



APPENDIX 3.1

ARCHITECTURAL DESIGN STATEMENT (RESERVE GAS FIRED GENERATOR)



Architectural Design Statement

Proposed Energy Building, Killimor, Co. Galway

27707-ZZ-ZZ-ZZZ-PP-TMA-AR-P1.2

2024.05

Project	Proposed Energy Building, Killimor, Co Galway
Client	Halston
Project Number	27707
Document Reference	27707-ZZ-ZZ-ZZZ-PP-TMA-AR-P1.0
Date	May 2024

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P1.0	Design Statement	2024-05-20
P1.1	Design Statement	2024-05-21
P1.2	Design Statement	2024-05-21

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01. Background

Taylor McCarney Architects were commissioned by Halston to carry out an architectural executive design function in relation to the building envelope at Coolpowra, Co. Galway.

This study was to appreciate the context and operations of a building such as this, and to develop a design concept and strategy around site integration, materiality and volumetric form for this project - on this site.

We have visited the site a number of time and carried out a series of iterations of the design, refining the concept to the conclusion of this application. The story of that design evolution is contained in the following pages.



02. Concept

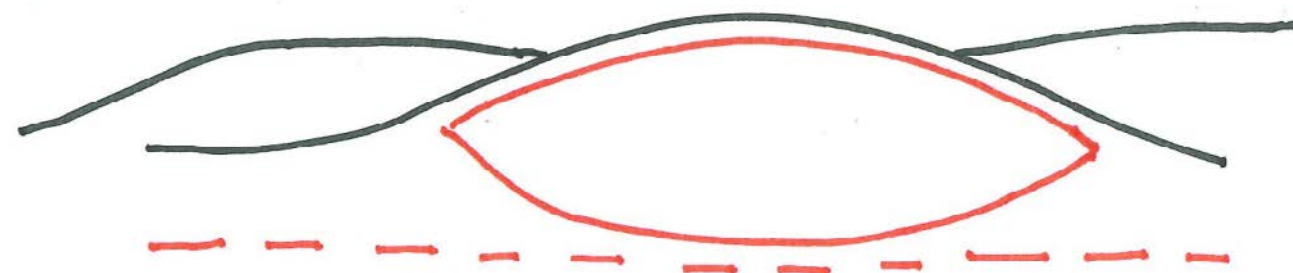
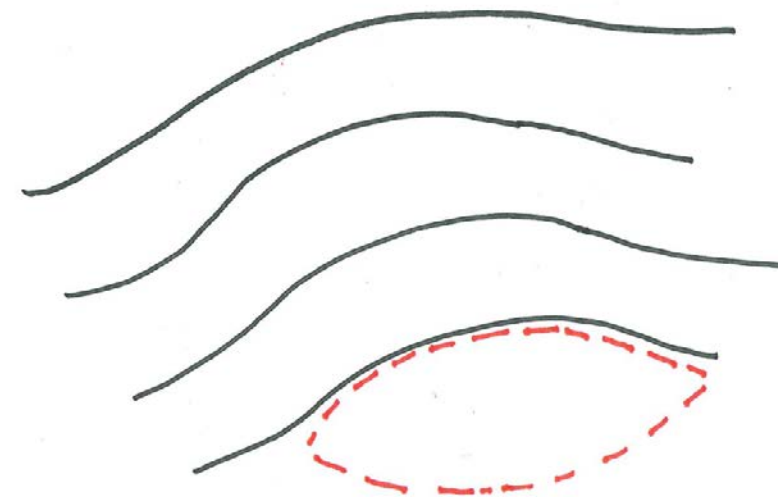
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The site topography is one of rolling hillside and farmland. It is this landscape that forms the basis for the building form and volume. The building is envisaged as another “fold” in the landscape- a further undulation in section that captures the workings of this building typology.

It is imagined as another rolling wave and curve - as opposed to a solid block of a structure which would bear no relationship to its context.



LANDSCAPE INFORMS BUILDING FORM.

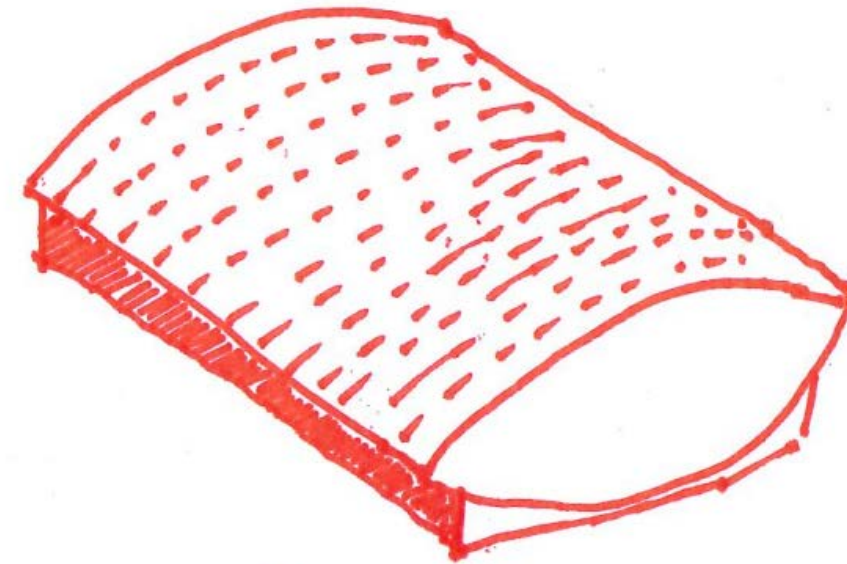


BUILDING VOLUME INFORMED BY LANDSCAPE + context.

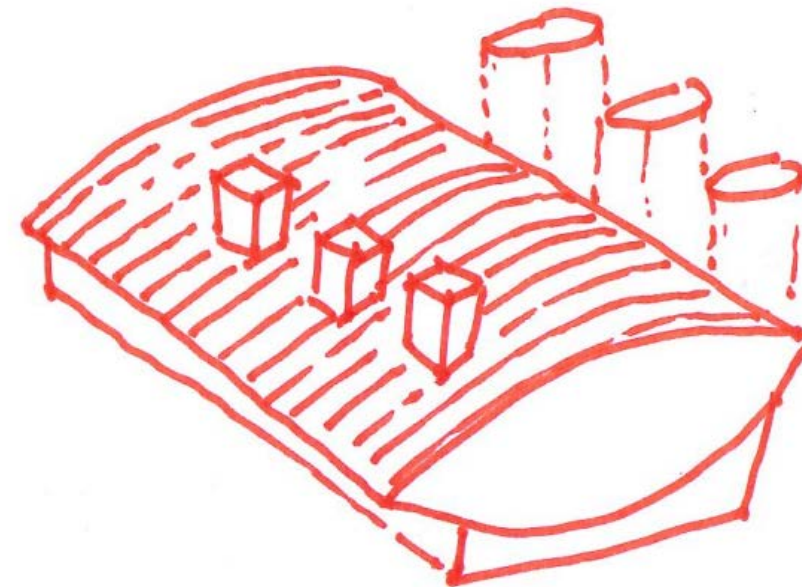
02. Concept

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It is within this “folded” landscape that the building shape and form begins to develop. A soft edged form, appropriately finished - a familiar curvature in the landscape which draws reference from traditional Irish Countryside vernacular architecture, utilised in a new and contemporary way for a large scale building.



MATERIALITY to engage with context
+ site .



OPERATIONAL REQUIREMENTS ADDED .

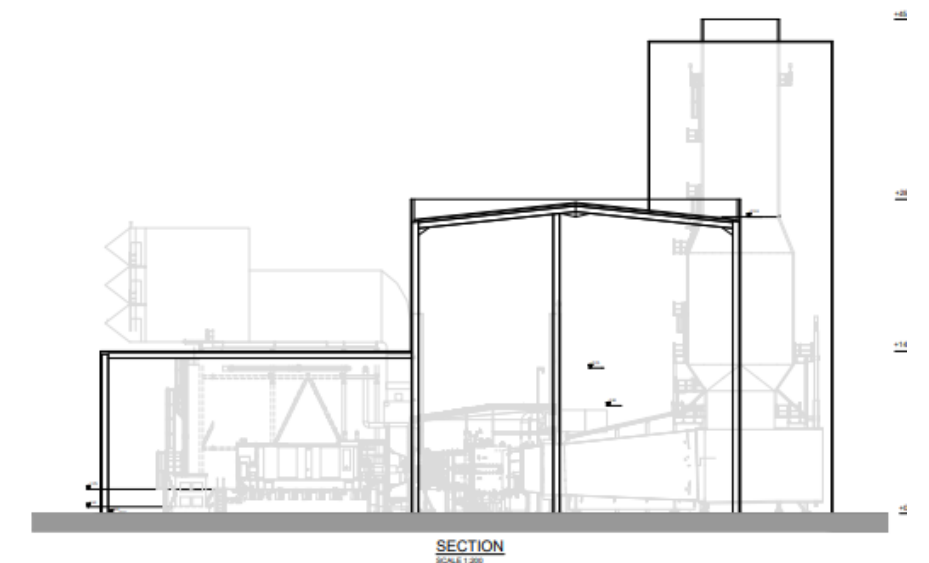
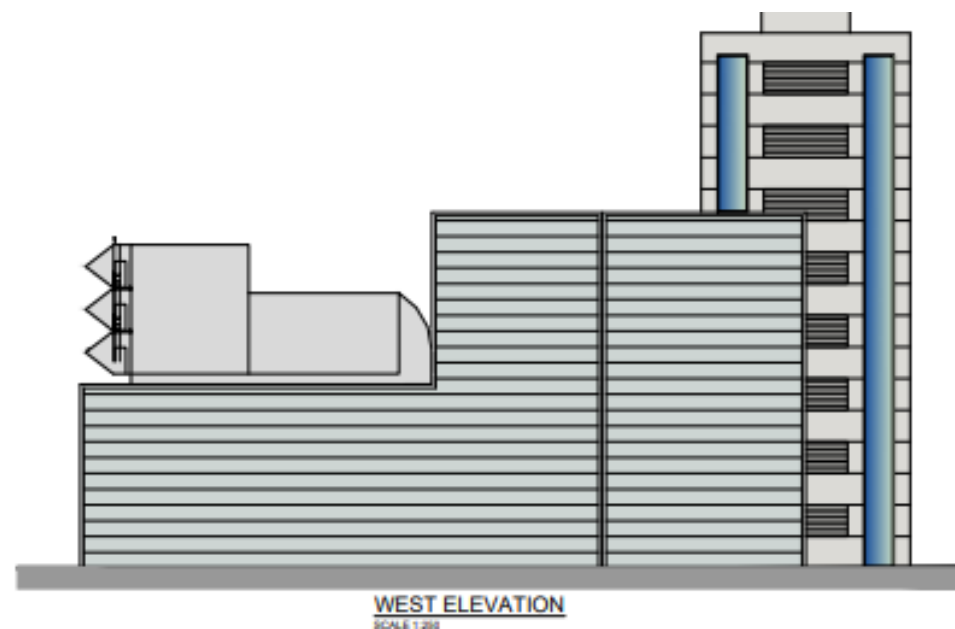
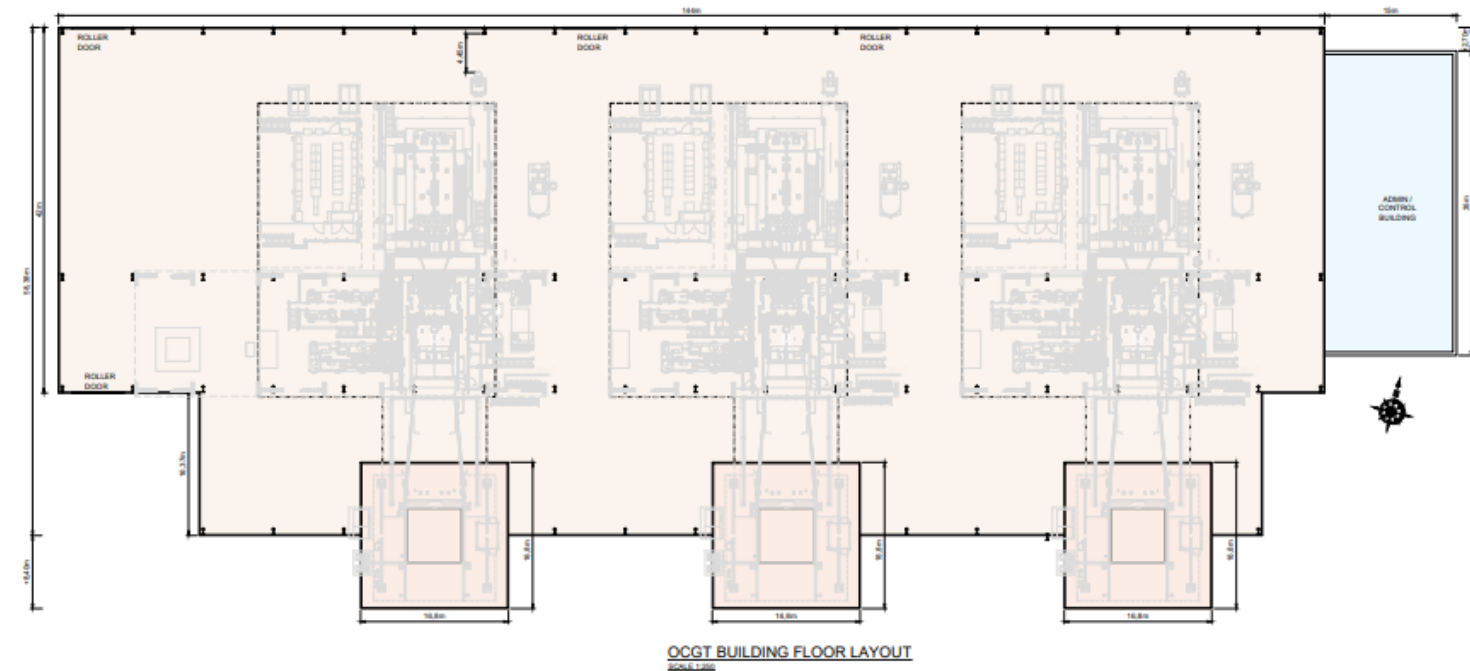
02. Concept

Once the concept of the building form that relates to the landscape is established, the building envelope and volume must be developed. The building must capture the critical operational dimensions in section of these building types

This must be captured however, in a way that does not represent the traditional “ box “ approach for a site like this as per the attached.

That said, the building must also operationally manage the sectional requirements for a building of this type.

