The Great Grid Upgrade

Eastern Green Link 3 (EGL 3) and
Eastern Green Link 4 (EGL 4)

Converter station design - background to potential architectural approaches

Version: A

May 2025

nationalgrid

Revision Log

Revision	Date	Notes
0.1	26.03.2025	First WIP Issue for comments
0.2	14.04.2025	WIP Issue for comments
0.3	17.04.2025	For Final Review
0.4	22.04.2025	Minor Comments
A	29.04.2025	Final Issue - no further comments

Contents

1. Introduction

1.1 Overview and Purpose

This **Converter station design - background to potential architectural approaches** document is written to support the English components of Eastern Green Link 3 (EGL 3) and Eastern Green Link 4 (EGL 4).

EGL 3 and EGL 4 are two proposed new electrical connections being developed by National Grid Electricity Transmission (referred to as NGET) to reinforce the electricity transmission system between Scotland and England. The Projects have been designed to increase the capability of the network to carry low carbon and renewable energy from where it is generated to homes and businesses across the country

In England, EGL 3 and EGL 4 span both offshore and onshore environments, and therefore they have been split into two geographical parts, referred to as the 'English Onshore Scheme' and the 'English Offshore Scheme', which are collectively termed 'the Projects'.

Broadly, the infrastructure required to deliver the Projects includes: high voltage direct current (HVDC) and high voltage alternating current (HVAC) underground cables, two new converter stations, a new substation and supplementary works to an existing overhead line.

Separate consents will be sought for the Scottish elements of EGL 3 and EGL 4 and therefore have not been considered within this document**.**

This document focuses on the two converter stations proposed in the Walpole area. Each of the converter stations would sit on a platform approximately 350 m by 250 m upon which there would be a number of buildings and equipment up to 30 m in height (excluding lightning protection and aerials). The platforms could be raised by up to 1.7 m to address flood risk protection and surface water drainage requirements. More information on the typical converter station layout being used for the illustrations in this document is included in **Section 5.2** of this document. The area around the converter stations would include security fencing and lighting, permanent access roads and drainage. Although not yet incorporated into the design it is likely there would be measures such as planting, to help screen the converter stations in views. More information regarding the emerging landscape response is included in **Section 4** of this document.

The individual buildings that form the converter stations can be designed in various ways. These configurations are subject to further design, and there may be opportunities to incorporate architectural approaches into the design of the converter station buildings included within NGET's application for development consent via a Development Consent Order (DCO). A series of potential architectural approaches are presented in the **Stage 2 Consultation Document** and the **Feedback Form**, which could inform future detailed design work on the proposed converter stations. This report provides a background to and summary of these potential architectural approaches, including information relating to the design process that has informed them.

The architectural concepts presented in this document are not intended as depictions of the actual proposed converter stations. They are architectural concept drawings only, intended to illustrate what is meant by a particular design approach. The feasibility of all concepts, and how they could be incorporated and to what extent, will be considered in an ongoing way as the Projects progress. This will consider factors including engineering design requirements, ongoing preliminary **Environmental Impact Assessment** (EIA), and consultation feedback.

1.2 Summary

This document has been prepared to provide a summary of the design process that is currently being followed in order to develop architectural design approaches and design principles that could be applied to the converter stations. These suggestions of design approaches are being developed in parallel to the process of selection of the preferred locations for the siting of the converter stations and Walpole B Substation in the Walpole area, which are being consulted upon as part of the statutory consultation being held in May through to June 2025. Therefore, they have not been developed to work on particular sites but in response to the general context of the Walpole area. More refined responses to specific sites will be developed and inform the final design once the selection of locations for the Projects in the Walpole area has been made. This process will involve multi-disciplinary inputs tailored to the identified sites.

This document covers the following sections:

- **Introduction** – Setting out the response to the brief and the design process.
- **Site Analysis** – Including a short summary of how the analysis of the site area has informed the design approach including identifying constraints and opportunities.
- **Research** – Including local case study buildings, and a sample of other completed converter station projects to learn from design approaches have been used before.
- **Emerging Architectural Response** – Including a recap and scoring of the design approaches included at the non-statutory, and the generic engineering solution used as the basis of illustrations.
- **Design Development** – Including concept development sketches and artists impressions of four example design approaches developed for the purpose of gathering feedback.
- **Emerging Landscape Response** – Including notes on how the landscape and ecological mitigation proposals will be developed, ideas on principles and what has been used in the illustrations.
- **Next Steps** – Identifying how this work is anticipated to continue towards making an application for Development Consent.

Response to the Brief

This document considers as to how the various architectural concepts may change how the converter stations appear or are perceived in the landscape. It is proposed to use good design as a means of reducing adverse impacts on the visual amenity of the area in line with National Policy Statements (NPSs), particularly section 4.7 of the Overarching NPS for Energy (EN-1) which covers the *'Criteria for good design in Energy Infrastructure'*[1].

The design process has been aligned with guidance provided by the Planning Inspectorate, Nationally Significant Infrastructure Projects (NSIPs): Advice on Good Design[2]. In this advice Annex A lists good design issues to consider, many of which are reflected in the structure of this document such as: analysis, research, and developing a design response. The Planning Inspectorate guidance also highlights the importance of identifying a clear vision which sets out the design intent in relation to quality of placemaking. This is something in development alongside designating a design champion for the Projects. As part of the statutory consultation on the Projects, opinions are sought on the material within this document. NGET will have regard to the responses received when considering the approach to design of the converter stations.

1. https://assets.publishing.service.gov.uk/media/65bbfbdc709fe1000f637052/overarching-nps-for-energy-en1.pdf. (2023, November)
2. https://www.gov.uk/guidance/nationally-significant-infrastructure-projects-advice-on-good-design#annex-a--good-design-issues-to-consider (2024, October)

2. Site Analysis

2.1 Site Visits and Photography

Site visits have been undertaken by the design team in 2024, covering a wide area of potential locations for the converter stations, and in different seasons to see how the landscape setting changes through the course of the year.

Open Landscapes

Typical View near West Walton

Existing Infrastructure near Walpole

The site visits have followed the various public rights of way (PRoW) through the area such as the Jubilee Way. This has shown that the views can vary, with areas near villages more enclosed and the large areas between much more open. Only trees and buildings interrupt the view to the horizon as the nearest hills are too far way to be seen. A variety of types of infrastructure are clearly evident, especially in the area around the existing substation and the River Nene. The red marker poles signify buried gas mains that will also need to be taken into consideration for siting. The Landscape Character Assessment[3] defines Area D - The Fens - Settled Inland Marshes noting that within the D2 distinctive character type '*Pylons and village churches are conspicuous landmarks in all directions*.'

