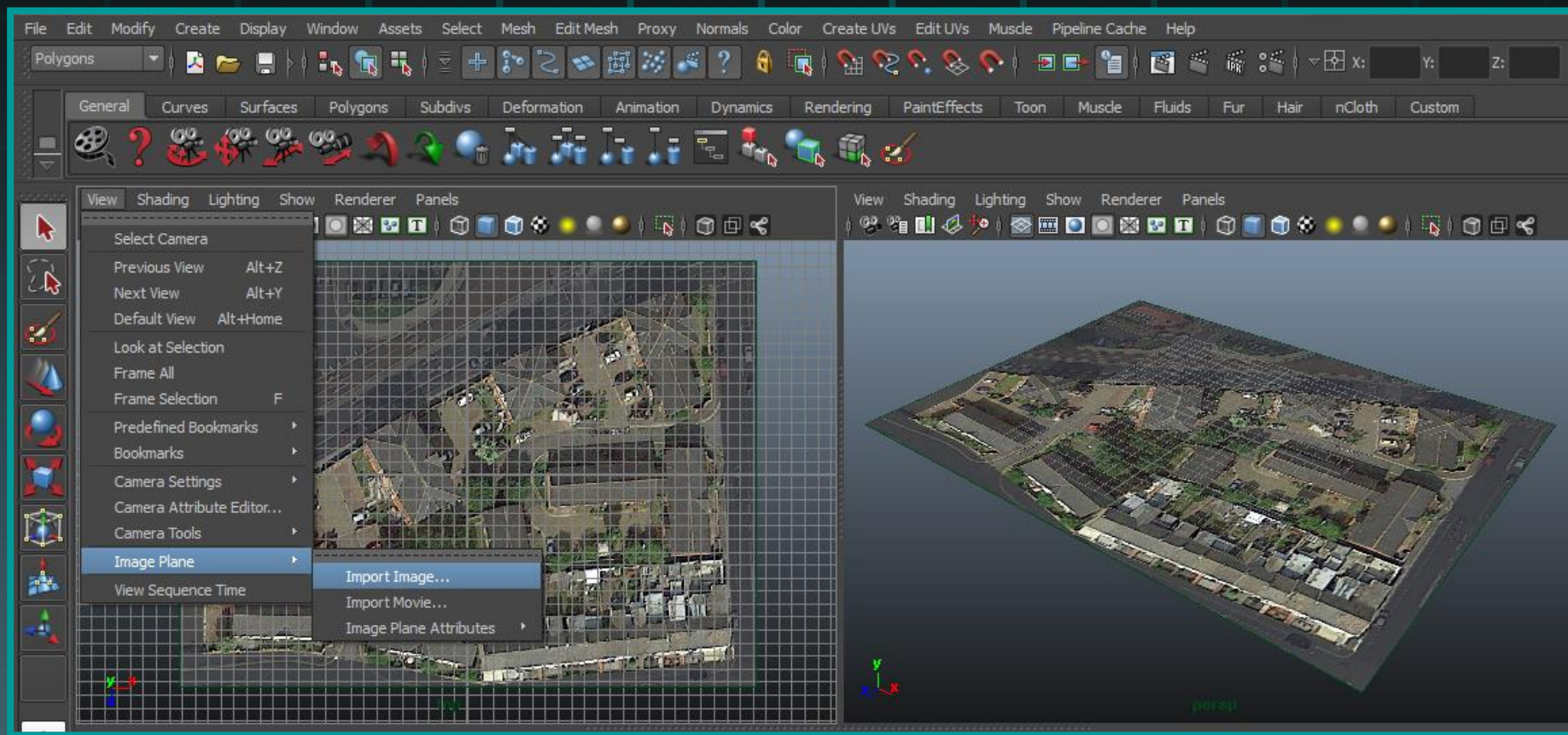


ENVIRONMENT DESIGN

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Working with references

In the **TOP** Maya viewport: **Image Plane > Import Image**



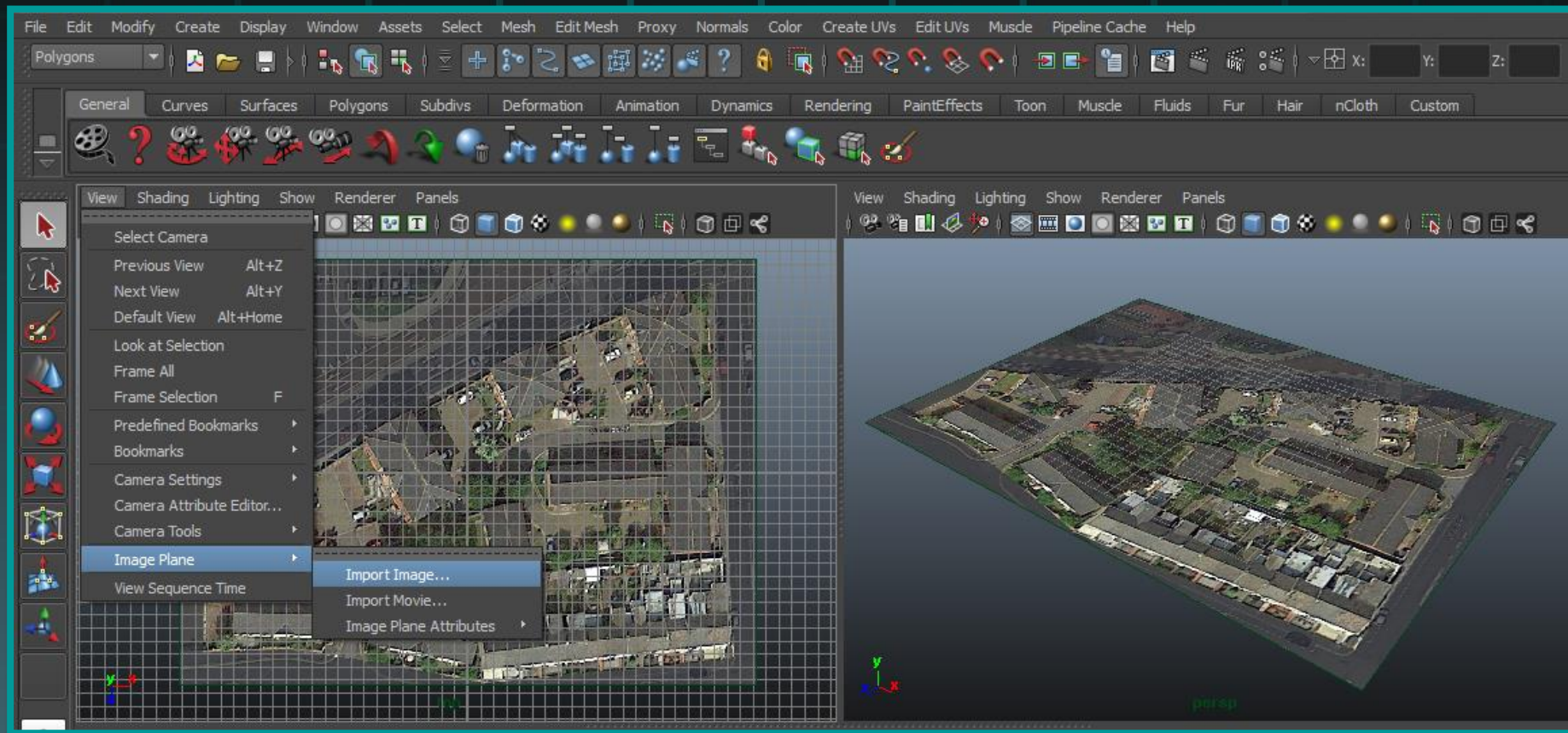


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Working with references

Import the image file downloaded from your **Moodle Resources**.