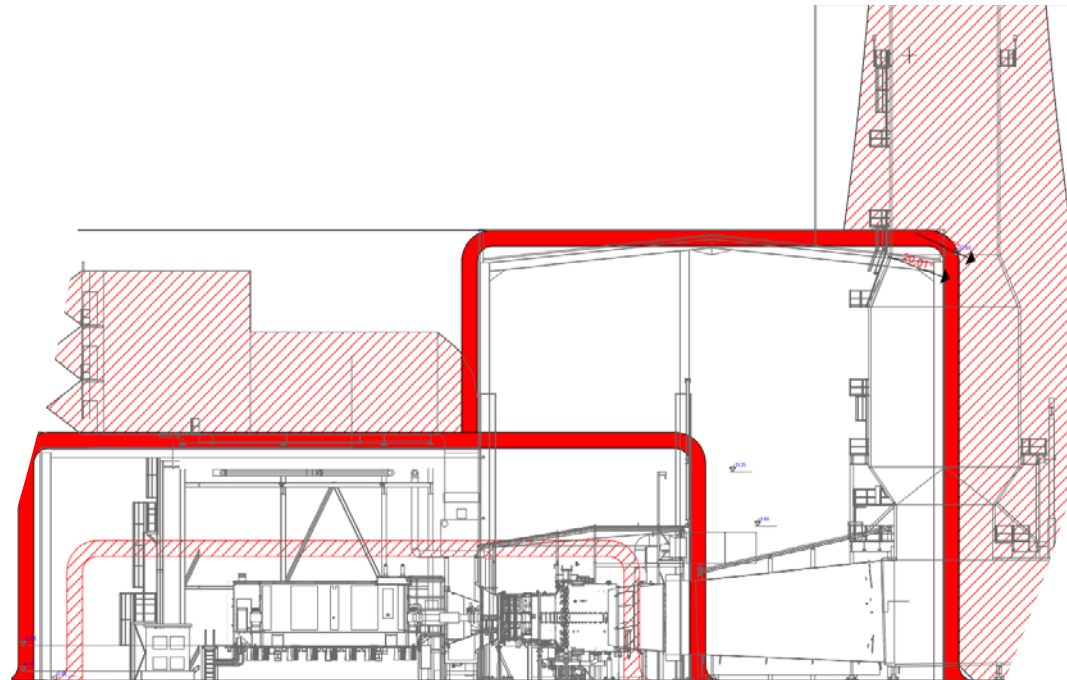
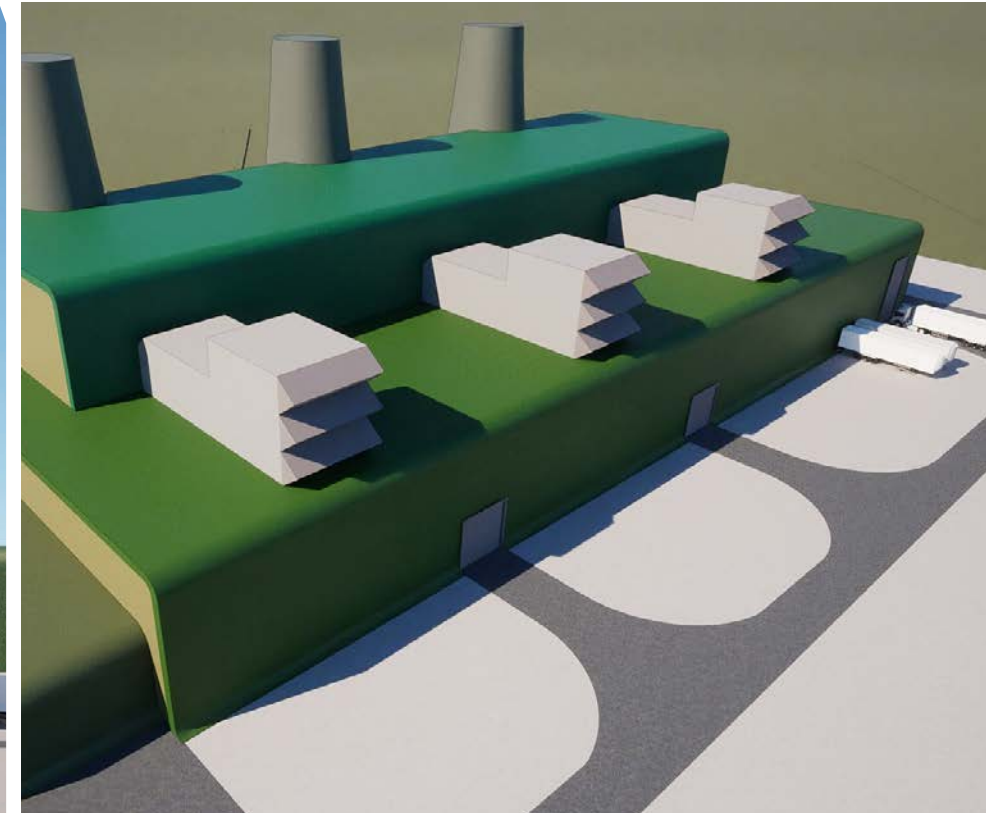
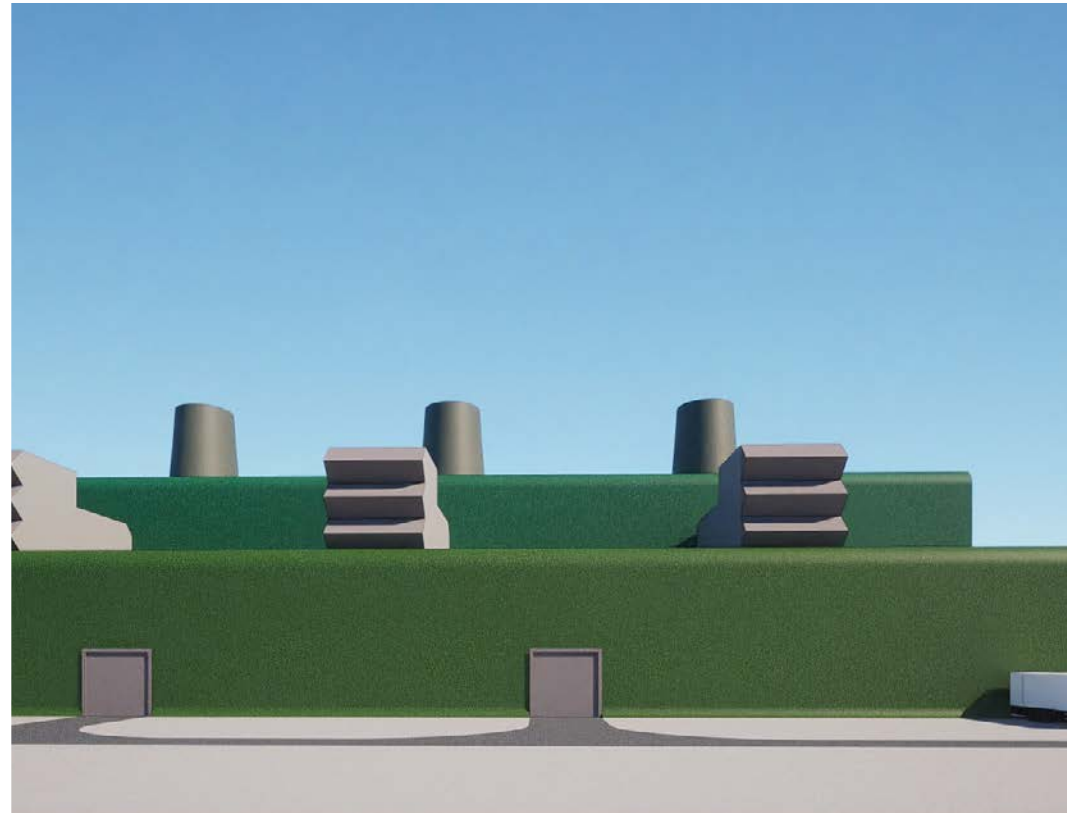
Early volumetric analysis established the building plan and sections and design reviews of this challenge.



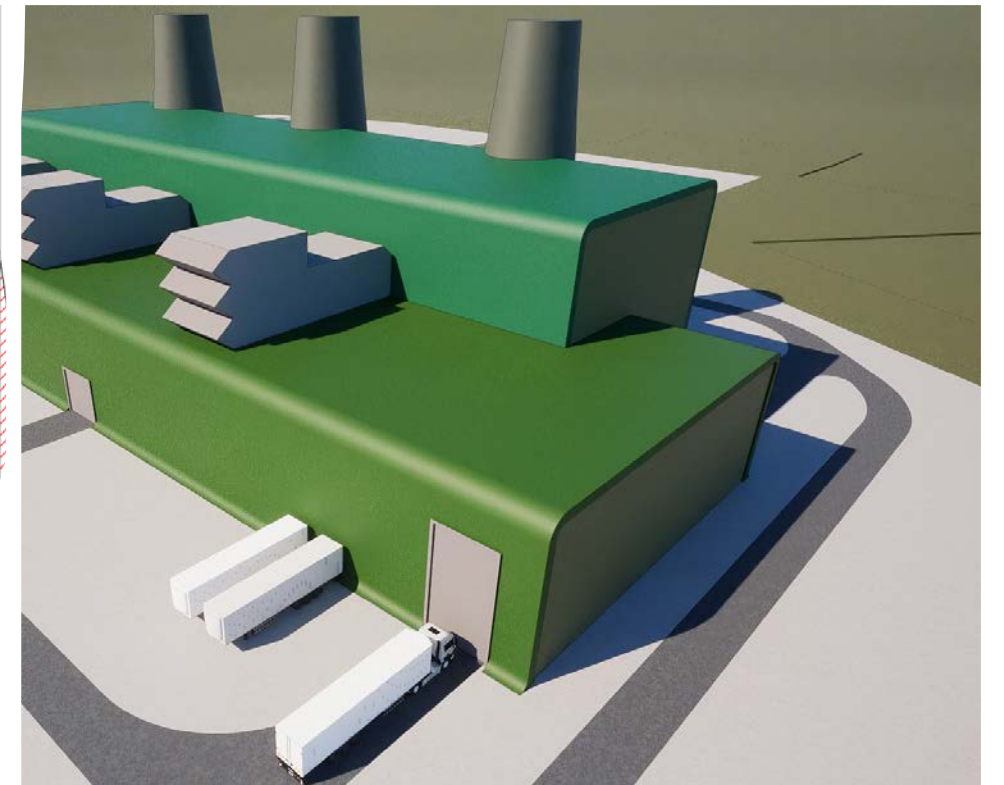
02. Concept

These sections were then extruded in built form to establish building heights, stack heights, plant etc. This allowed interrogation of the most appropriate site placement for the structure, building colour studies and most critically volumetric analysis and the management of the building form.

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SECTION
SCALE 1:200 @ A3



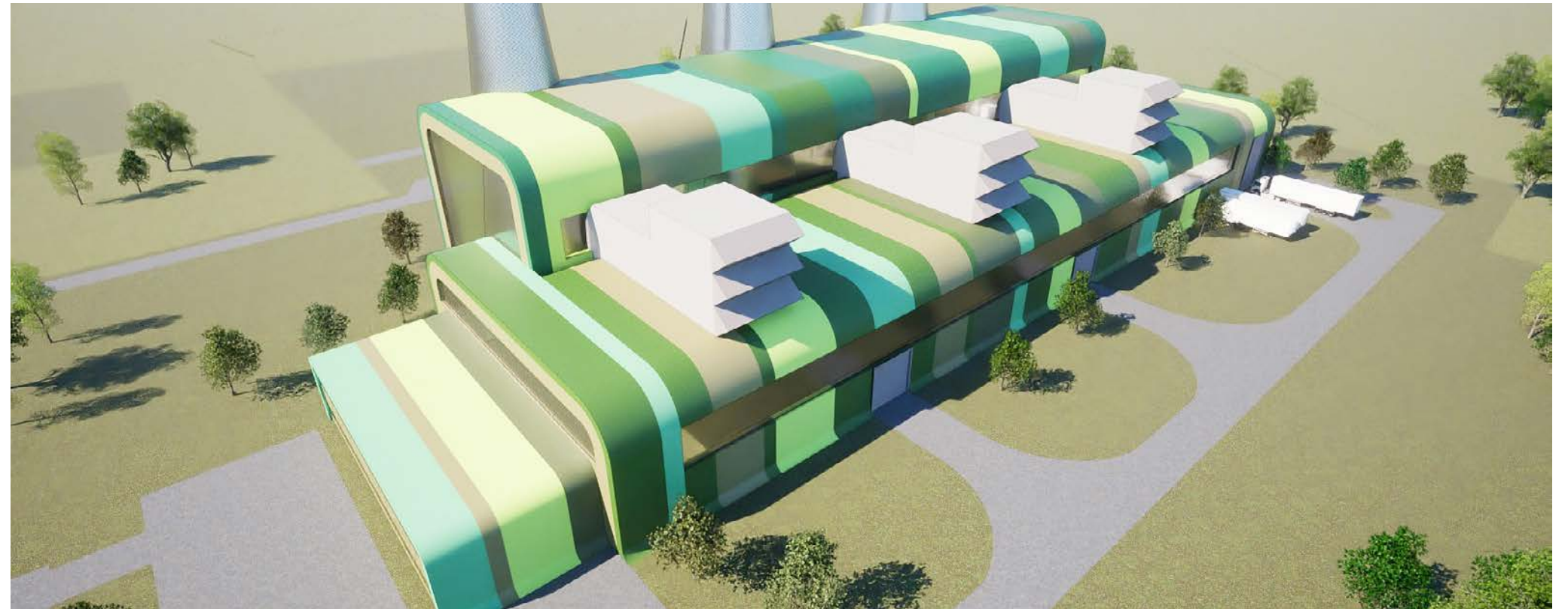
02. Concept

Materials were explored on early design options, and exploration of a curvature at the edges to soften the visual impact of the project utilised.

However, what became apparent quickly was that the management of the building volume in a “traditional” form for buildings such as this (which are also usually more urban) was challenging.

It was determined therefore that something more integrated with the land and informed by the site positioning would need to be developed.

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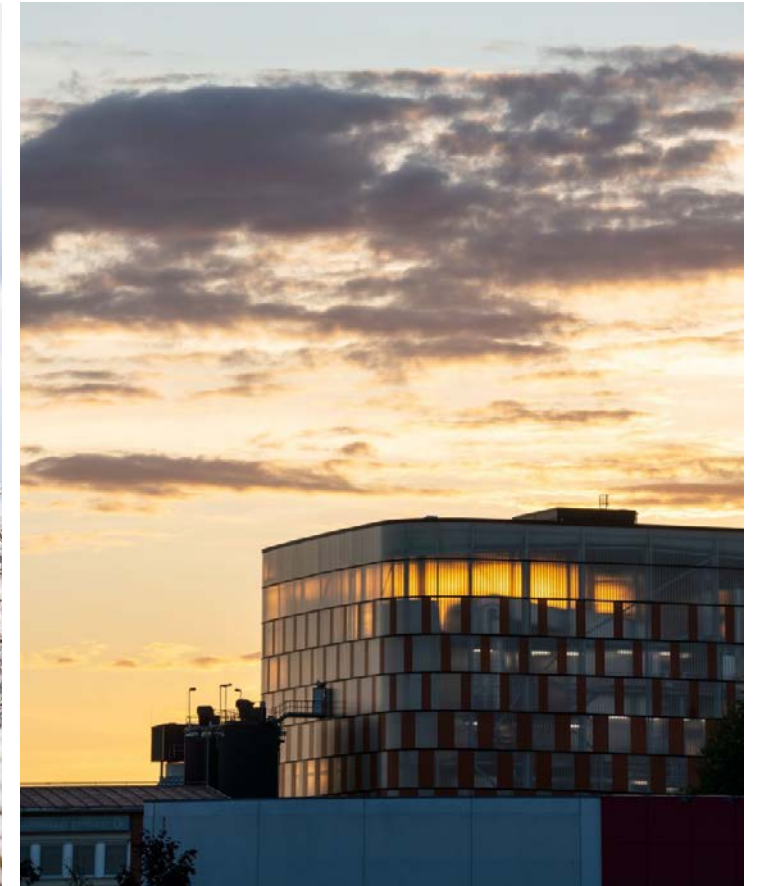


03. Typologies

There are a number of interesting typologies for a building such as this, particularly in Scandinavia.