Local Landmarks

Ingleborough Mill

St Mary's Bell Tower

Faulkner House

Power Station

The openness of the landscape allows certain landmarks—particularly St Mary's Bell Tower—to be seen from long distances. Some of these landmarks are historic and listed buildings, while others are associated with infrastructure, such as the power station at Sutton Bridge, or with agriculture and related industries, such as the Princes Group food processing facilities. The visibility of these landmarks helps with orientation and locating oneself within the landscape.

Using this Analysis:

This analysis can inform the siting decisions and design approach through:

- identifying some of the potential key views to and from landmarks and listed buildings; and
- developing an understanding of the cultural and landscape character of the area.

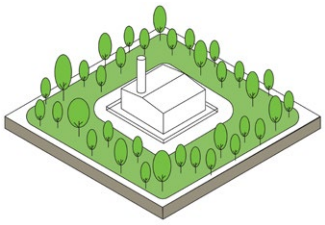
Opinions can be provided as feedback on the context of the area and how the designs should respond to them. This information and feedback help ensure local knowledge is incorporated and informs the Projects.

3. Summary of Visual Character, page 78, King's Lynn and West Norfolk Borough Landscape Character Assessment, (2007, March)

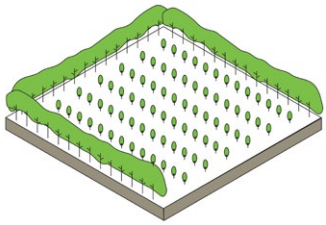
2.2 Summary of Landscape Pattern Analysis

As part of the desktop studies of the local area and through walking around the area of study in person the design team have observed the following distinctive patterns in the landscape focusing on the field pattern and the pattern of waterways.

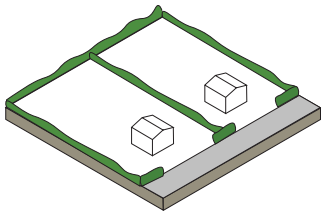
Trees and Hedgerows



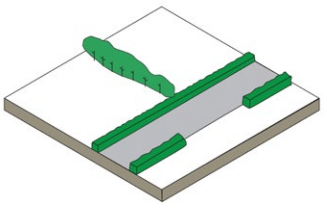
Visual Mitigation



Wind Breaks



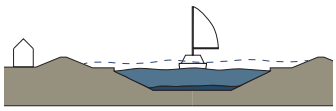
Privacy



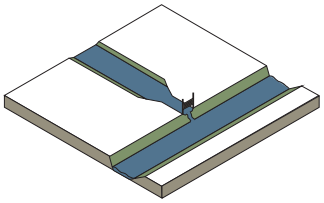
Boundaries

Trees are predominantly found in margins in a landscape that is mostly very open. They are used to; screen existing infrastructure around the boundary, as distinctive lines around orchards to provide shelter form the wind, as dense evergreen boundaries to gardens, and as field margins where hedgerows along roads are typically cropped to keep clearances or between fields where they are often allowed to grow more freely with a mixture of species that provide a varied habitat.

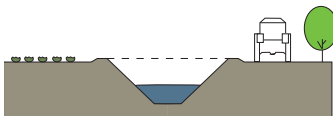
Waterways



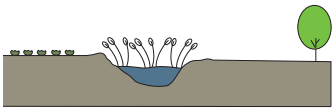
Tidal Rivers



Main Drains



Managed Drains



Field Drains

The land between Wisbech and The Wash has been reclaimed from marshland and the shallow sea over centuries. This low-lying farmland is drained by a network of managed channels that feed into main drains that in turn empty into the rivers via sluice gates that prevent tidal water inundating the land. Maintaining this network, and integrating with it could inform the landscape design, particularly noting the linear nature of water features and how they form boundaries and follow other features such as roads.

Using this Analysis:

This analysis can inform the design process as the Projects are developed through:

- identifying the sense of place that the Projects need to relate to;
- development of the landscape design that will be used to mitigate the impact of the converter stations and create a setting for the Projects; and
- informing the design of the buildings in terms of forms, patterns, and colour palette.

Opinions can be provided on this analysis and what features and patterns of the landscape may be considered important in the context of how the designs should respond to them. This information and feedback help ensure local knowledge is incorporated and informs the Projects.

2.3 Summary of Textures, Patterns and Colours

The design team has collected images that capture the kinds of textures, patterns and colours that have been observed in the area. The images below are a small sample of them. The circles represent colours that have been extracted from the images to inform a potential colour palette.

Landscape Colours

The colours of the landscape change with the seasons and cycles of agriculture, becoming more vibrant in spring and gradually more muted through autumn. The patterns in the fields varies by the types of crops and tramlines and ploughing. At macro-scale the landscape is highly engineered but close up is softened by more natural processes especially in the margins.

Materials and Textures

The area features a rich colour palette with the churches featuring honey coloured stone, and houses using brick and referencing traditional East Anglian black barns with timber cladding. Many of the agricultural buildings are dark green or dark grey, whereas most of the existing infrastructure or larger industrial and logistics buildings use paler greys to blend into the sky.

Using this Analysis:

This analysis can inform the design process as the Projects are developed through:

- informing a potential colour palette for items such as cladding, roofing and fencing;
- considering the types of textures and patterns that could relate to the place; and
- understanding that the Projects need to work with the changing environment.

Opinions can be provided in the feedback forms as to what references should be made to colours, textures, patterns and materials as the design approach is developed.

3. Research

3.1 Local Reference Buildings

The design team has studied other large scale buildings in the local and wider area to see what strategies have been employed which could inform the design process for the converter stations. This process has focused on more modern buildings that have transferable features such as forms, cladding types, and colours.

15

Princes Group, Long Sutton

The largest part of the factory is approximately 20 m tall and roughly 120 m long and 85 m wide. It uses a simple colour scheme of a paler blue-grey on the upper parts and a darker grey on the lower parts including the loading docks.

16

The Hub, Holbeach

This university facility has been designed to reference East Anglian black barns using corrugated metal cladding and lower red brick volumes. It gives expression to the functional requirements with the louvred ‘chimneys’ that break the ridgeline of the simple gable form.

17

Type-C Aircraft Hangar, RAF Feltwell

Typical of the expansion of air-bases during the mid 1930’s. It features taller gables at either end, one of which has the wide hangar doors plus a pattern of bays down the side with a sequence of hipped roofs and valleys in between.

18

AH Worth, Fosdyke (A17)

The most notable feature of this building is the external frame which gives a strong rhythm to the elevations. However this strategy can lead to complications such as weathering of the frame and risk of cold bridging, resulting in condensation and leaks in seals.

This is just a small sample of the notable local and regional buildings that are of a type that could be used as inspiration for the converter station designs. The feedback forms can be used to offer any other reference buildings that it is felt are worth including in this exercise.