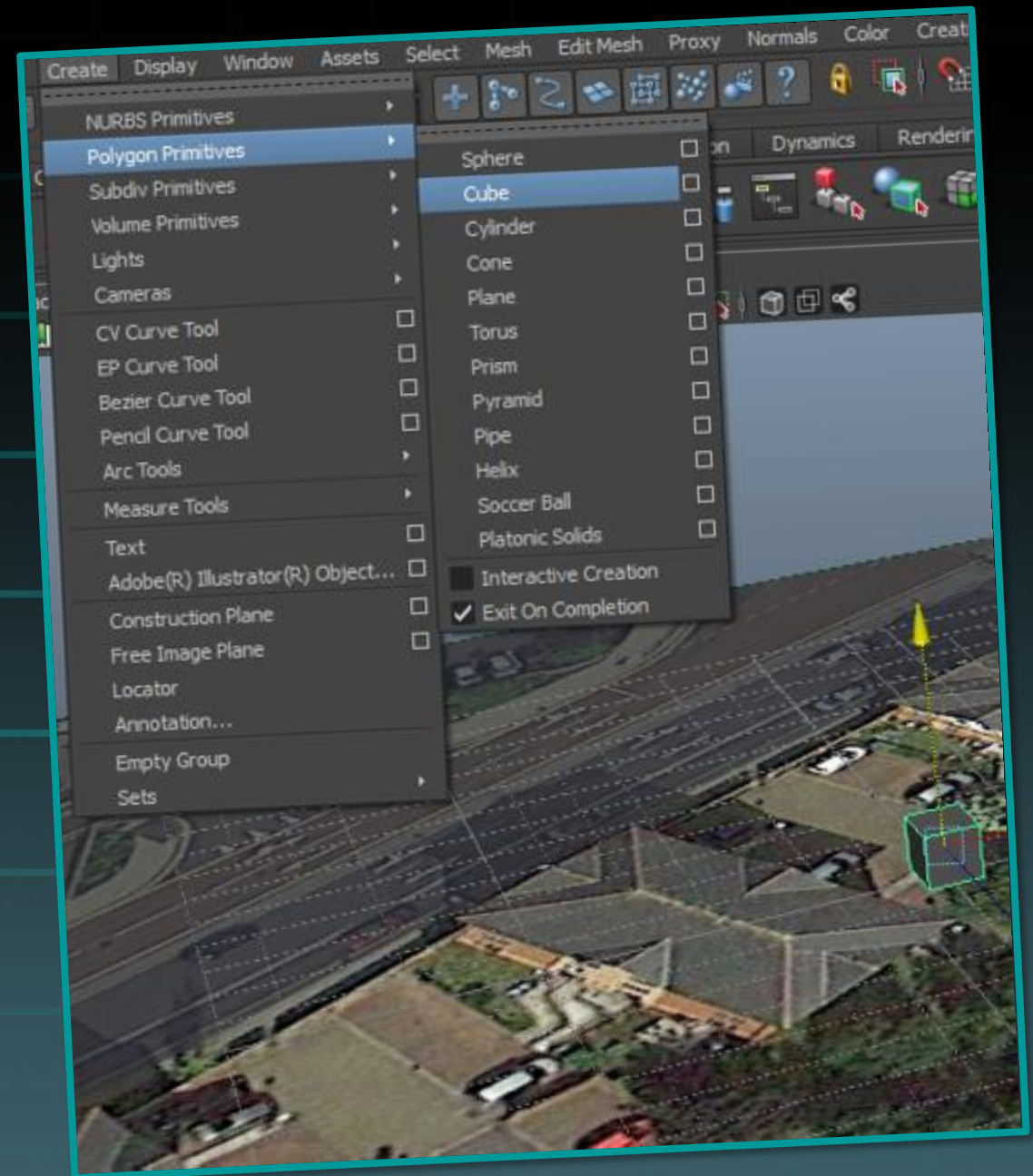
ENVIRONMENT DESIGN

Environment Prototyping ('Whiteboxing')

Working with references

Create polygon primitives to block out the environment.

These can easily be rescaled or changed if you aren't happy with the layout – this is one of the main reasons for a whitebox prototype to exist!





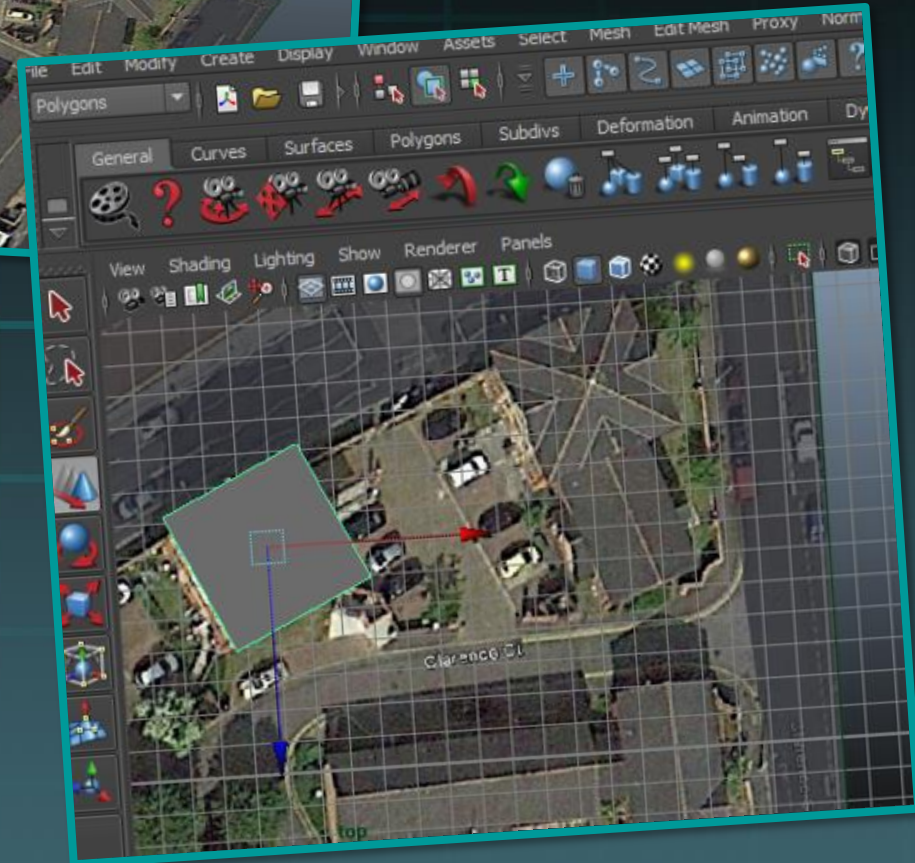
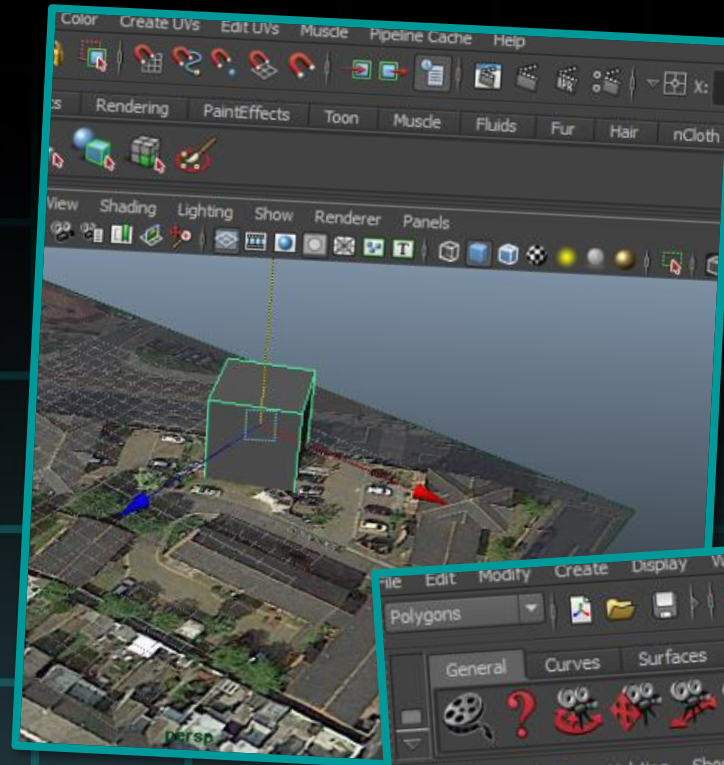
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Move, Rotate and Scale your primitives accordingly.