Plants in Copenhagen and Uppsala are particularly interesting, in that they share the common theme with this project in “wrapping” the operational section in a softer form.

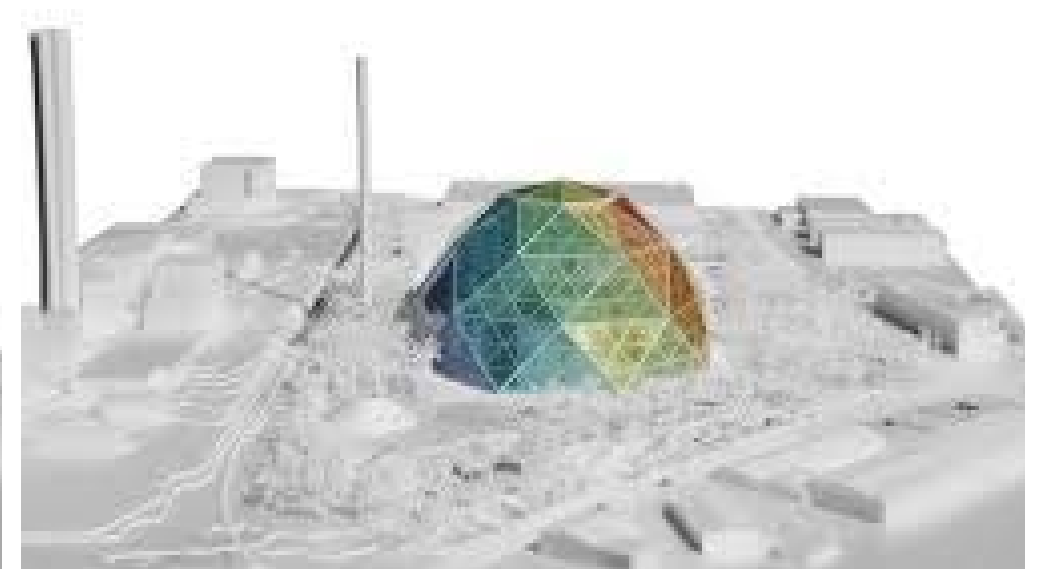
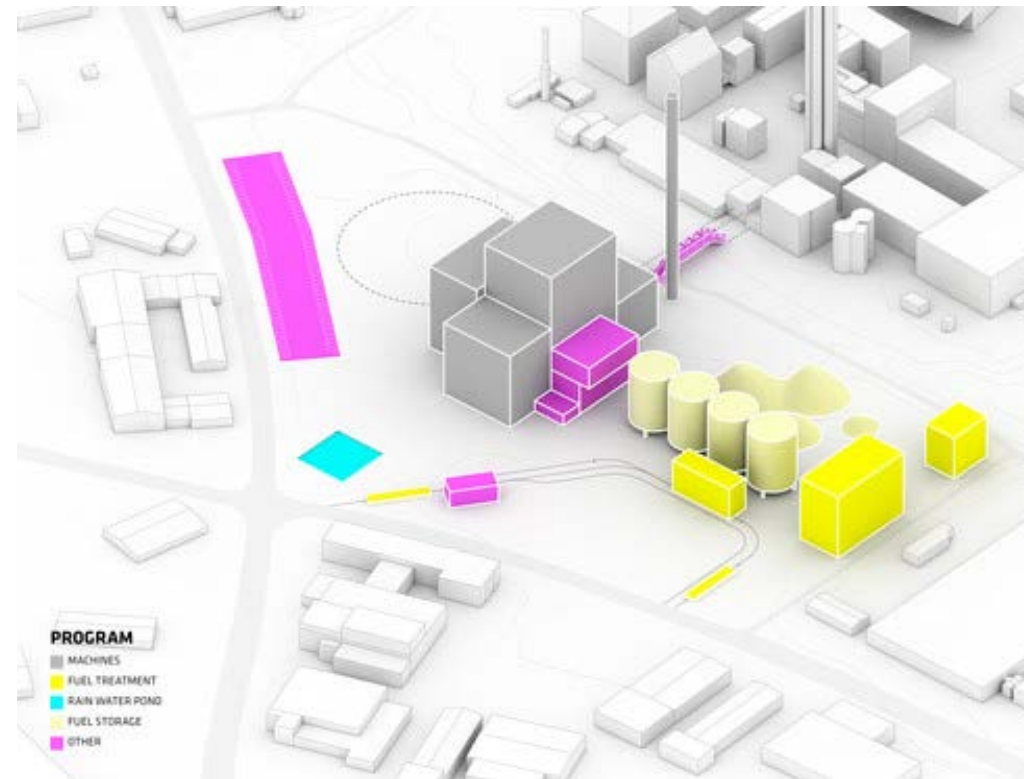
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03. Typologies

This Power Plant project in Upsala Sweden By BIG Architects particularly demonstrates the idea of softening the volume of the plant – by enveloping the traditional workings of the plant in a more contemporary envelope - in that case via a coloured PV frame.

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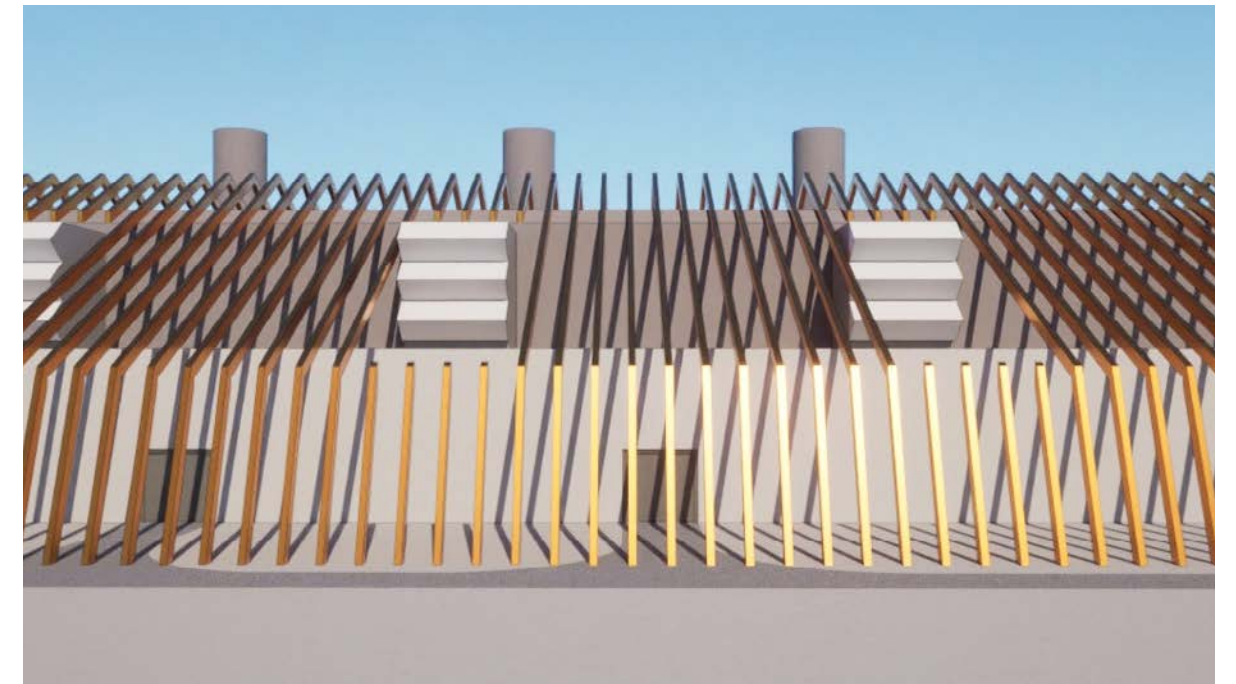
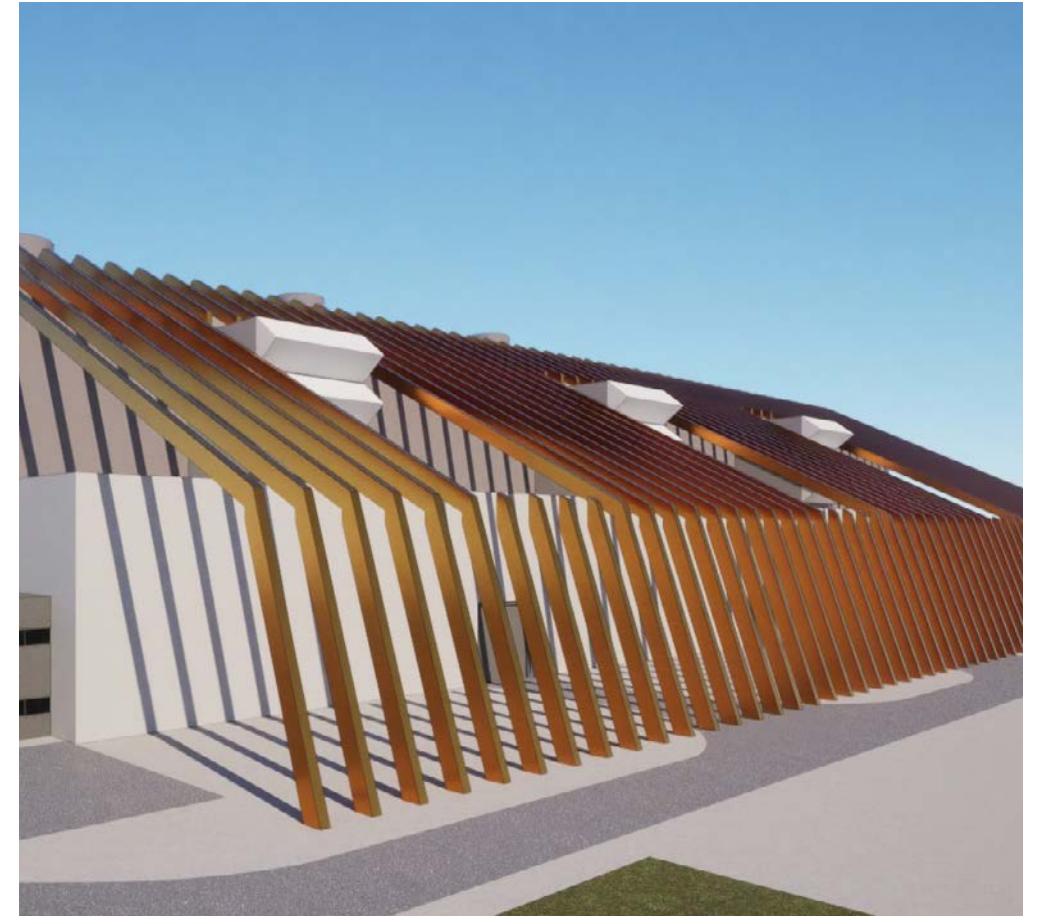
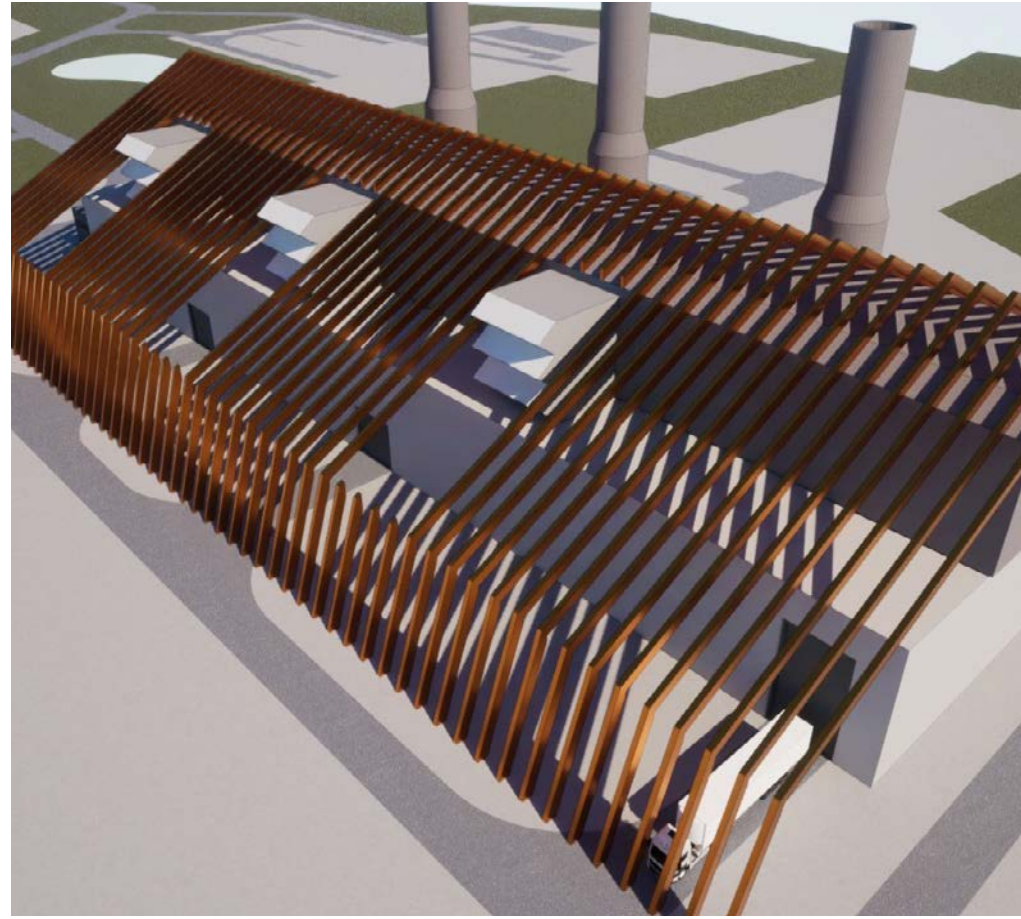


04. Design Process

This then led us to explore how we would “wrap” the building here.

A series of structural iterations exploring the frame and shape of the building (without cladding) followed. This ultimately led to a departure from the traditional box portal type structure, and into a softened curvature more befitting of this site.