3.2 Other Converter Stations and Wider Inspiration

The design team has studied other converter station projects in the UK and Europe where conditions, and design constraints, are most similar to the UK. The following is a small sample of these that demonstrate the type of buildings that are needed, and some of the architectural design approaches that have been delivered before. These projects vary in terms of supplier technology, overall power, and voltage which are all key determinants of scale of buildings.

19

Viking Link, Bicker Fen, Lincolnshire

This is the closest completed converter station to the Walpole area. The green colours reference nearby large agricultural buildings. The use of colour bands is relatively effective in reducing visual impact, particularly as the buildings are mostly viewed from a distance.

20

Viking Link, Revsing, Denmark

The buildings have feature cladding over a simple black box. This cladding is anodised silver and is perforated to create patterns of Viking knots by a local artist engaged following public engagement on how to relate to the culture of the area.

21

IFA2, Fareham, Hampshire

Bunding and planting has been strategically placed around the converter station to reduce visual impact on the side facing sensitive receptors with the near side more open where it faces an airport. The cladding matches other buildings around the airport.

22

NordLink, Wilster, Germany

The landscape is similar to the Fens of the Walpole area and there is even a drainage channel around the perimeter of the compound. There is very limited tree screening. The buildings are functional forms and have a simple green colour scheme.

The design team will continue to look for other converter station examples as they are completed or applications are submitted. This can be a useful guide as to the range of reasonable architectural approaches that will be considered given the technical and operational constraints that come from working with such high voltages.

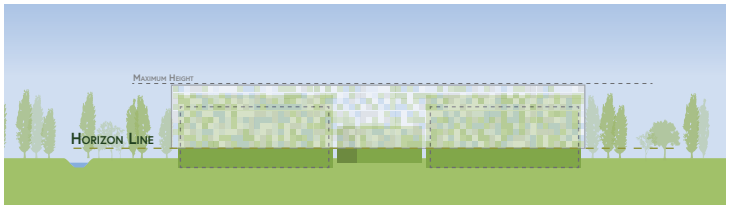
4. Emerging Architectural Response

4.1 Recap of the Non-statutory Consultation Design Approaches

The consultation banners and feedback forms from the non-statutory consultation events, held in spring/summer 2024, included the following six illustrations showing some possible design principles that could be applied to the converter station buildings. Field trips to the study area informed our understanding of the landscape character and key landmarks in the local area. This guided the emerging architectural response. The percentage in brackets reflects the relative scoring of the 87 responses in the feedback forms. Noting that this is a small sample of responses, the four highest scoring approaches have been developed further in **Section 5** of this document, seeking further views at this stage of consultation.

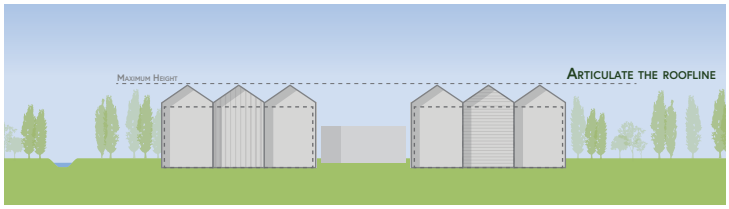
Mosaic Patterns (31%)

Use decorative feature cladding with patterns and depth. This could reference local art and culture.



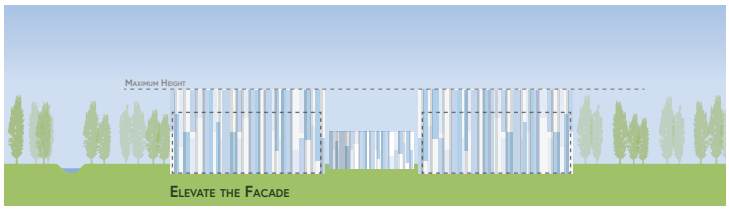
Vernacular Building Forms (24%)

Divide the form into a rhythm of bays suggesting barns or hangars. This could be used to reduce the visual bulkiness.



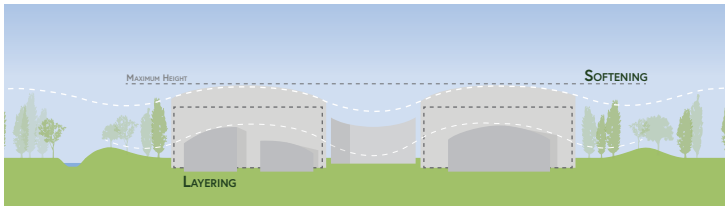
Enhanced Elevation (23%)

Vertical contrasting articulation and colour used to break up the profile. This could help to blend into the surrounding context.



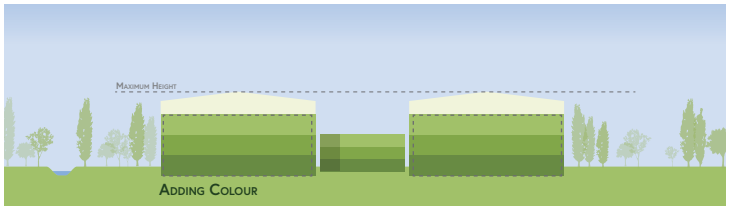
Layering and Softening Forms (14%)

Arrange smaller forms in front of larger ones as seen from key views. This could reduce the flatness of tall facades.



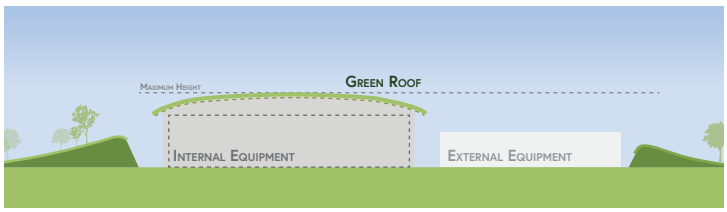
Horizontal Colour Bands (5%)

Gradient from dark base to light top using colours suited to context. Could reduce apparent height.