What we are hoping to achieve here is an approximation of the scene layout.





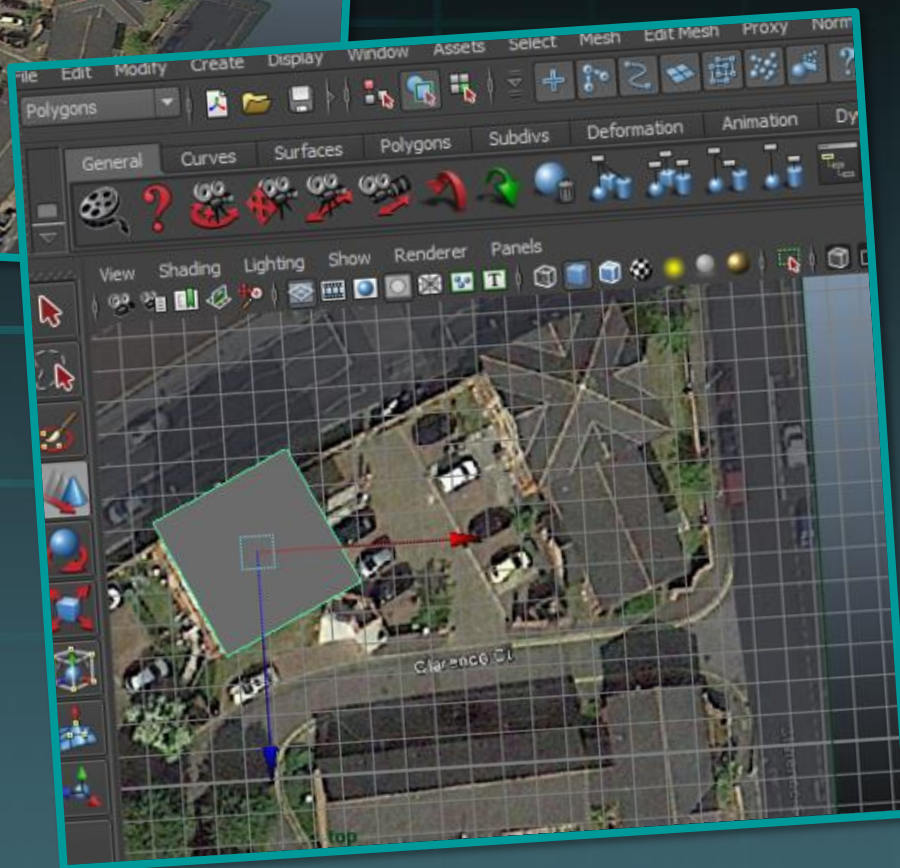
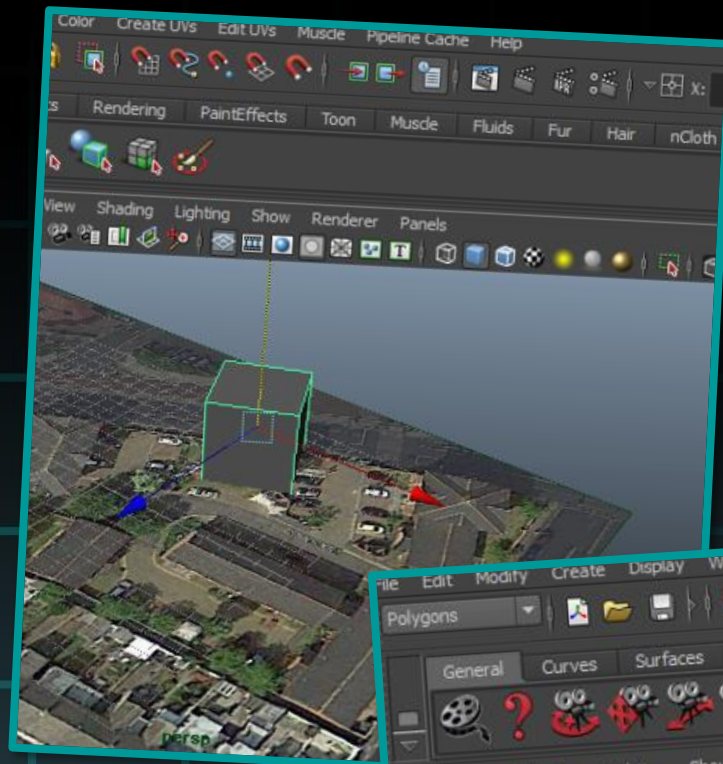
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Environment Prototyping ('Whiteboxing')