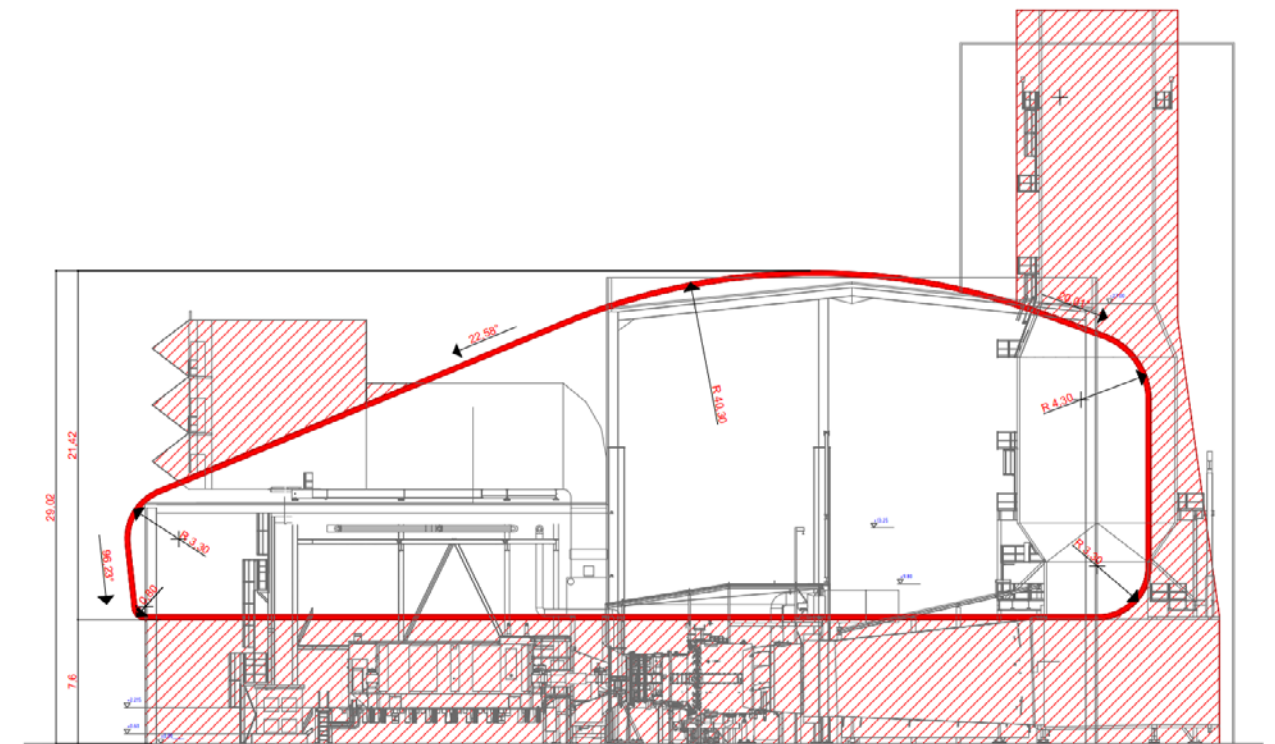
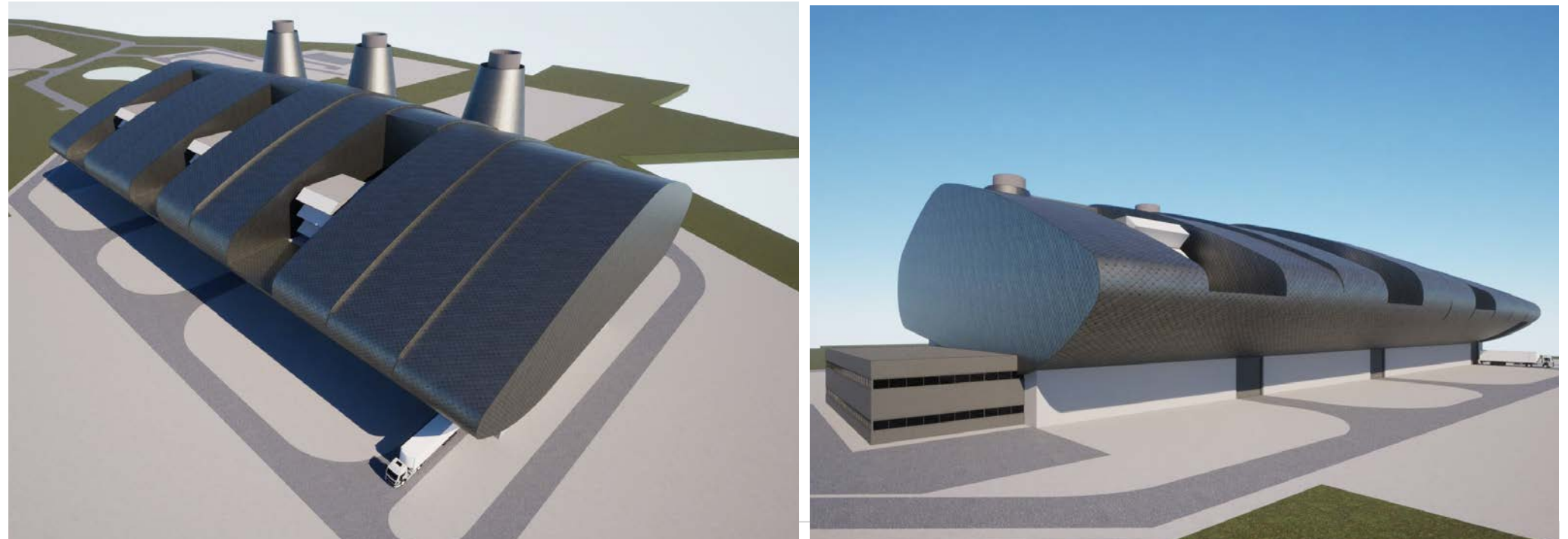
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04. Design Process

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Early design development envisaged wrapping a curved form atop a plinth entry level with stacks to the rear in a designed volume. These early sketches would form the basis for the finished design.

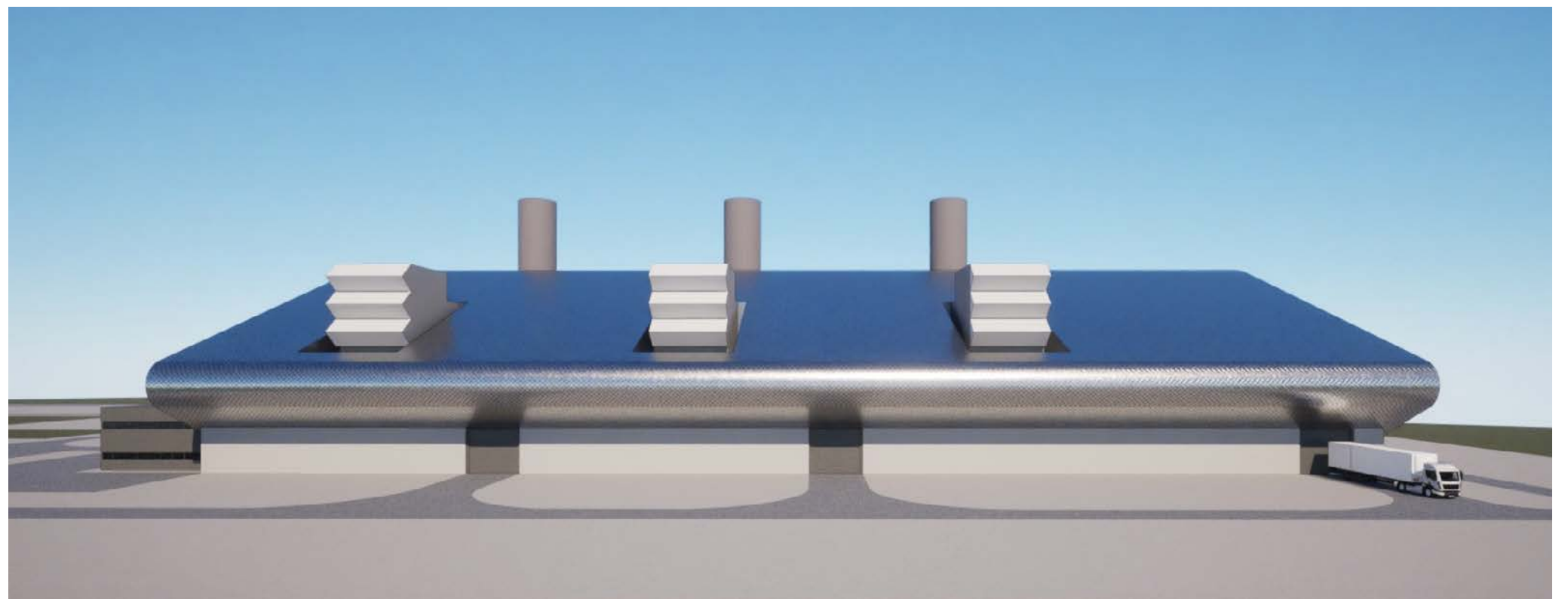
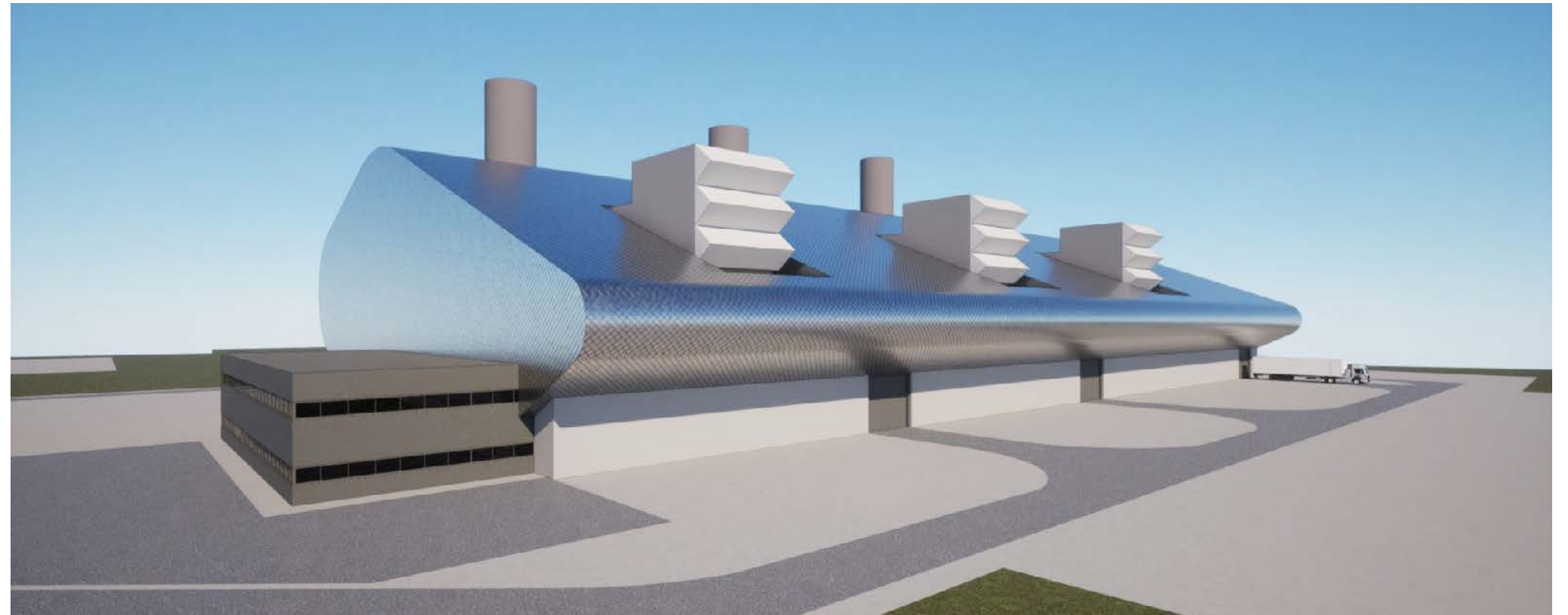


SECTION
SCALE 1:200 @ A3

04. Design Process

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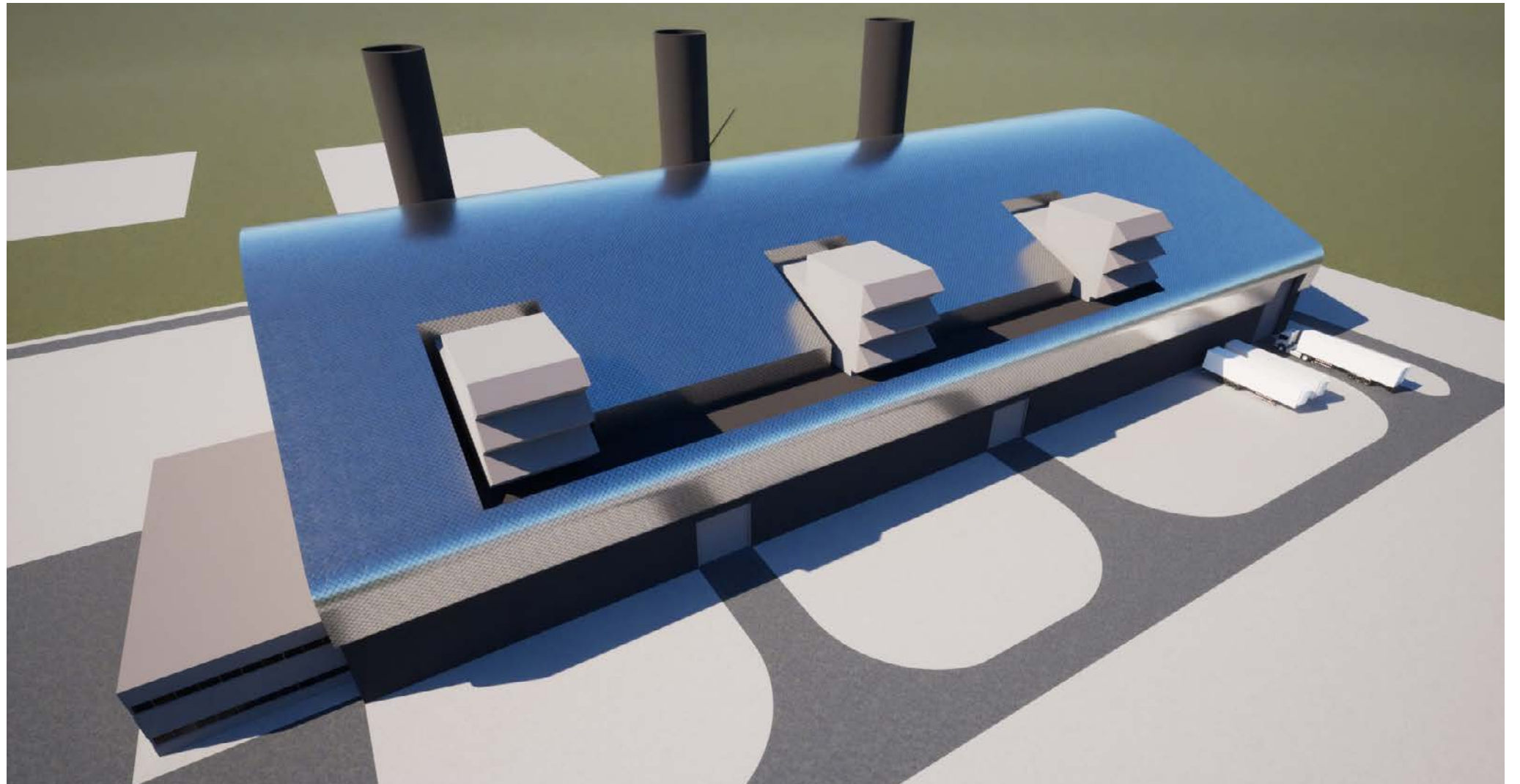
The consideration of the ancillary and admin spaces and the relationship between the volumes also needed development as did operational linkages at high level between AHU's.



04. Design Process

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These were then linked and further consideration was carried out around materials, stack finishes, access etc.