Green Roof and Bunding (3%)

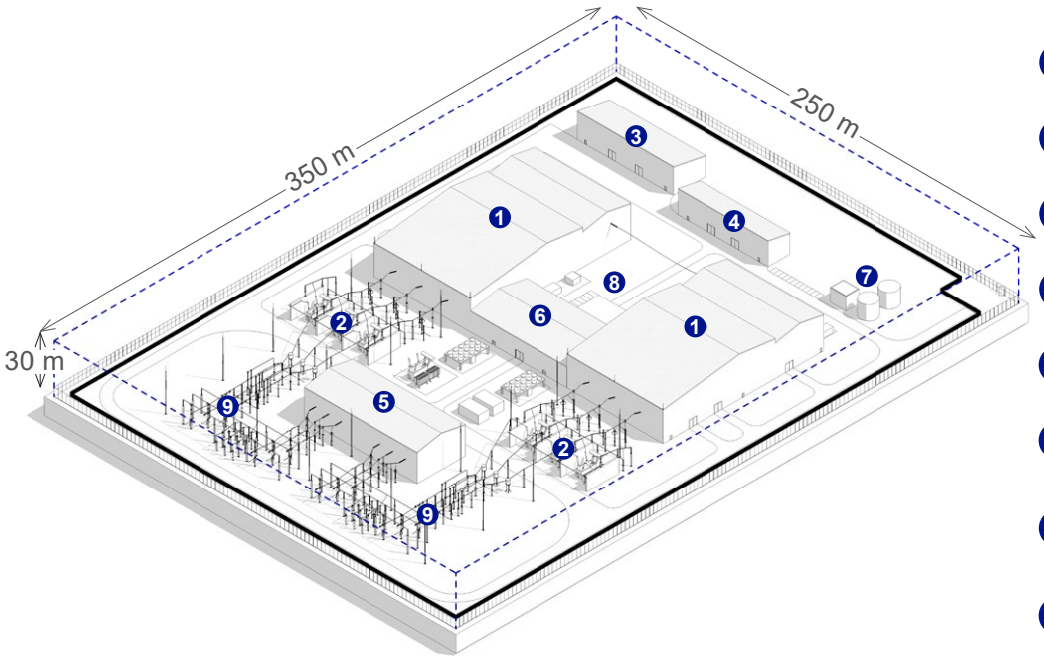
Combine sloped green roofs with planted bunding. This could help blend the buildings into the landscape.



4.2 Evolution of the Design Approaches

The image below shows a typical engineering solution for a converter station that could meet the technical requirements of the Projects. This layout and massing has been used for developing illustrations of how the potential design approaches could look. It is not possible to define the positions and sizes of buildings and equipment at this early stage as it will depend on the final design and supplier. For this reason maximum parameters will be defined for the position and height of the converter stations, which when represented in elevations and 3D views is called a Rochdale Envelope[4]. In the illustration sketches this is indicated using a dashed blue line as per the diagram below.

Typical Engineering Solution for a Converter Station



1. DC Halls
2. Transformers
3. Storage & Maintenance
4. Amenities Building
5. Harmonic Filter Building
6. Control Building
7. Fire Safety Systems
8. Car Parking & Unloading Area
9. Outdoor Electrical Equipment

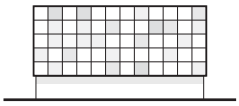
The Direct Current (DC) Halls are the tallest buildings in a converter station compound. The tops of these buildings are typically of a height that is beyond landscape screening and therefore these areas would be the primary focus of the design approaches. The lower sections and secondary buildings would form a backdrop.

As part of the statutory consultation on the Projects, views are sought on whether any of the four potential approaches illustrated in **Section 5** should be explored further or whether elements of any of these approaches could be taken forward into future designs. Views can similarly be provided on possible design approaches that have not been included. NGET will have regard to the responses received when considering how the design approach and design principles for the converter stations are developed.

Mosaic **Vernacular** **Enhanced** **Form**

4. The 'Rochdale Envelope' approach is employed where the nature of a proposed development means that some details of a project have not been confirmed (for instance, the precise dimensions of structures) when an application is submitted, and flexibility within clearly defined parameters is therefore sought to address uncertainty.

5. Design Development

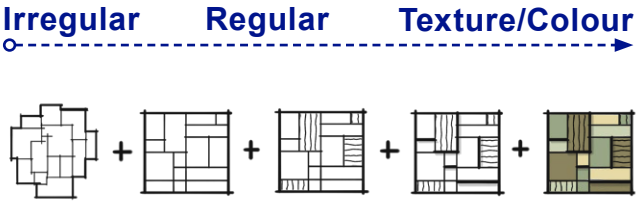


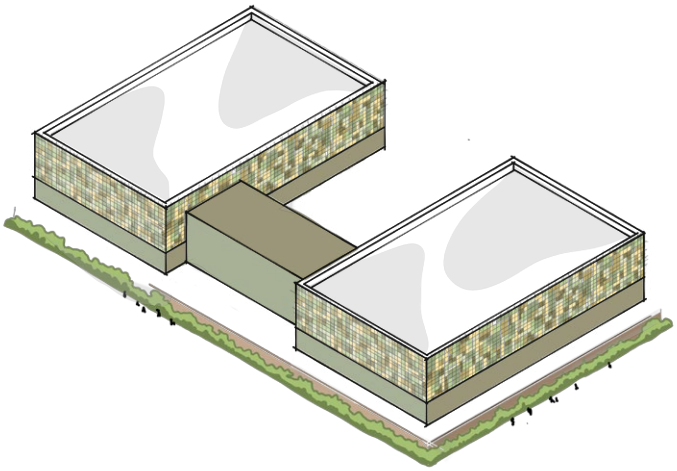
31%

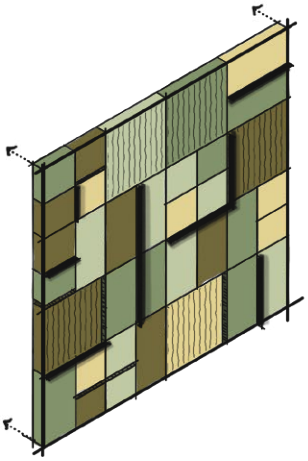
5.1 Mosaic Patterns

Concept Sketches

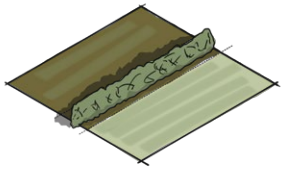
This is a small sample of the sketches that have been produced whilst exploring ways that the theme of mosaic patterns could be applied to the indicative building volumes of a typical engineering layout for the converter stations (colours to be investigated further).





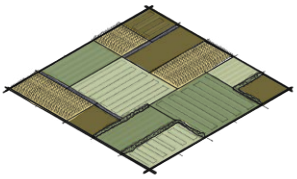


Hedgerows



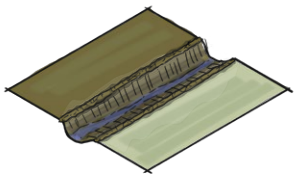
Protruding Fins

Field Divisions



Organisation & Texture

Drainage Channel



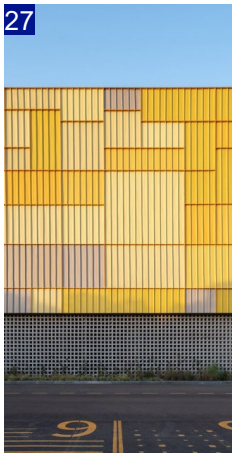
Shadow Gaps

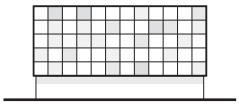
Concept

Agricultural Terracing - Embedding the design within the rural context.