Working with references

This can be fine-tuned if you aren't happy with how the scene is looking.

This rough layout also allows you to try crazy things – try adjusting the scale of your objects, or distorting them if you want a **stylized** approach.

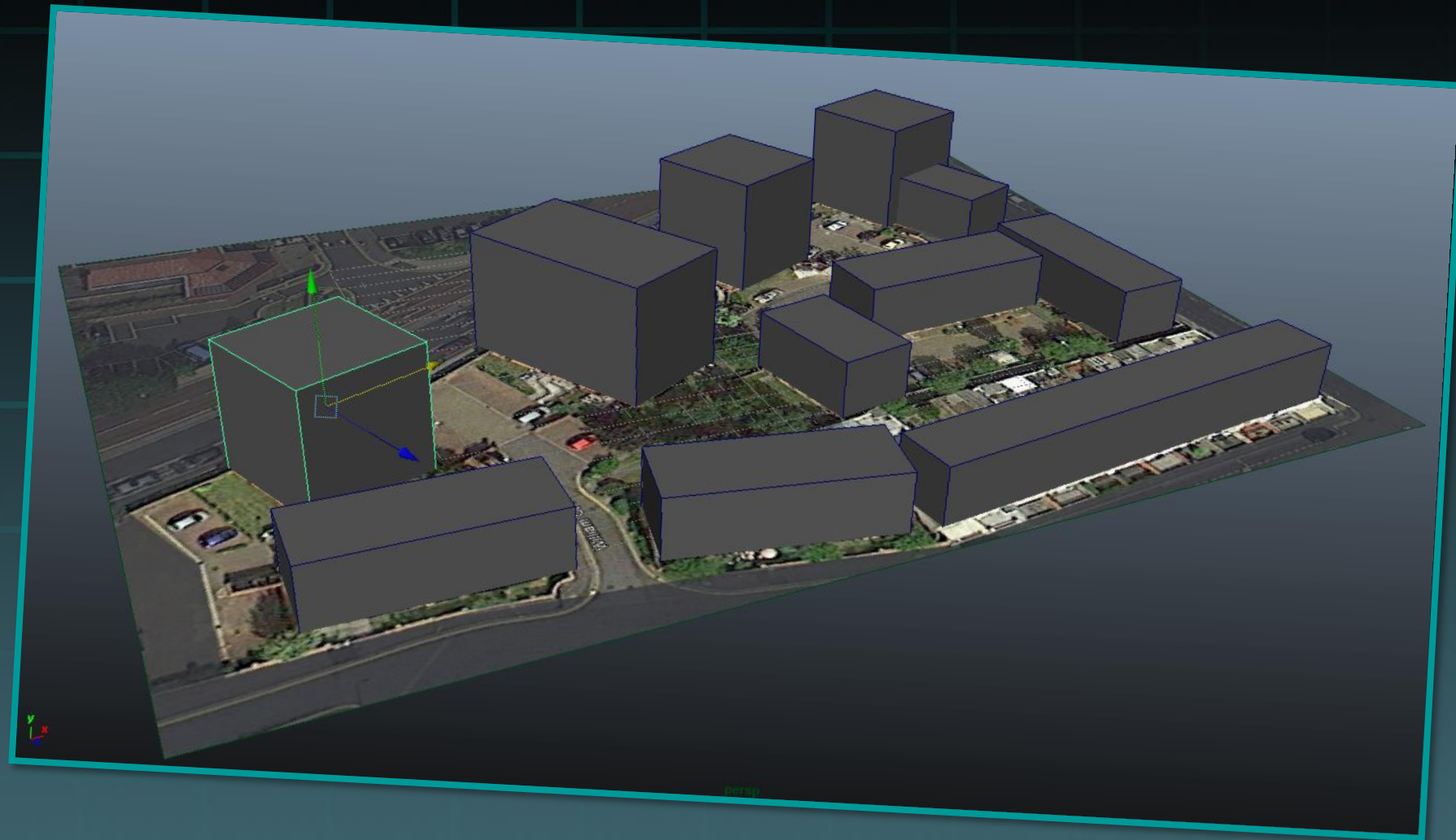




Working with references

Example:

Very early stage
whiteboxing

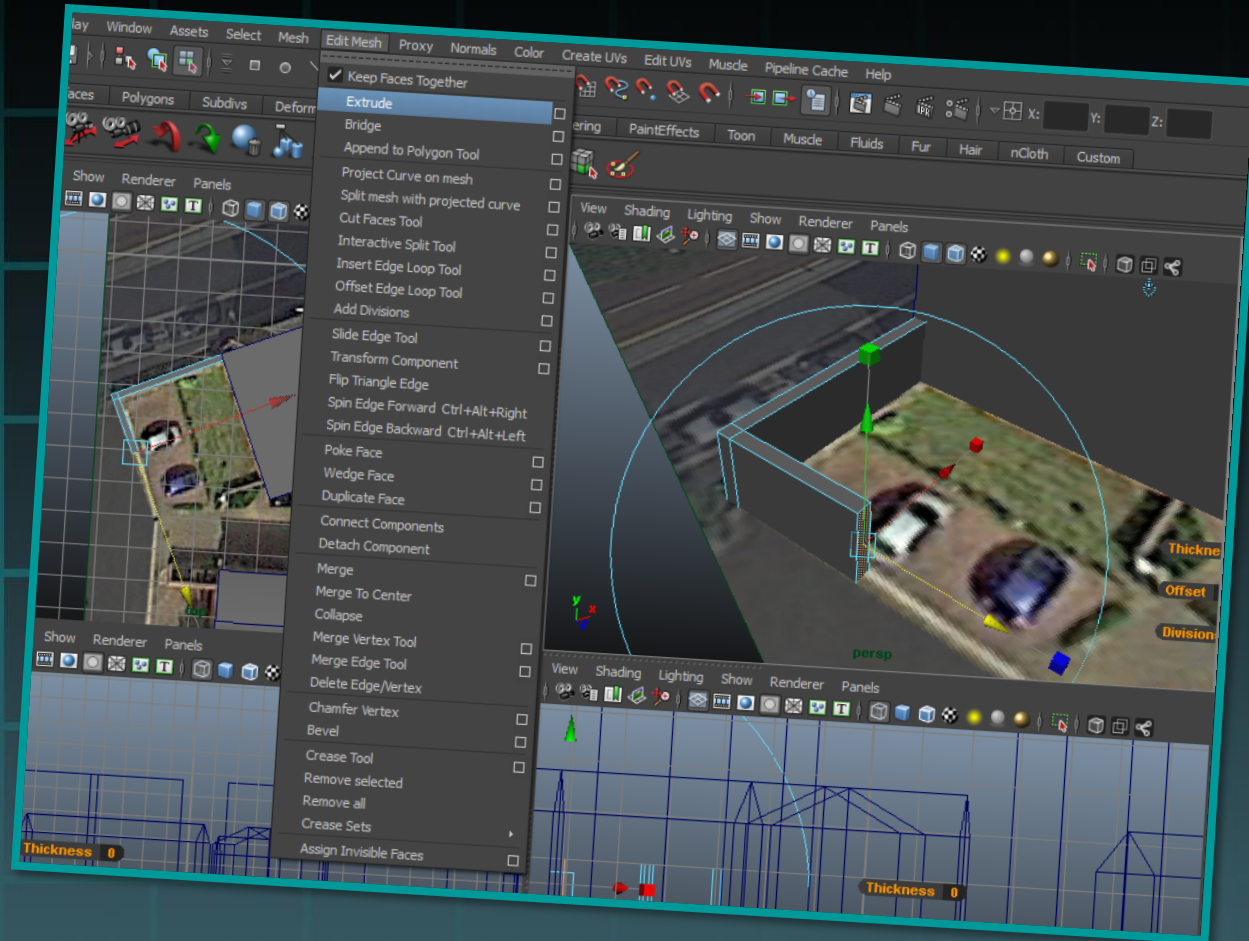




Working with references

Use **edge loops** and **extrusions** to produce irregular shapes if required.