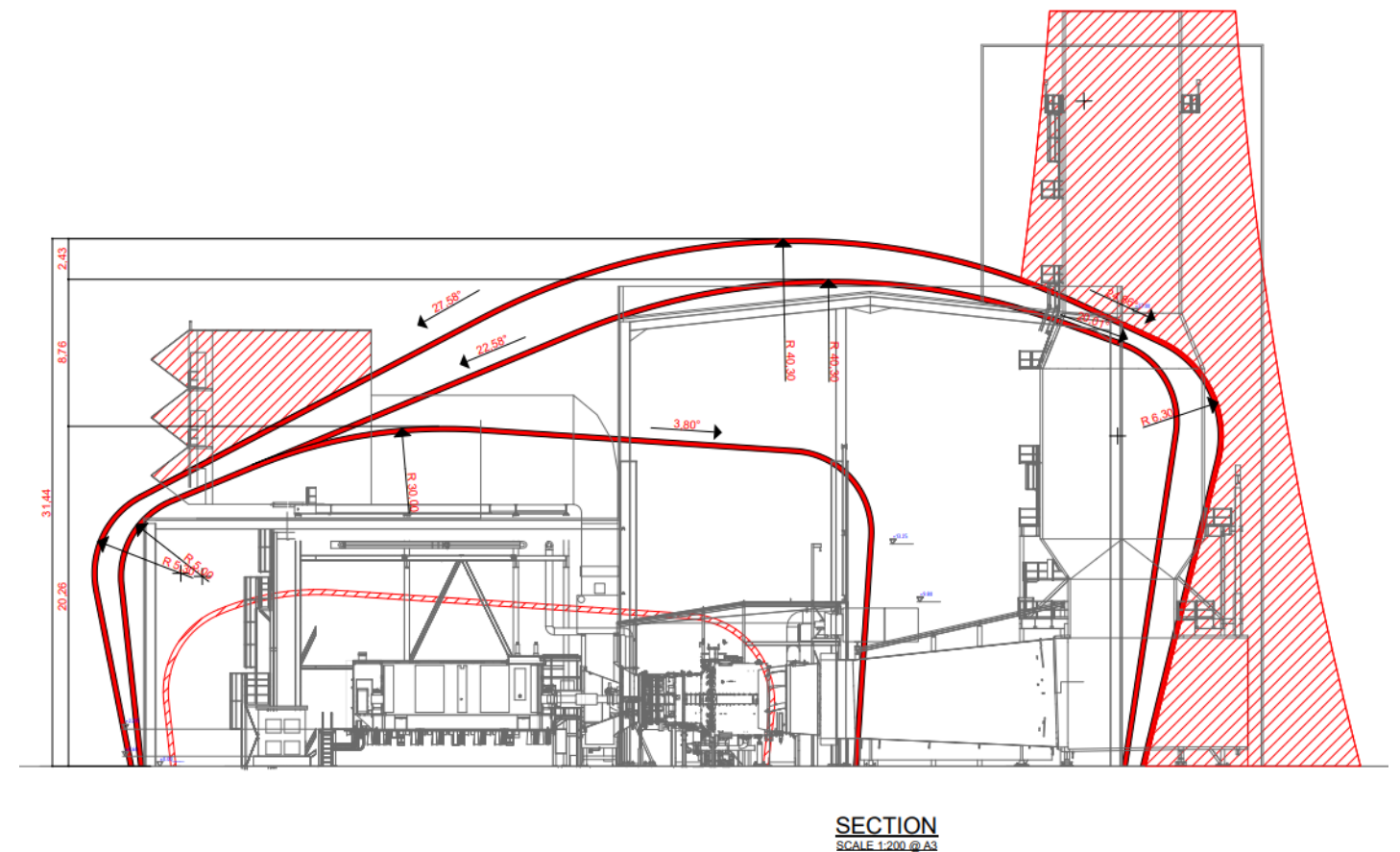
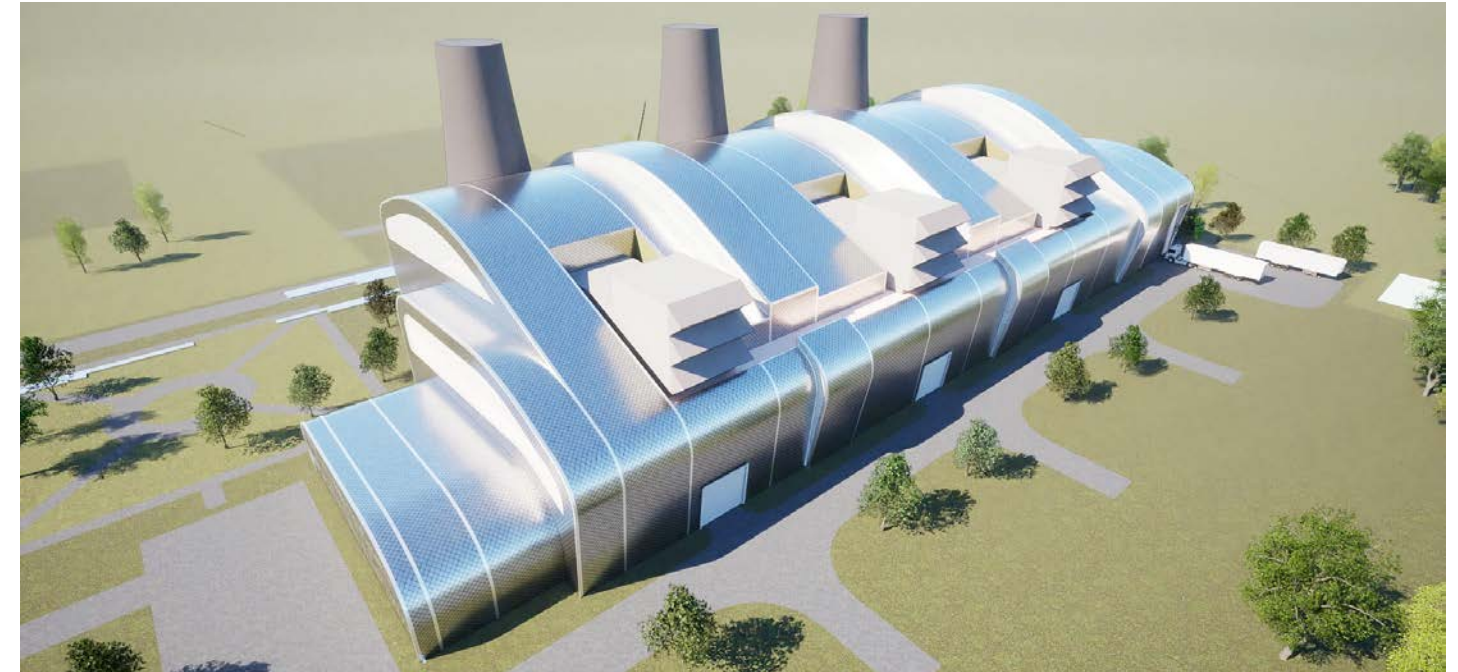
04. Design Process

The design then evolved to envelope the “plinth” also within the volume, leaving a single curved form.

This form was replicated for the admin block and areas of polycarbonate or glazing introduced to provide natural daylight into the building.

Three pop ups in the main volume were added with glazing each side to replicate the gable treatments.

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04. Design Process

Design considerations around the materiality, the colour and the stack treatment now started to be firmed up upon. A deliberate strategy of different materials between the building and the stack were explored. Colours for the stack that would “blur” them into the grey Galway skies were also interrogated for optimum solutions.

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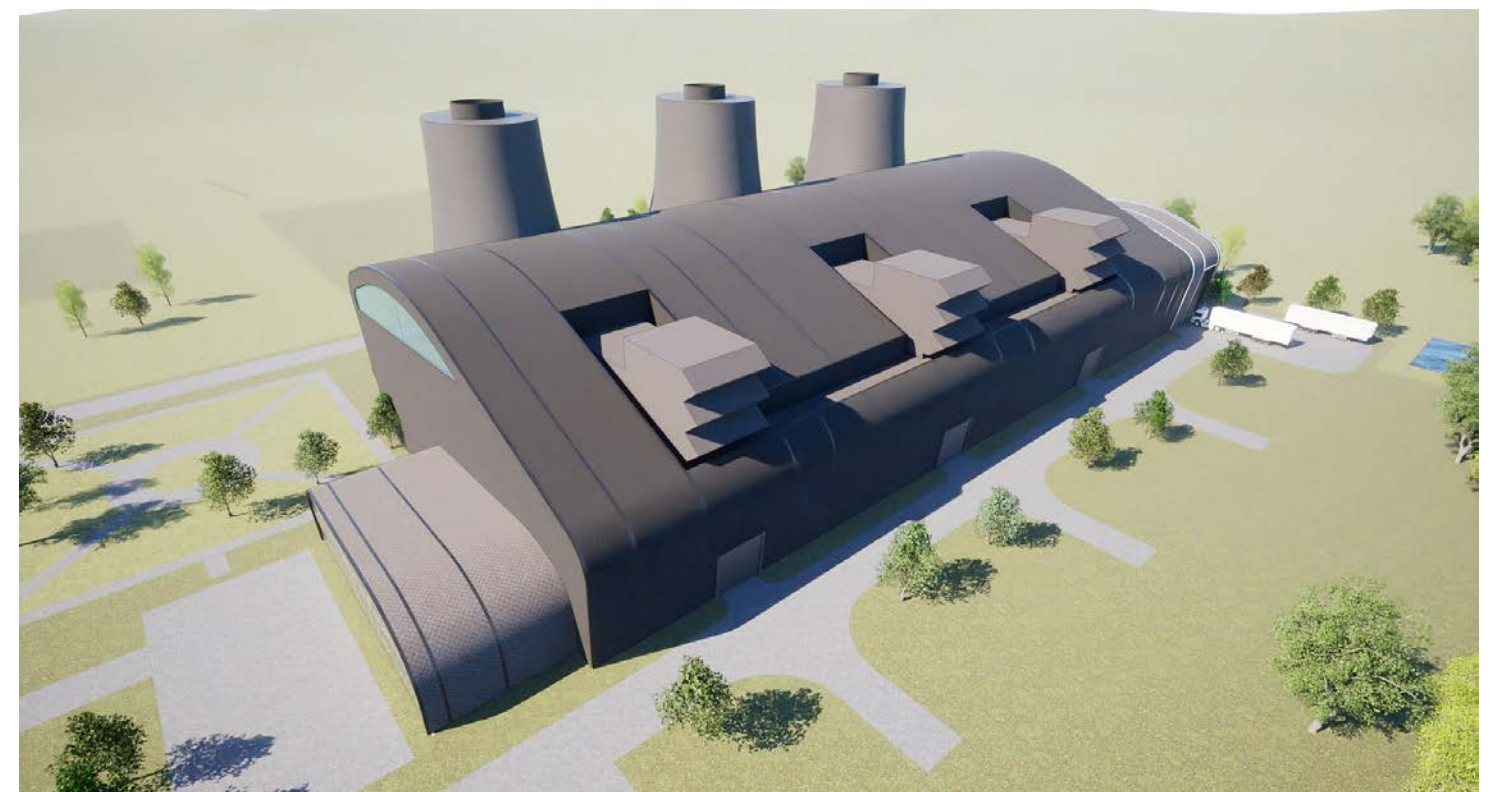


04. Design Process

Stack volumes and scale were also explored and the next iterations removed “pop ups” with a view to making the form as simple and pure as possible.

Material colours were also discussed in conjunction with photomontage development and broader site visibility factors.

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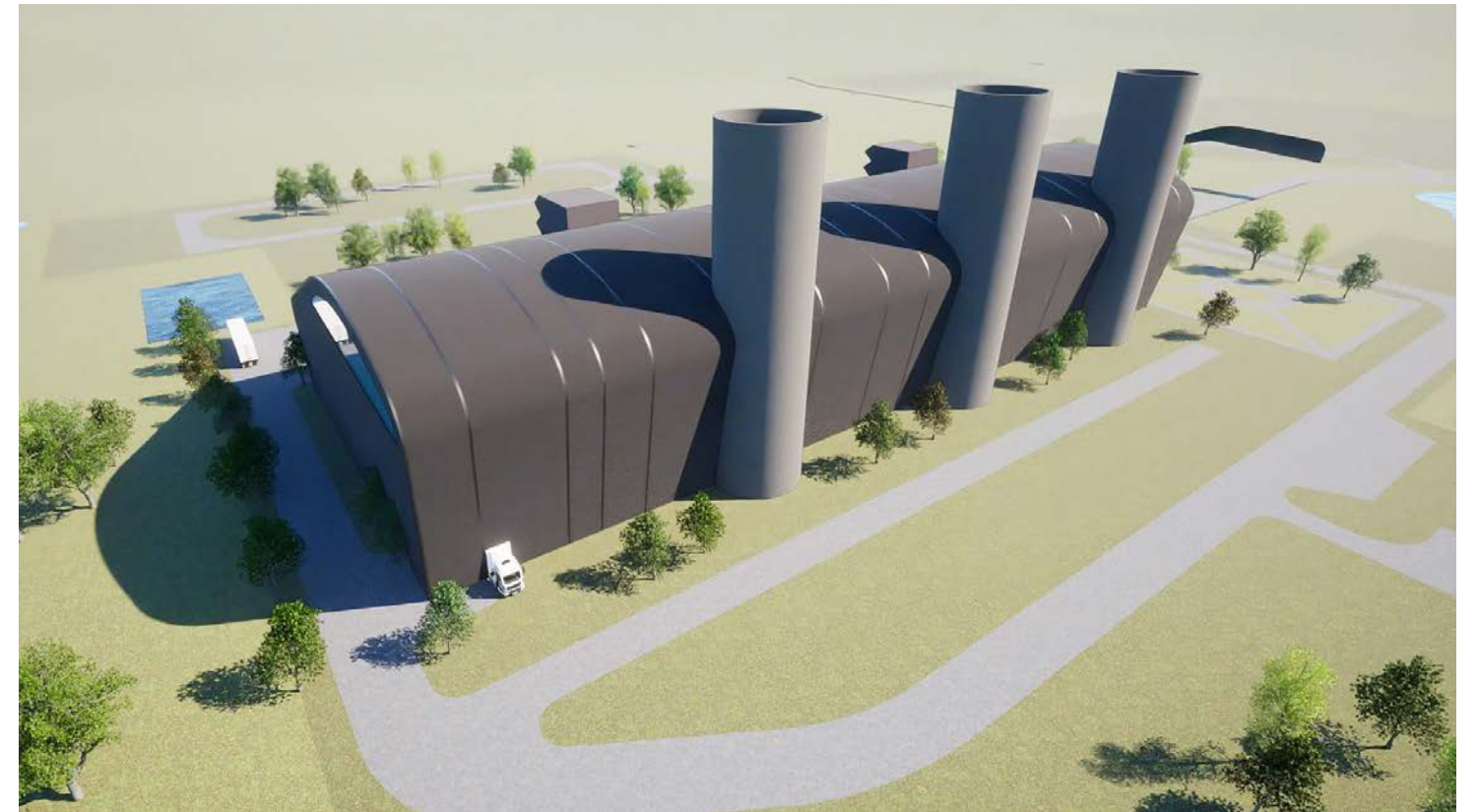


04. Design Process

The building volume was then further extended to encapsulate all the functions save the admin in one block.

Stack design and material were explored and developed towards the ultimate final solutions.