Precedent Example

Renovation of the ForD Warehouse

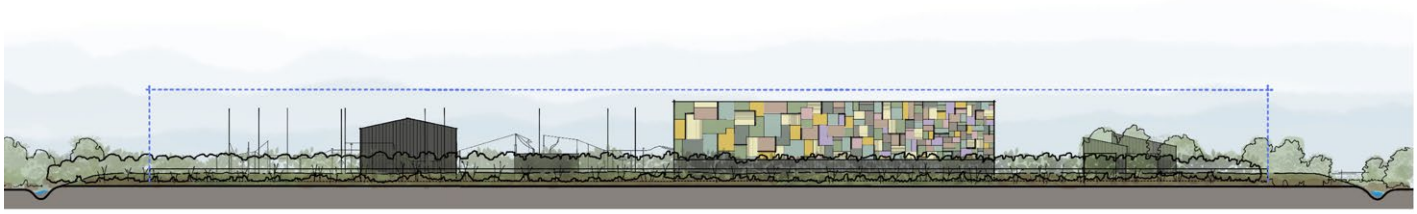




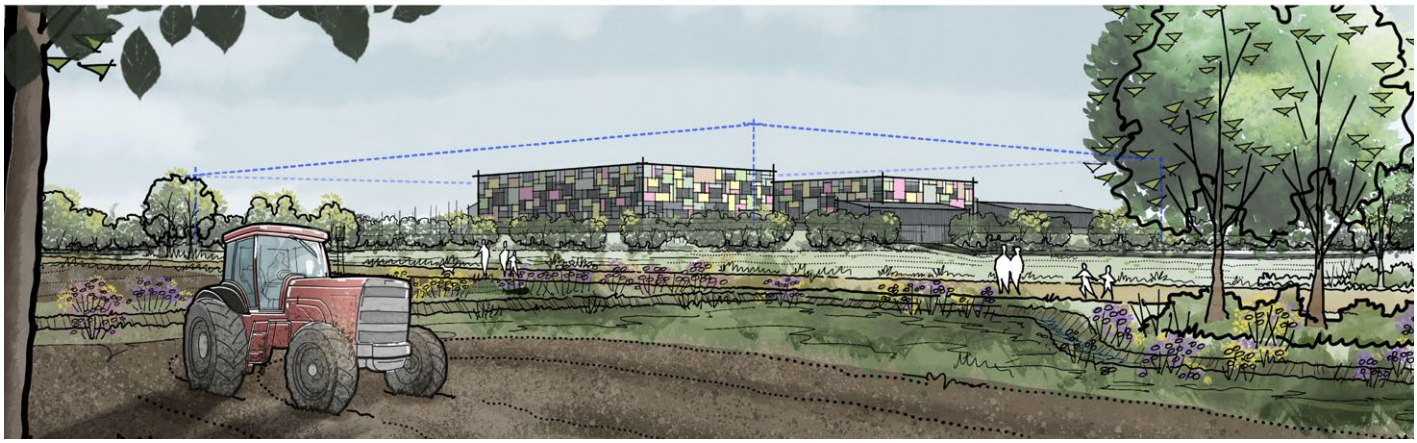
31%

The mosaic pattern strategy has been developed so it can draw upon the distinctive landscape pattern of the area. It has been noted that this pattern tends to have smaller patches near the villages, with lines of wind break trees around orchards, whereas the spaces between the villages are much more open, with larger fields and less hedgerows. This could be reflected in the cladding pattern of this design approach. The colours would need to be carefully mixed to relate to the context (images showing indicative colours).

Illustrative elevation showing mosaic patterns design approach



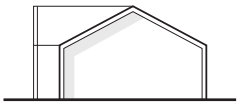
Illustrative eye level view showing mosaic patterns design approach*



**distance from camera to near corner of fence approximately 300 m*

Next steps for this design approach:

- Consider how the design could be adapted to respond to specific locations and settings and how to further relate the concept to the local culture.
- Develop how the pattern is distributed across the surface including the balance of open versus intricate areas including the scale and type of cladding panels.
- Develop a colour palette and explore how the colours can be combined to enhance the buildings while helping them blend with the surrounding landscape.
- Investigate the types of cladding systems and details that would be suitable for use on the buildings and could achieve the intended effects.



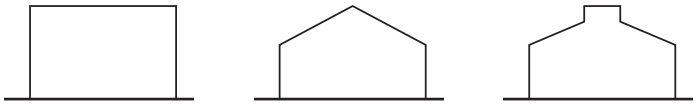
24%

5.2 Vernacular Building Forms

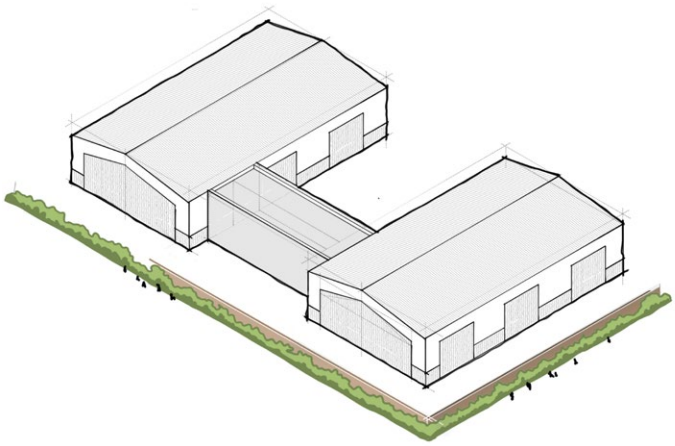
Concept Sketches

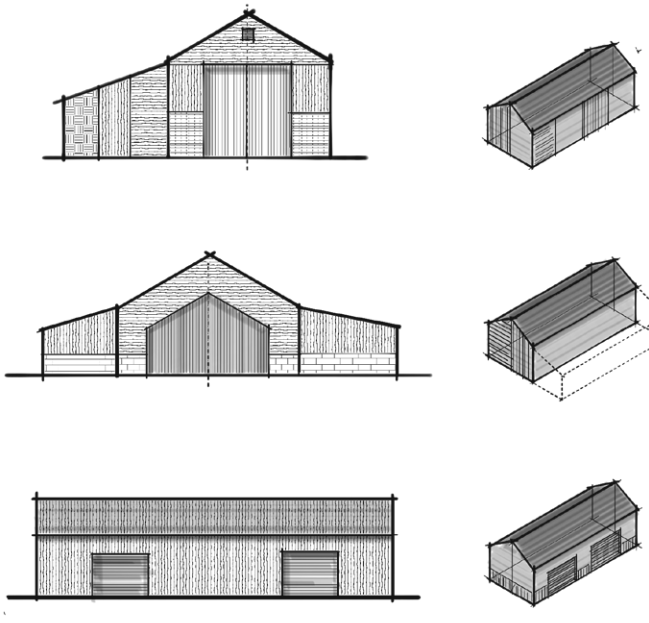
This is a small sample of the sketches that have been produced whilst exploring ways that the theme of vernacular form could be applied to the indicative building volumes of a typical engineering layout for the converter stations.