Remember: Excessive detailing is **not** necessary – this is a rough approximation of your scene!



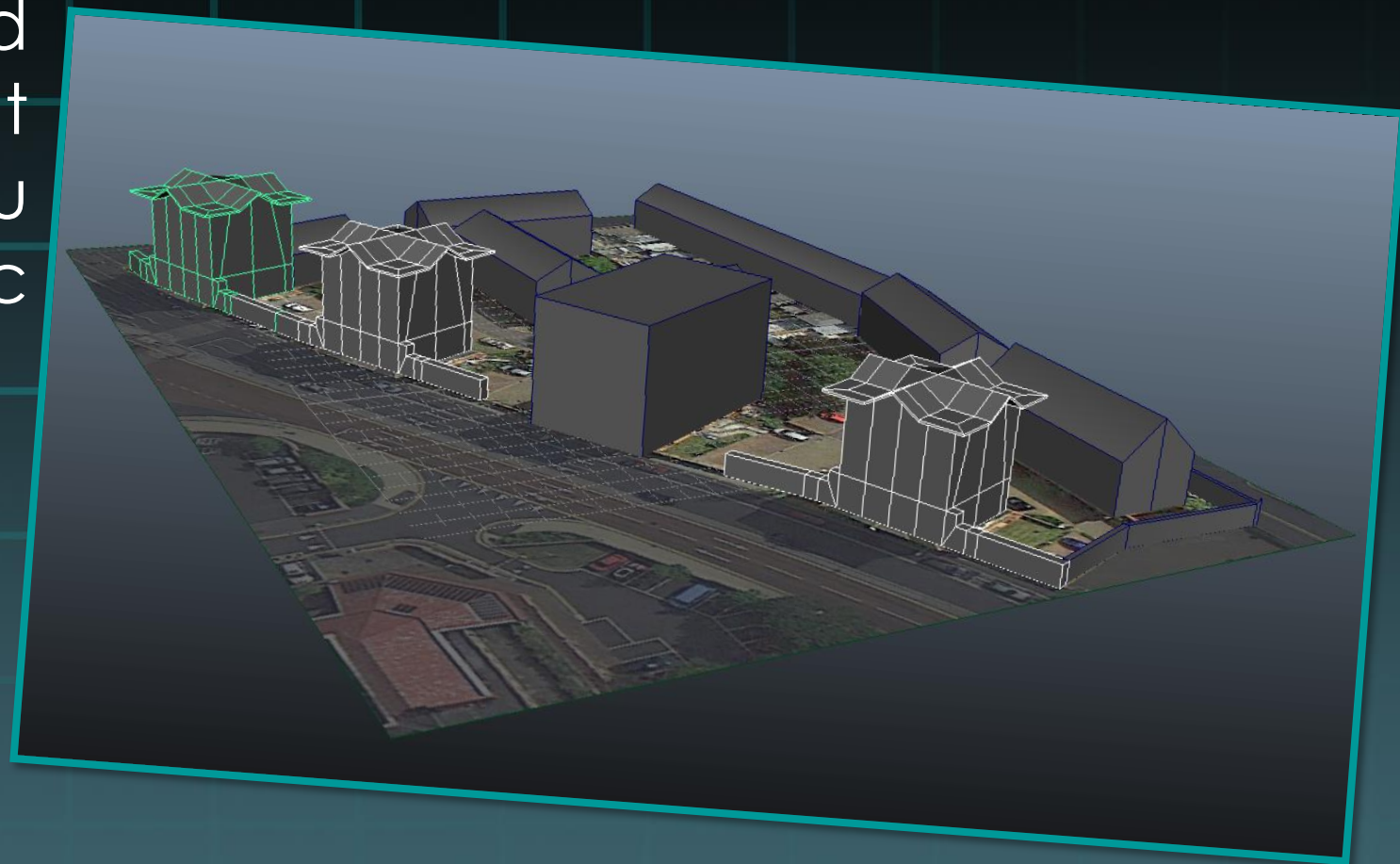


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Working with references

Once the space and scale in your environment has been finalised, you can replace the basic shapes with more detailed assets and props.