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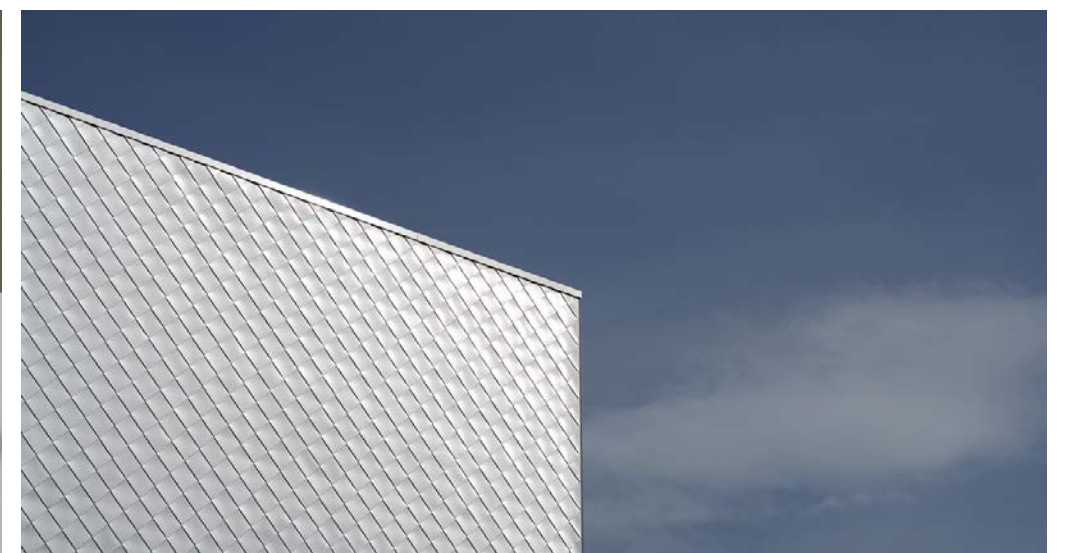
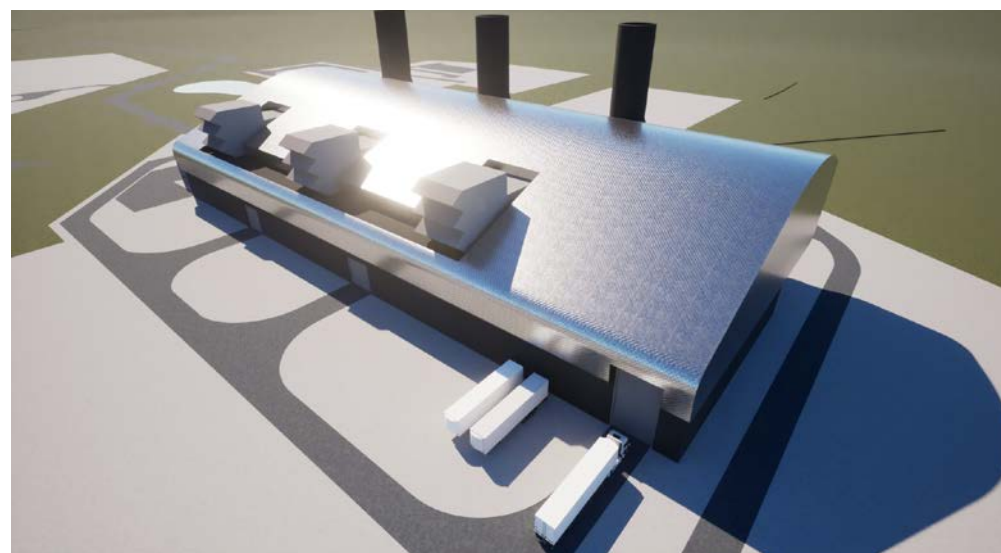
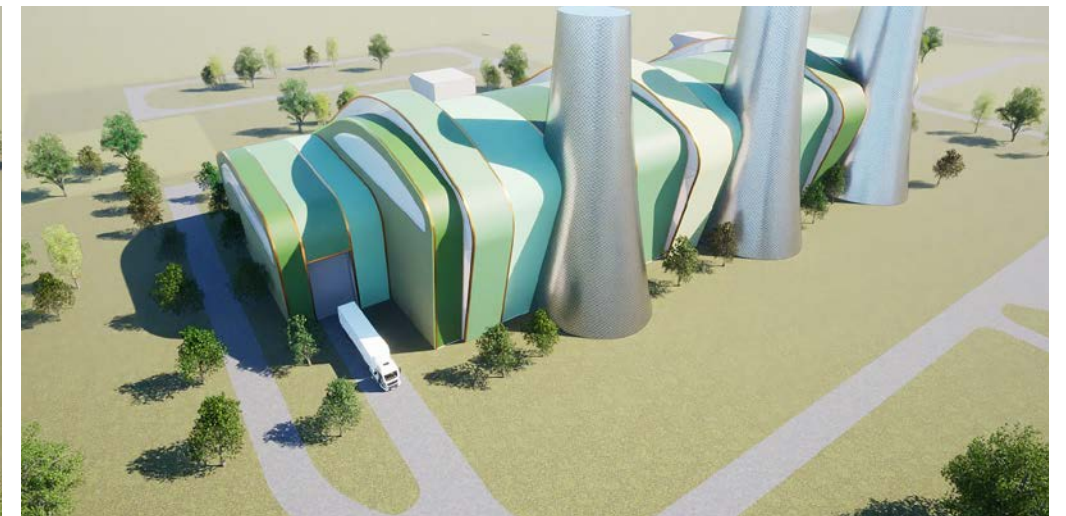
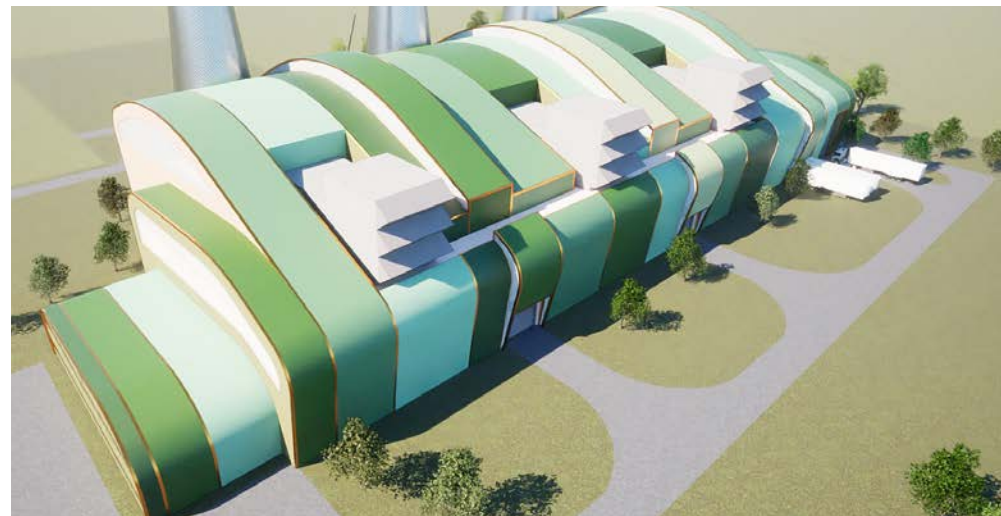
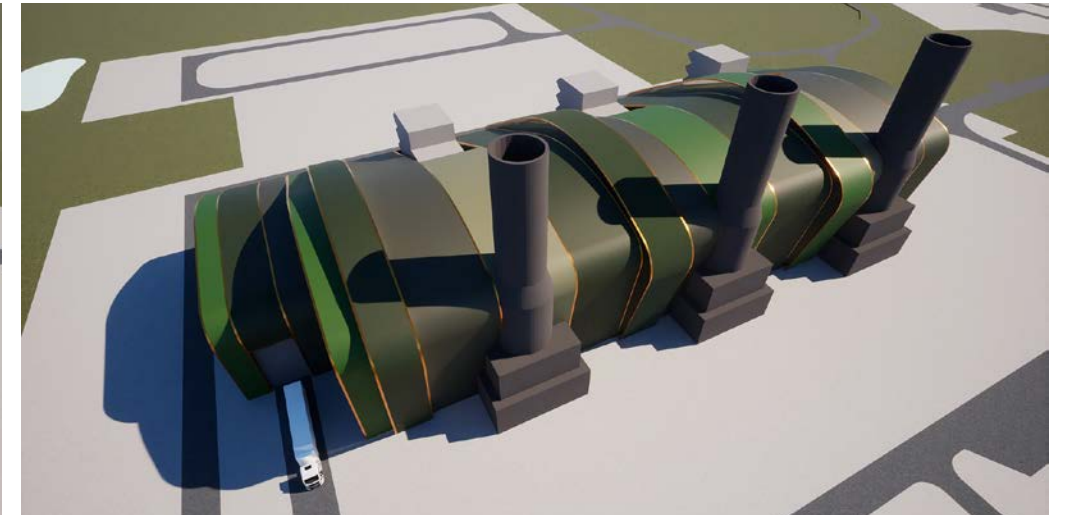
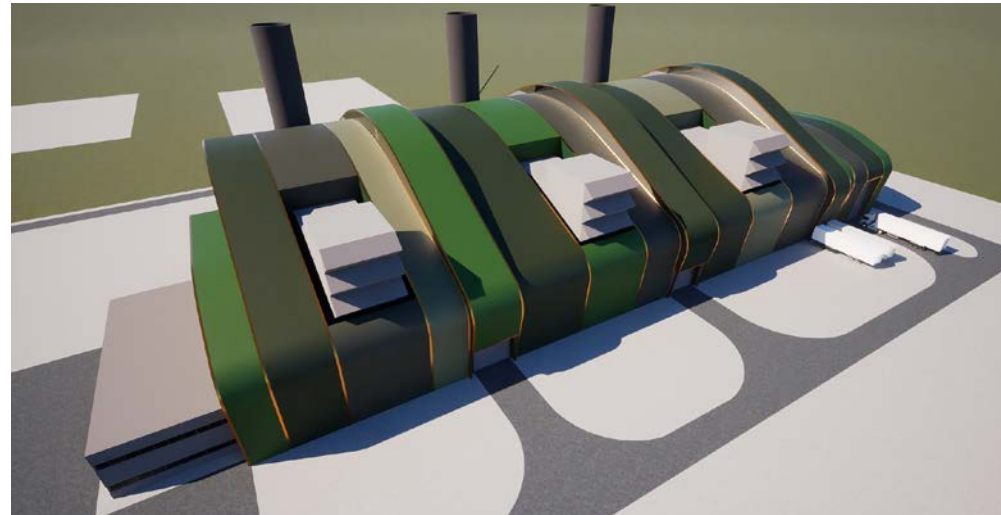


05. Materiality Study

A series of materials for the external envelope were explored ranging from varied green materials, to more metallic and reflective materials .

The analysis was carried out for both the building and the stacks.

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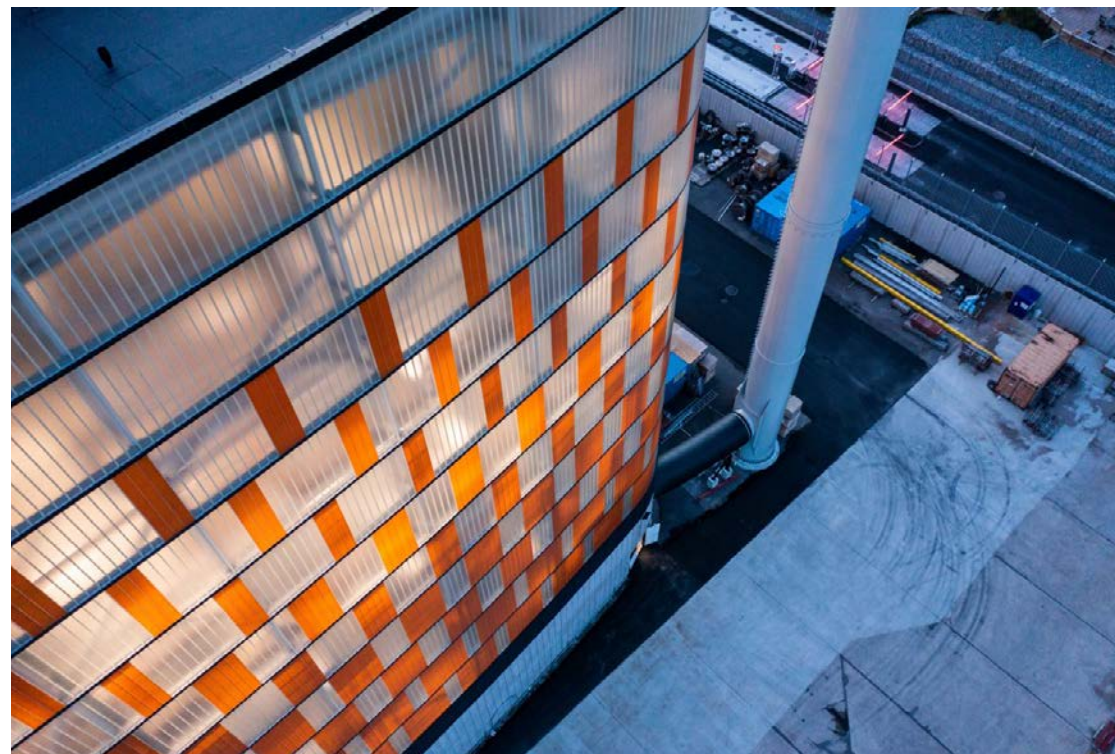
05. Materiality Study

The final material selection is for a standing seam metal roofing system for the main volume in a grey or matt silver.

This will avoid excessive glare which would have made the building more visible on the horizon. Instead, it will merge softly into the skyline and landscape.

Glass and coloured glass panels to the elevation and admin block will provide high quality internal environments as well as maximising on orientation and sustainable measures.

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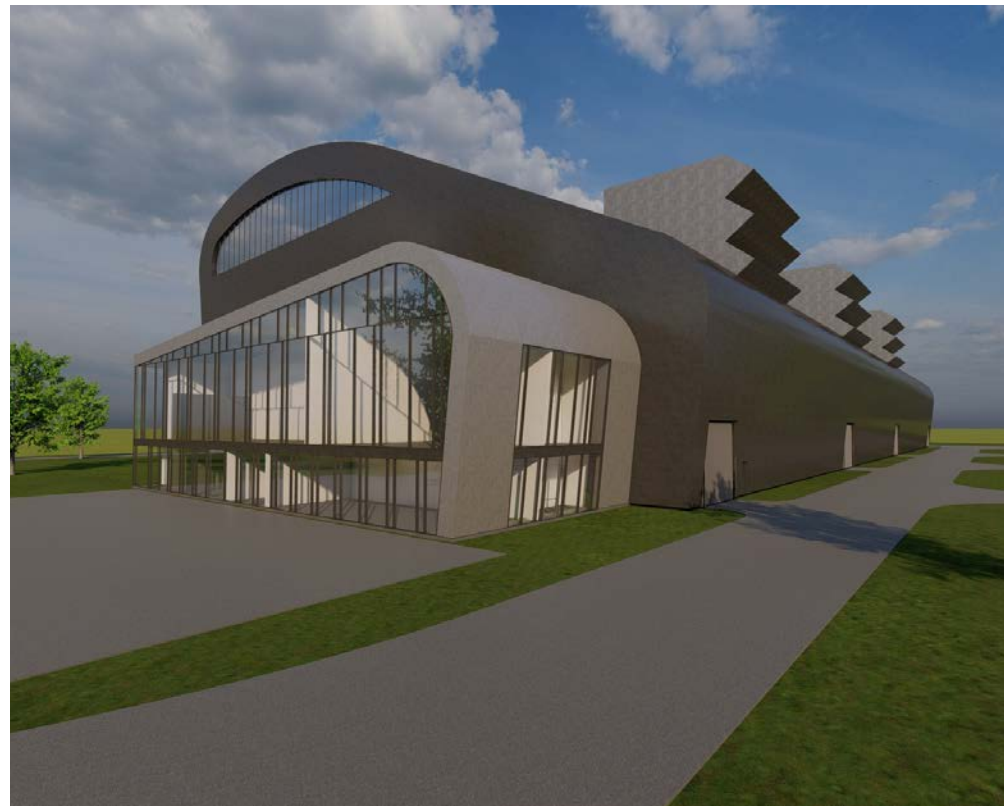


06. Conclusion

The final design solution remains true to the earliest concept ideals.