Common Forms



Most common forms. Extracted from local vernacular study.





Concept

Barn-Like Volume. A gabled or long-span structure inspired by traditional Norfolk Barns.

Precedent Example

Ademia Office Building (Top), Sainsbury Centre (Bottom), RAF Cardington (Right)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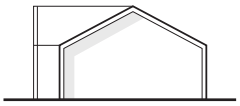

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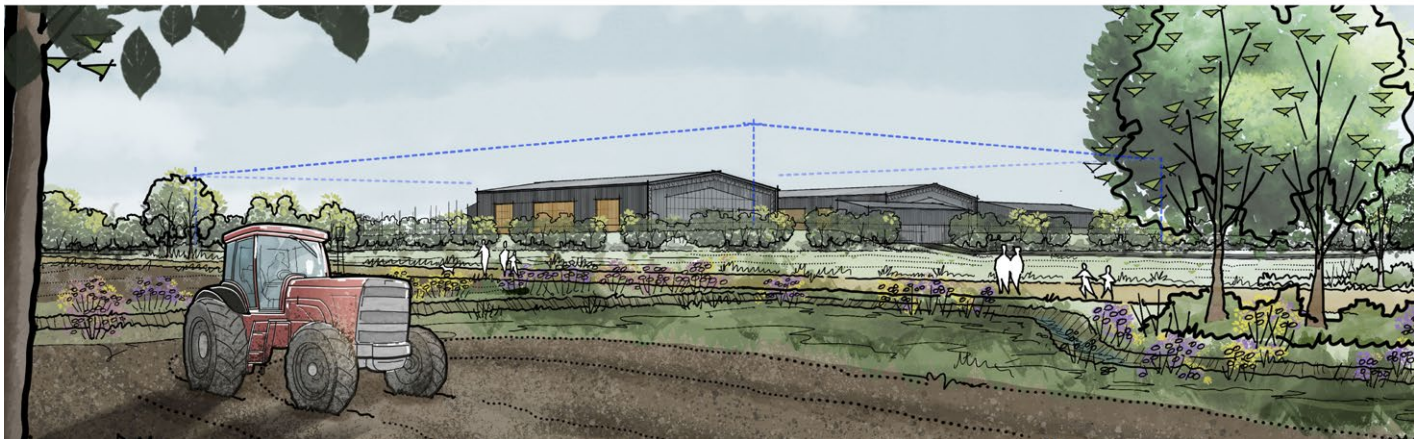
The vernacular building form strategy has informed a design approach which takes inspiration from the historic and modern agricultural, industrial, and infrastructure buildings in the area. The articulation of the gables can give the impression of an aircraft hangar in a similar way to the Sainsbury Centre in Norwich. The structural rhythm along the long sides can be reinforced by use of features such as rainwater pipes and dividing the cladding into bays with inset areas in different shades and colours. The cladding could be divided vertically with a lower plinth that addresses the ground but noting the preference to not use horizontal colour bands.

Illustrative elevation showing vernacular building form design approach

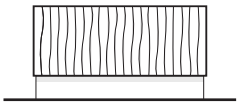
Illustrative eye level view showing vernacular building form design approach*



**distance from camera to near corner of fence approximately 300 m*

Next steps for this design approach

- Explore how elements - such as roof pitch, structural simplicity, and materiality - can be interpreted, while maintaining authenticity and relevance to the local context.
- Consider how different colours and cladding types could be combined to articulate the large elevations.
- Investigate material choices (e.g. corrugated metal) that reflect vernacular precedents and how different profiles can create textures to the roof and facades.
- Explore how key details such as eaves and gutter profiles can be incorporated into the concept and how repeating features such as rainwater downpipes can add rhythm to the elevations.



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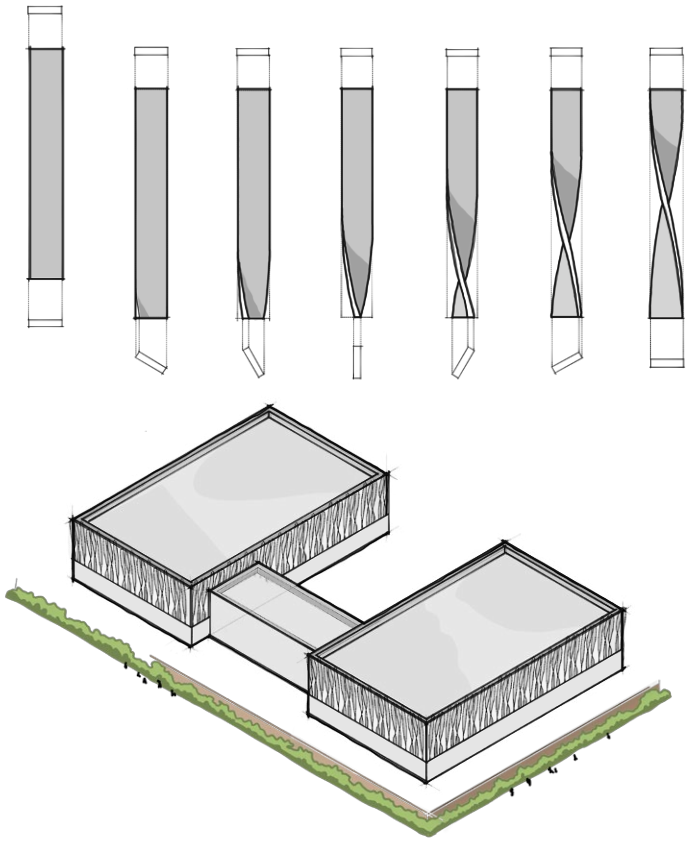
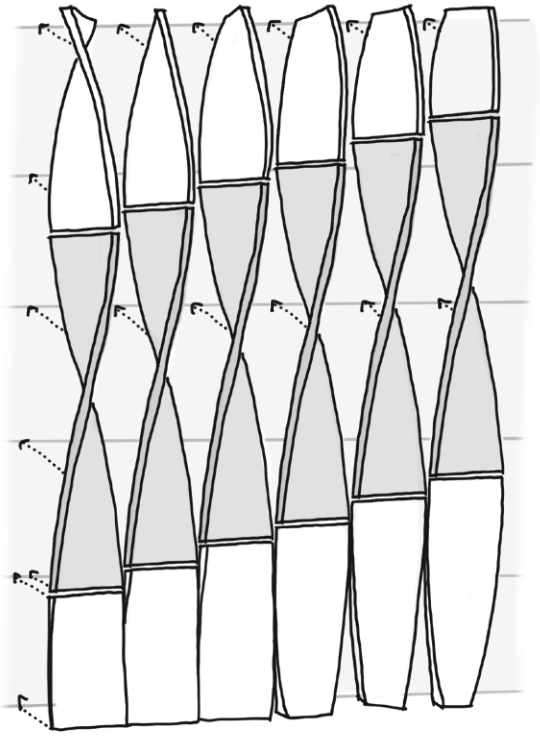
5.3 Enhanced Elevations