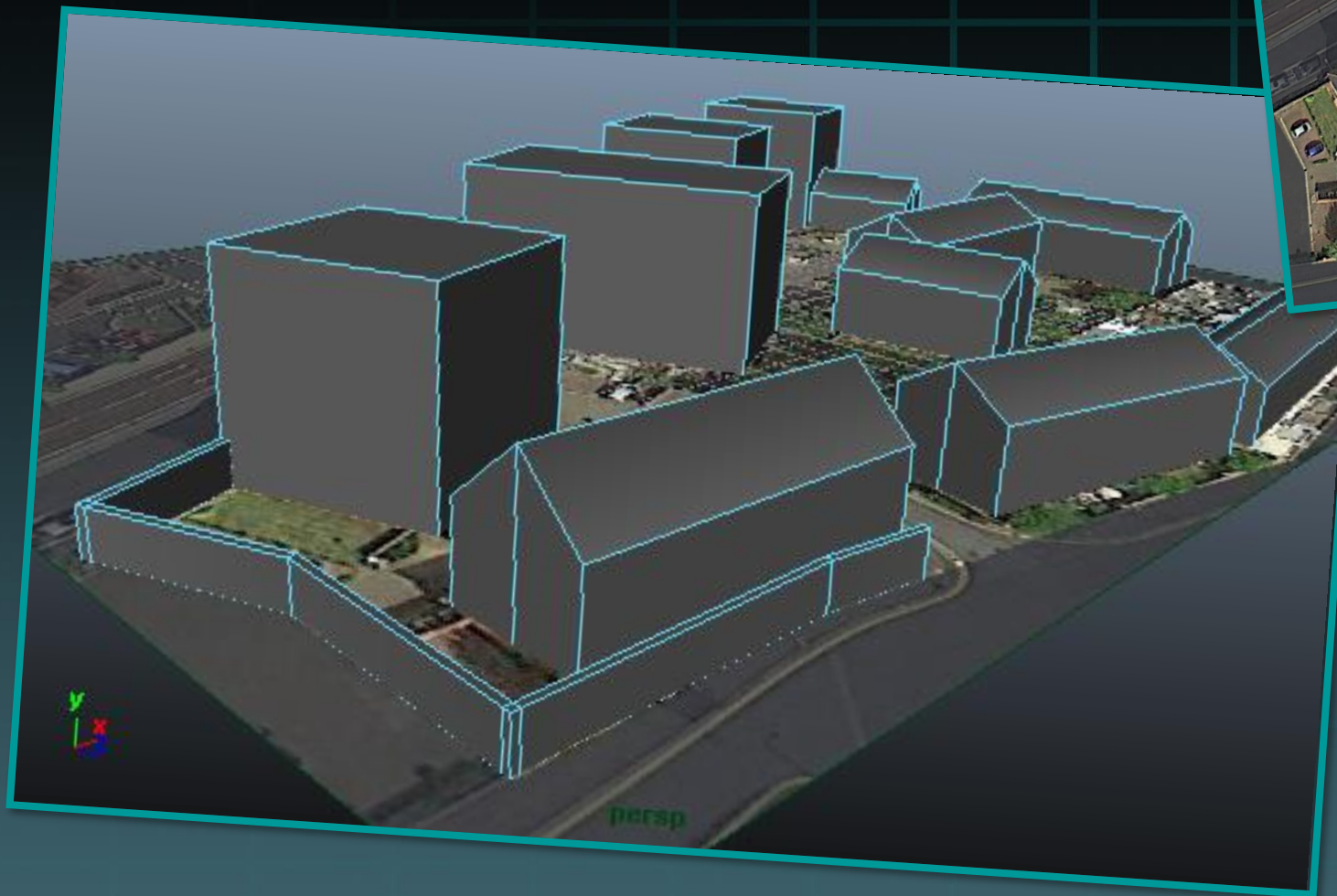




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Working with references: Exercise



Using the reference image, spend no more than **30 minutes** whiteboxing an environment in Maya.



Remember:

**SAVE YOUR WORK
AND SAVE IT OFTEN!**



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Bibliography

Stylized House Diorama, John Teodoro

<https://www.artstation.com/artwork/lkmge>

Hand-Painted Desert Oasis Diorama - Jasmin Habezai-Fekri

<https://www.artstation.com/artwork/288Q8A>

Thunderbird 1 Launchbay Diorama, Bert Ruiter

<https://www.artstation.com/artwork/VDeqZ>

Metal Slug Diorama, Lary Kummer

<https://www.artstation.com/artwork/VgJ0rn>

ArtStation - Restingplace, Alexander Ferm Forslund

<https://www.artstation.com/artwork/AXnJ5>

House Diorama, Mia Marié Boas

<https://www.artstation.com/artwork/8ekNoq>



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