The building has been refined and simplified over a series of design iterations to form a single curved volume sitting in the landscape. A continuity of its context which has informed its architectural form.

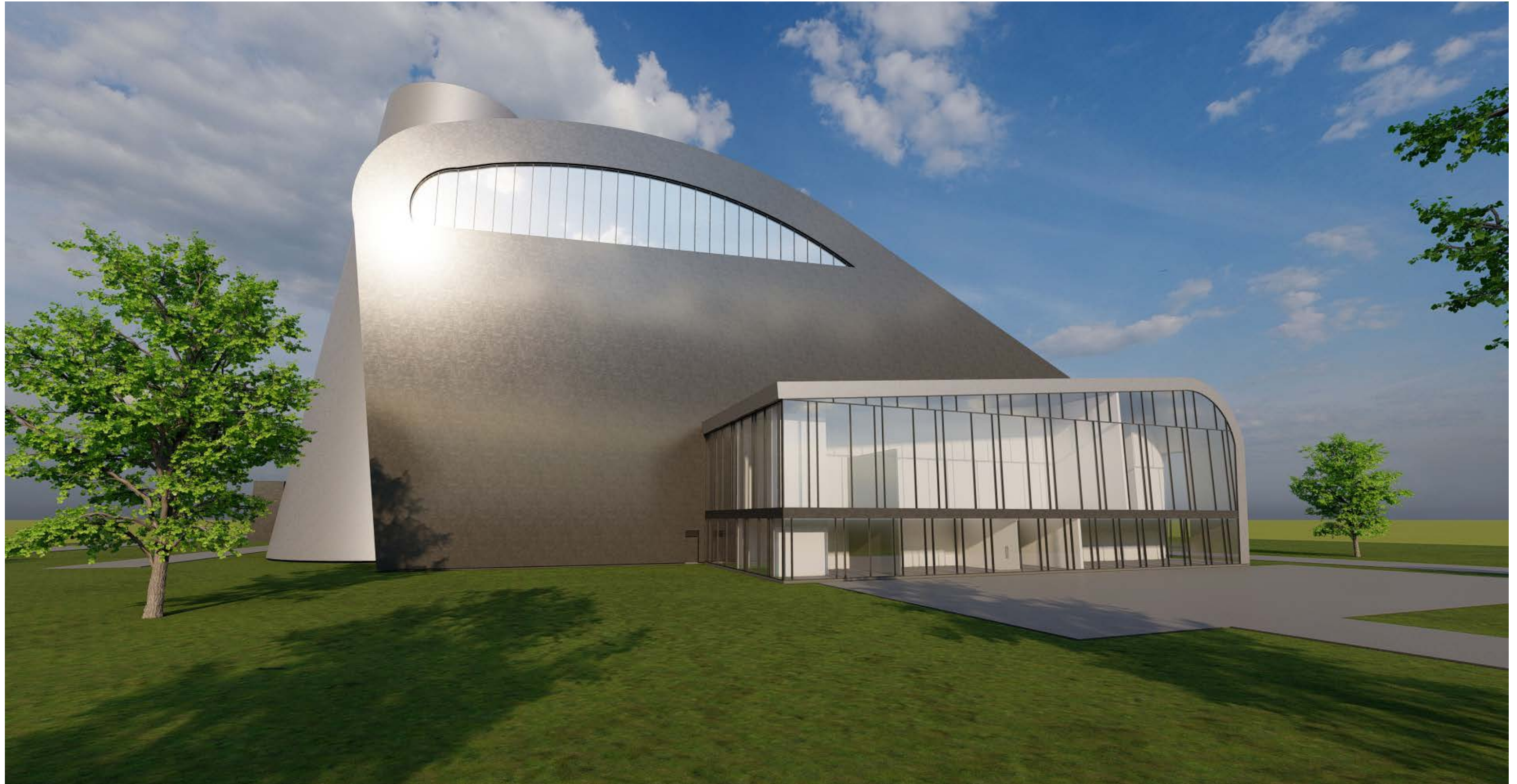
The material colours have been deliberately selected to provide opportunity for merger in the skies and to reduce glint or glare. Supplemented by landscape, we believe this form to be an excellent and site specific design solution for this building typology in this location.

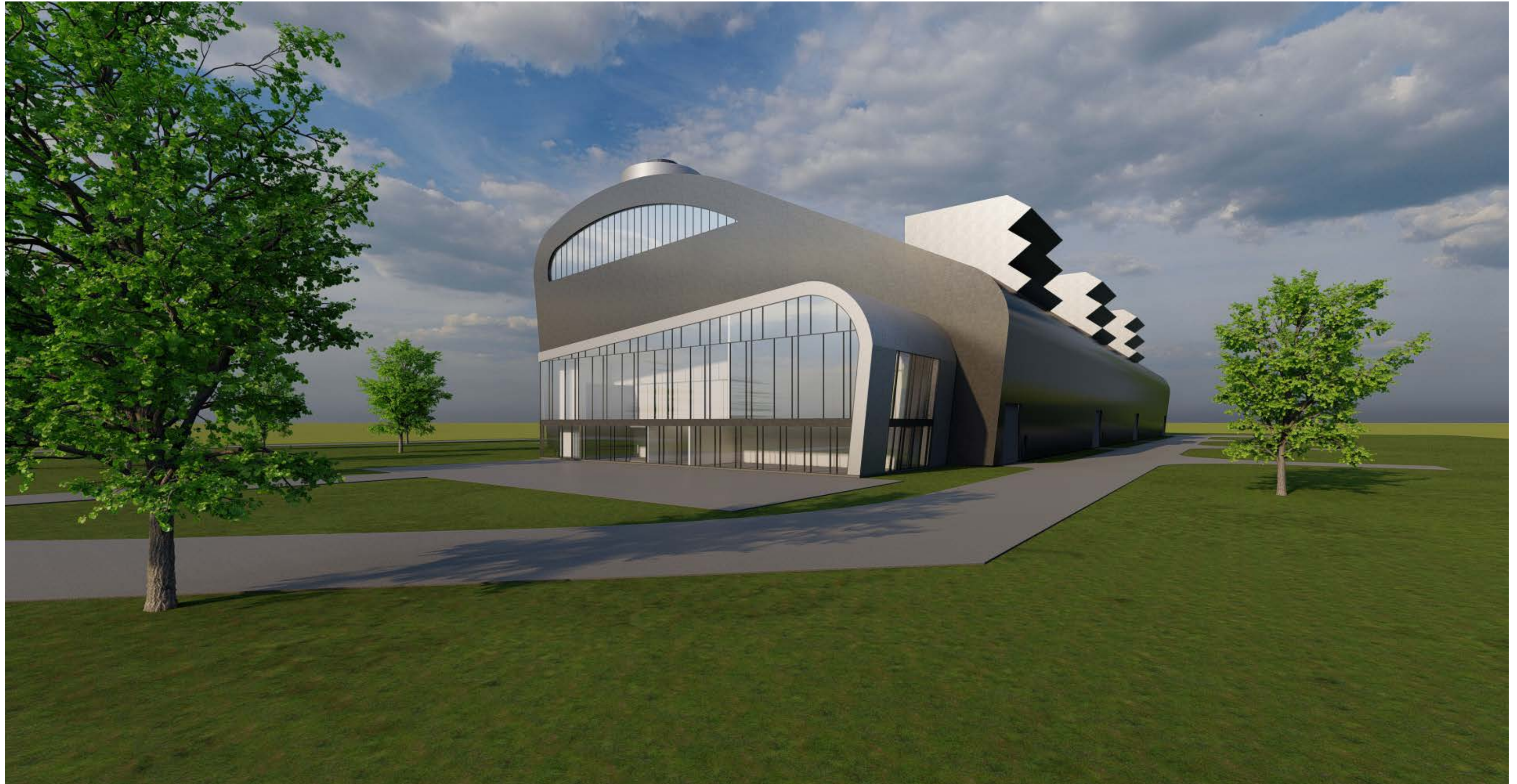


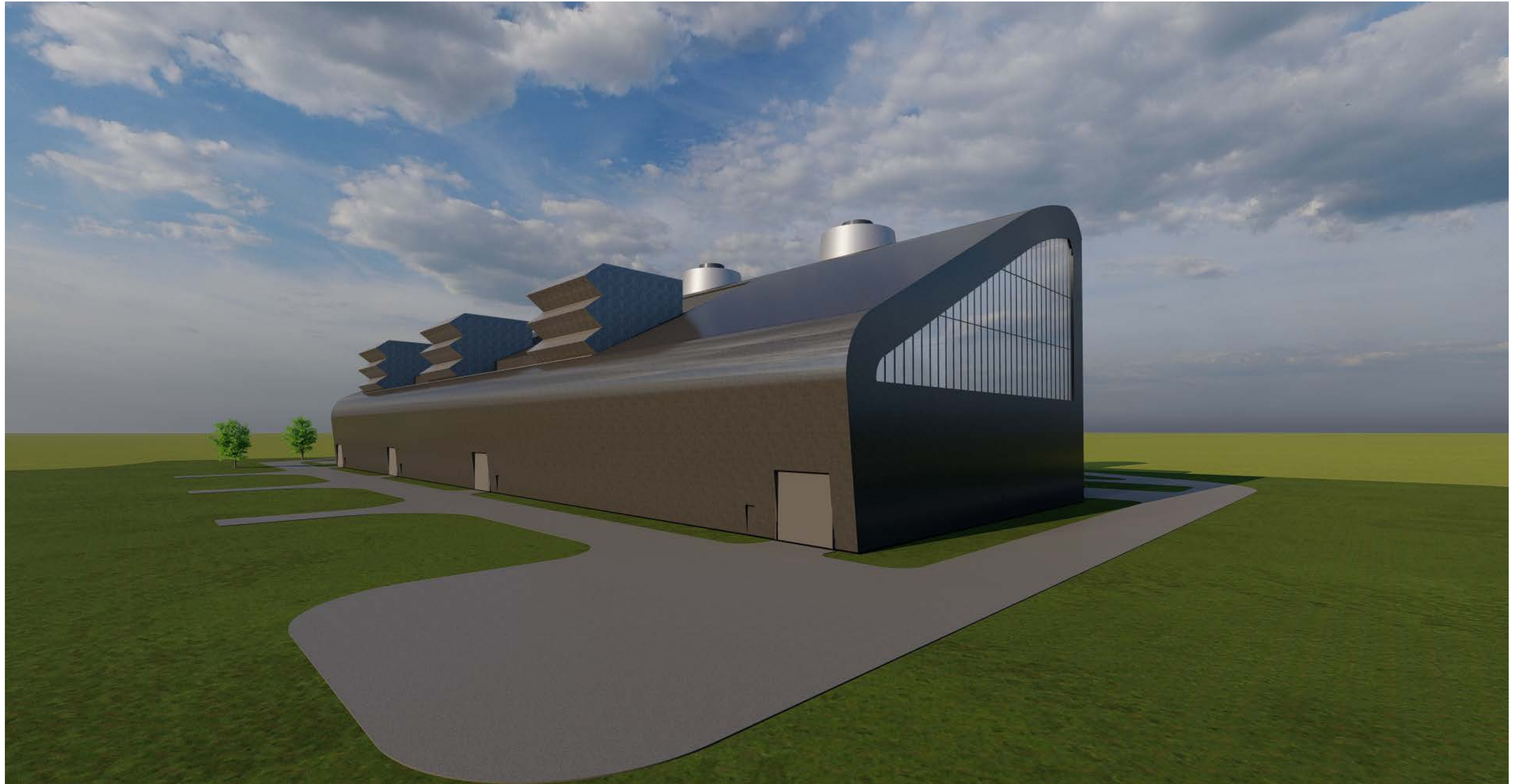
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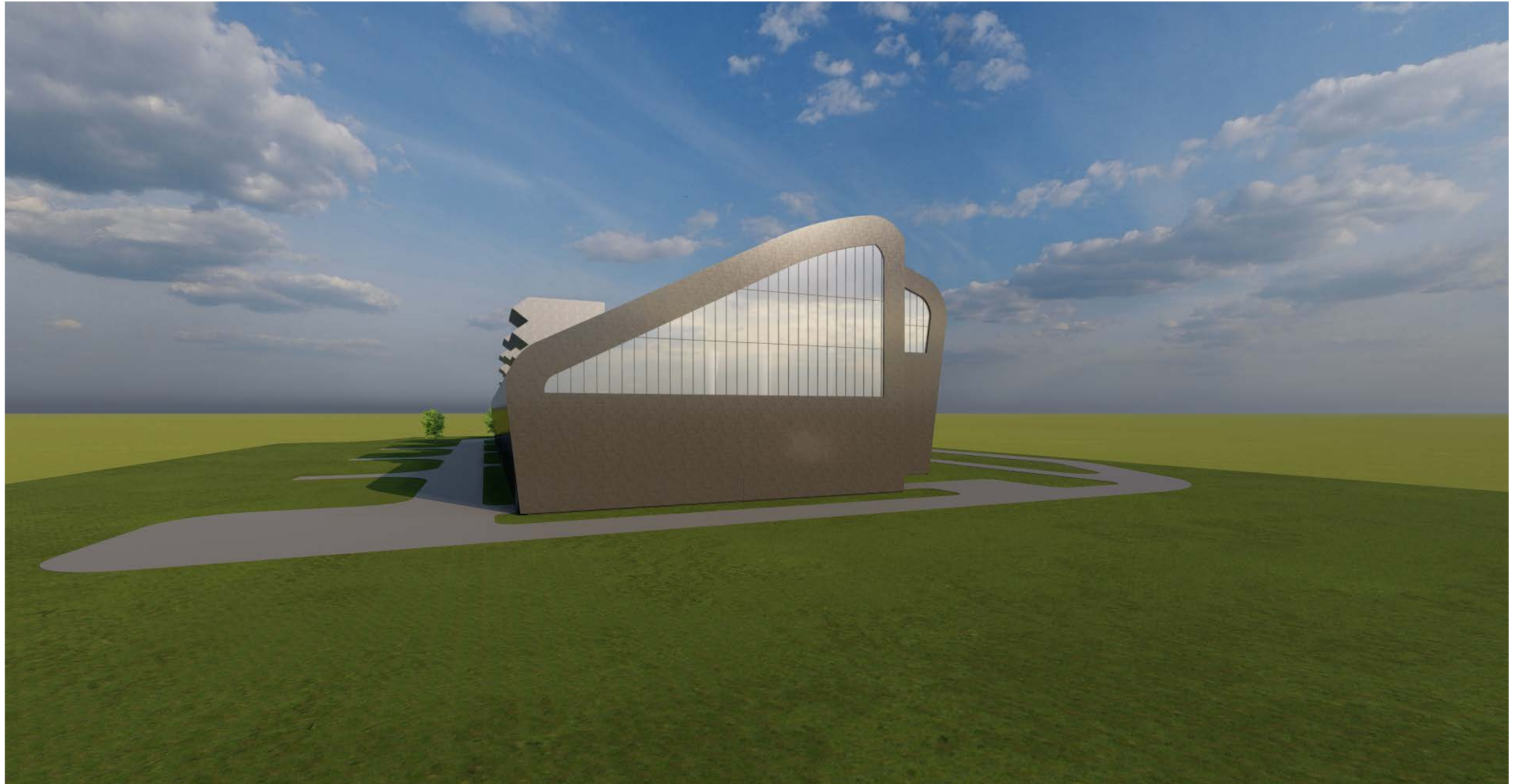