Concept Sketches

This is a small sample of the sketches that have been produced whilst exploring ways that the theme of enhanced cladding could be applied to the indicative building volumes of a typical engineering layout for the converter stations.





Concept

Agricultural & Industrial cultural components such as propellers and harvesters.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Precedent Example

Galerie Bruno Bischofberger *(Top),* Fachada *(Bottom), Victoria Gate Car Park (Right)*


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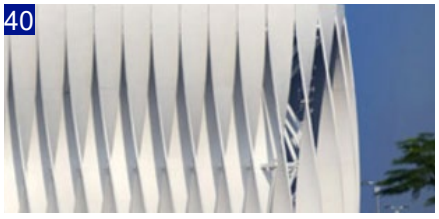
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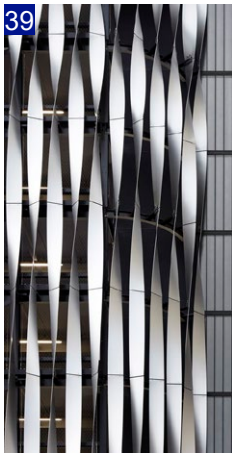
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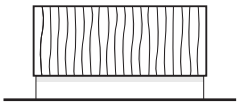

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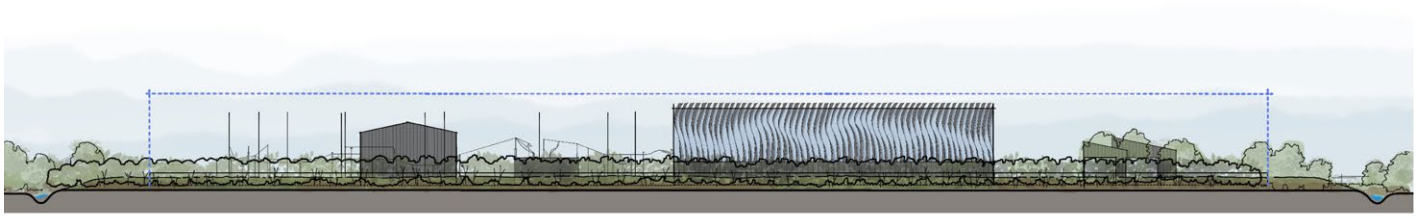
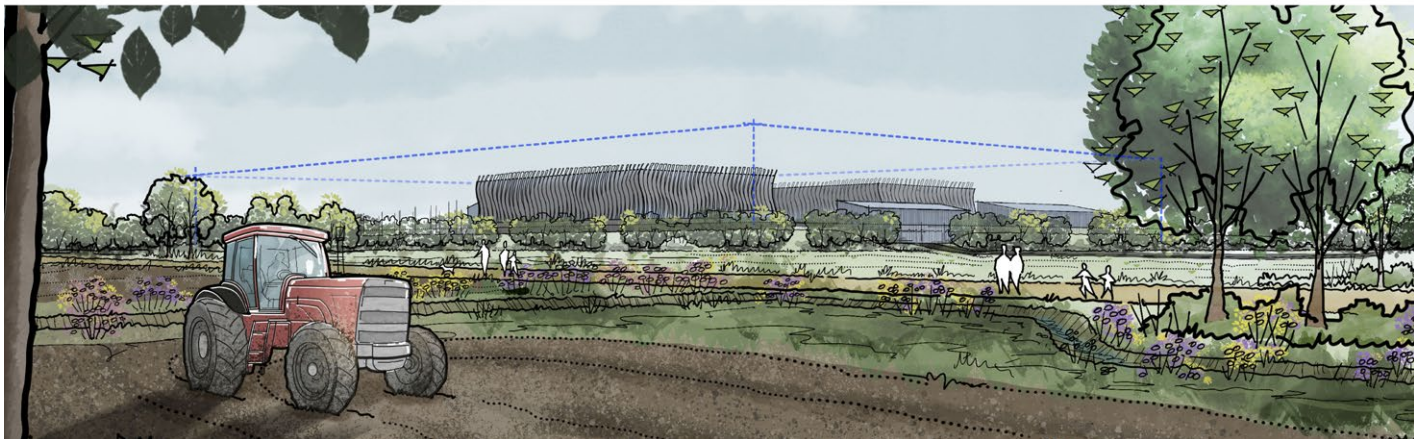
The enhanced elevation strategy could take inspiration from the cultural heritage of the area. An option that is being considered is to reference the second world war aviation history by adding twists to the facades that are reminiscent of propellor blades. This could give depth and varied shading to the elevations that would respond to changing lighting conditions. The way the twists relate to each other could be used to create variation and pattern as the design approach is developed.

Illustrative elevation showing enhanced elevations design approach



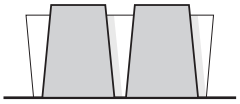
Illustrative eye level view showing enhanced elevations design approach*



**distance from camera to near corner of fence approximately 300 m*

Next steps for this design approach

- Refine the conceptual narrative, focusing on how dynamic forms (e.g. curved lines, aerodynamic profiles and other shapes) can be abstracted into cladding patterns or surface articulation.
- Investigate standardisation and repetition of cladding panels to ensure efficient manufacture, ease of installation, and means of attachment without compromising the waterproofing on the cladding.
- Consider the scale of the pattern and how it can be used to soften the appearance of the building forms rather than making the buildings overly distracting.
- Consider the form of the base building behind the enhanced cladding, particularly the roof.