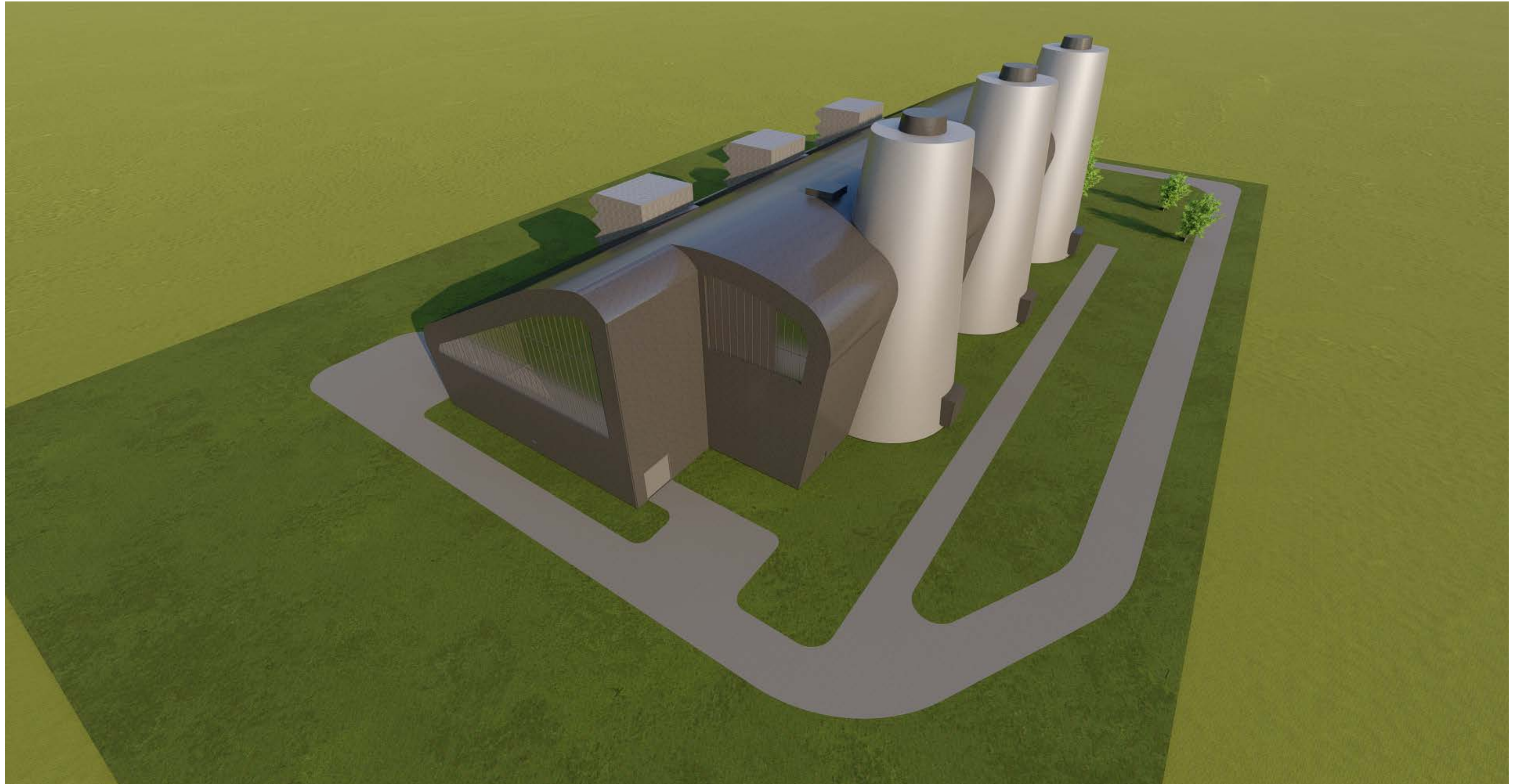




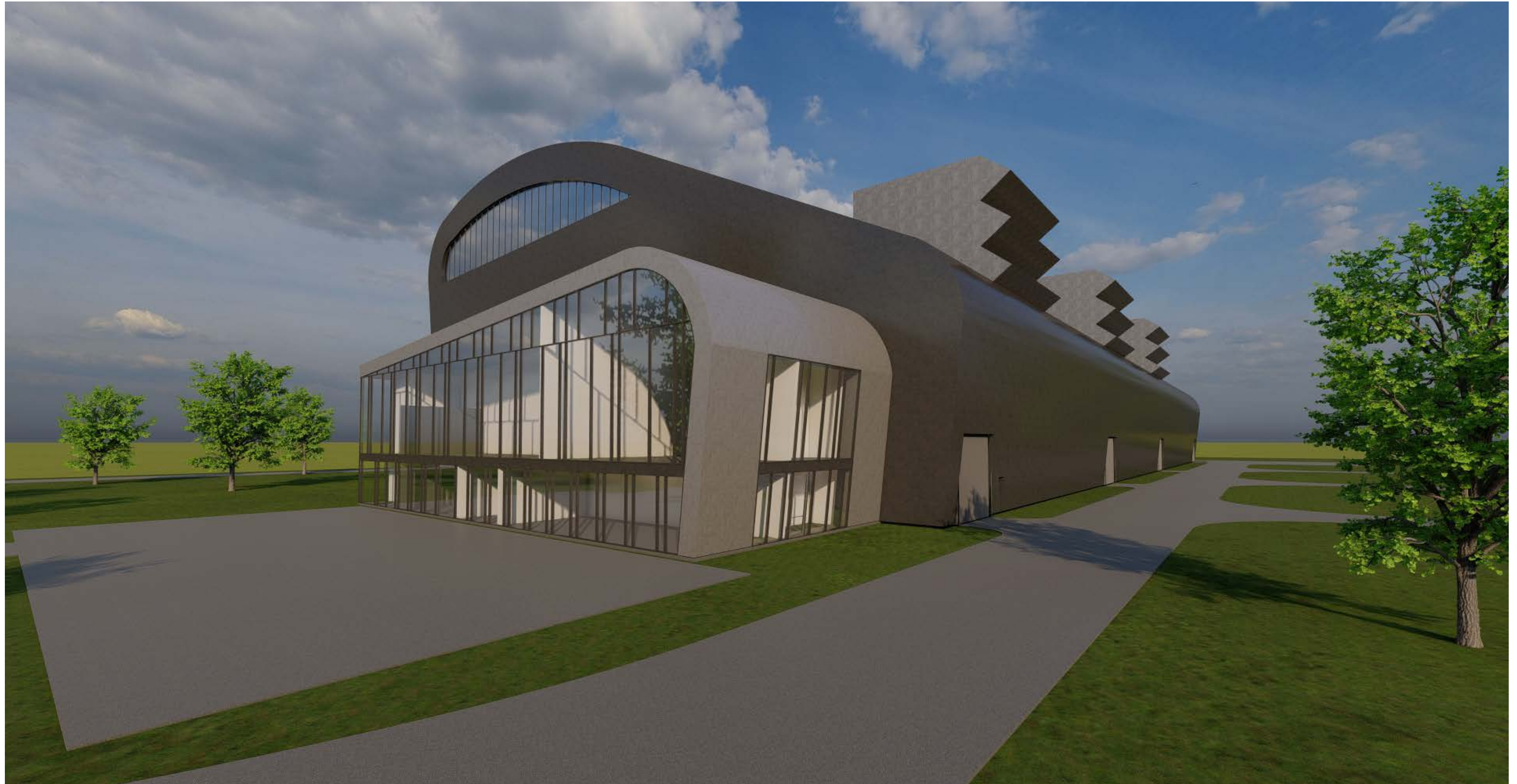


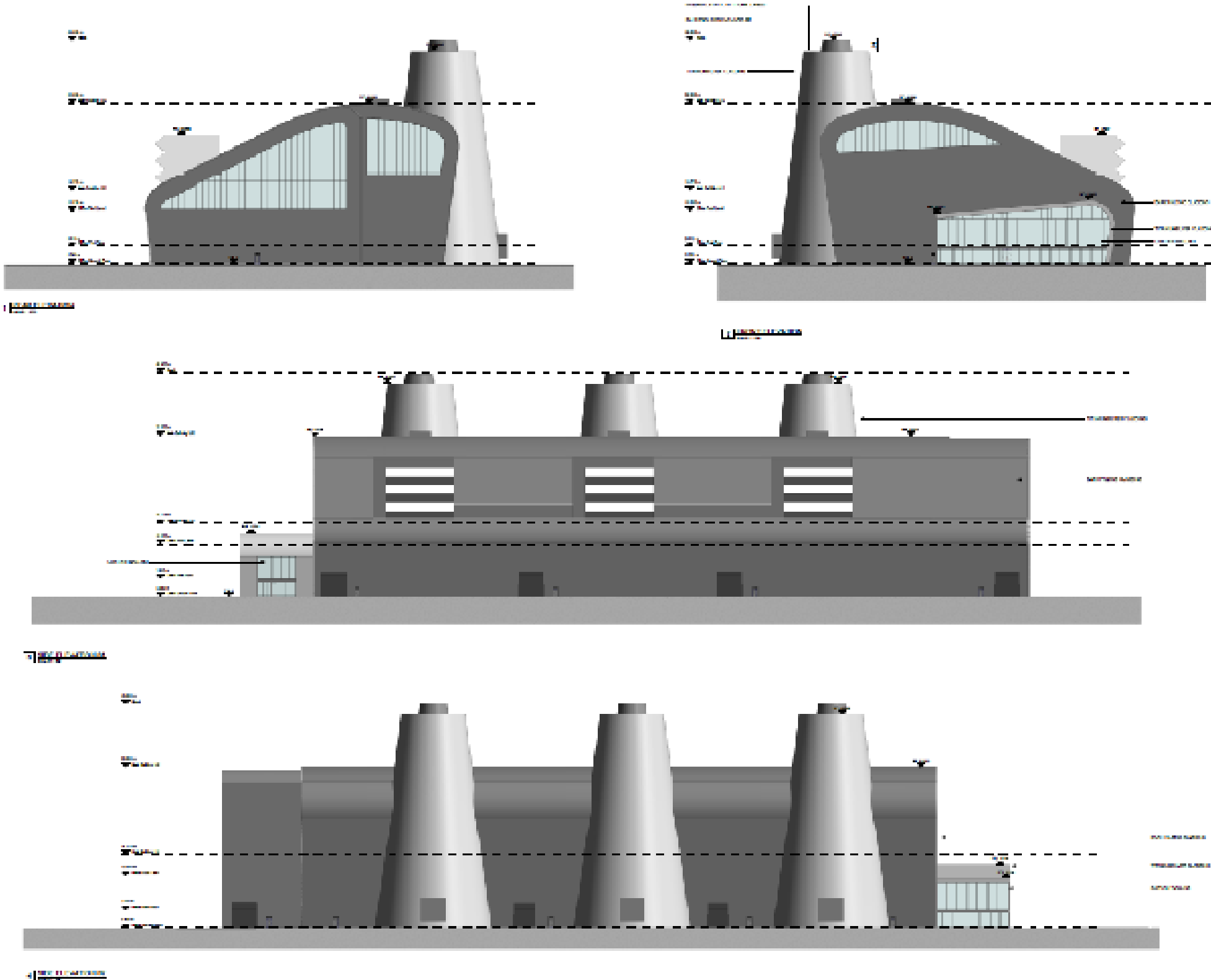


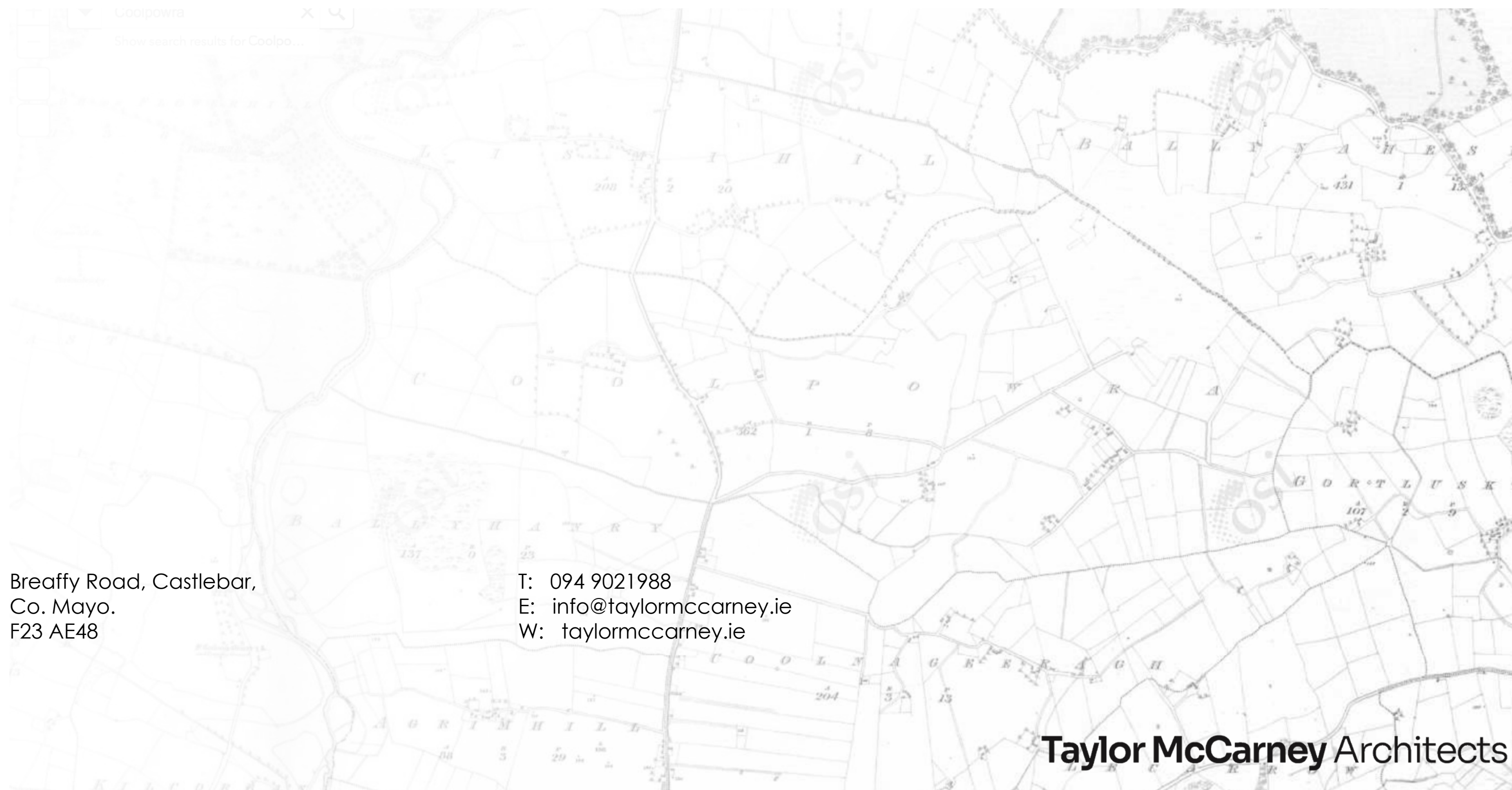












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