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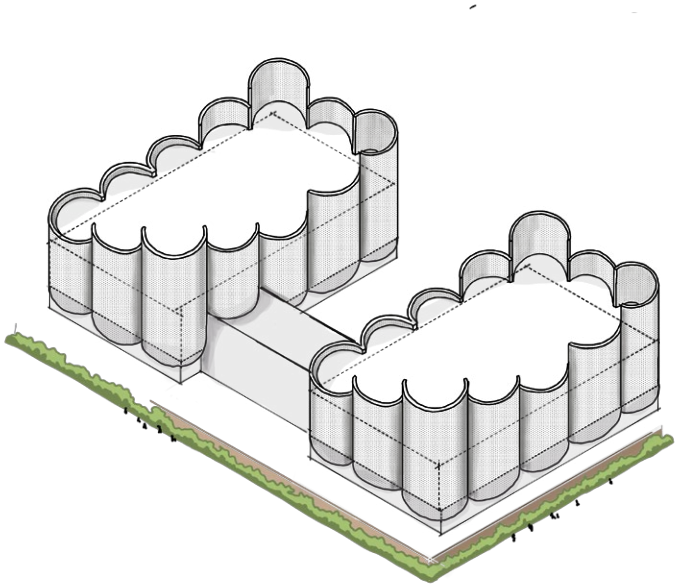
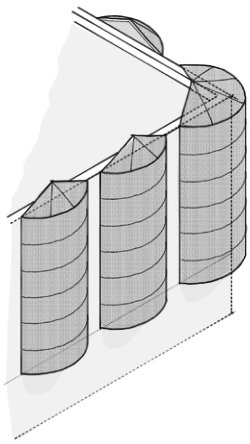
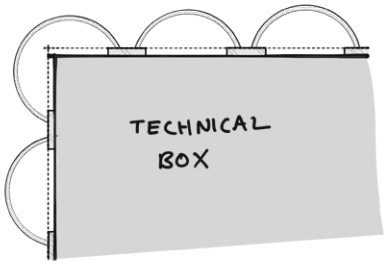
5.4 Layering and Softening Forms

Concept Sketches

This is a small sample of the sketches that have been produced whilst exploring ways that the theme of layering and softening forms could be applied to the indicative building volumes of a typical engineering layout for the converter stations.







Concept

Silo-Inspired Components, key structures in agricultural landscapes.

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Precedent Example

Art Gallery *(Top)*, Zeitz Mocca *(Bottom)*, *Bacalan Block (Right).*

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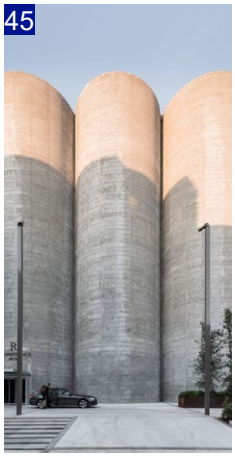

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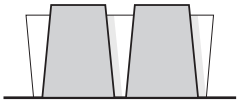

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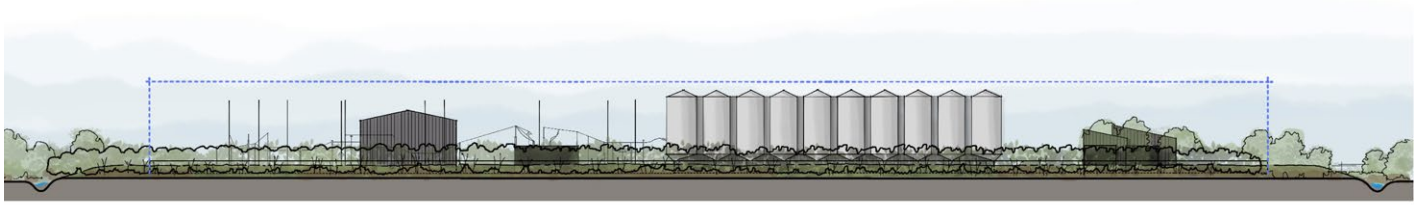
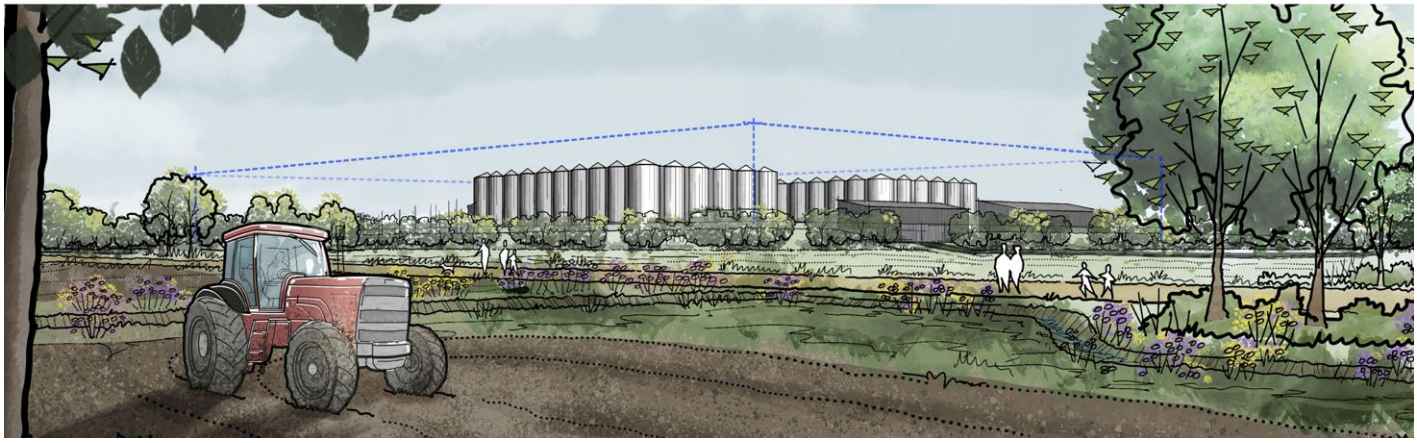
The layering and softening strategy is intended to divide the massing of these large buildings into smaller parts to reduce their visual bulk. Inspiration has been taken from the way that large silos are sometimes arranged in a cluster of cylinders. The rectangular volumes could be wrapped to create a pattern of rounded forms that have a soft shading across their curved surface. The conical tops of the silo forms could articulate the roofline, and the way the bases tend to be lifted off the ground, could be used to define a flat base that would be better suited to access doors.

Illustrative elevation showing layering and softening forms design approach



Illustrative eye level view showing layering and softening forms design approach*



**distance from camera to near corner of fence approximately 300 m*

Next steps for this design approach

- Develop how cylindrical silo forms can be composed and repeated to create a distinct external envelope that wraps the technical box, giving the impression of sculptural massing.
- Consider variation in scale, spacing, and detailing of these silo-inspired forms to avoid visual monotony and enhance architectural character, particularly the top and bottom.
- Consider the textures and colours that may work for the silo forms such as mesh.
- Investigate the means by which the expressed forms are attached to a more conventional shaped technical building without compromising the technical performance.

6. Emerging Landscape Response

6.1 Landscape Mitigation and Screening

As part of the statutory consultation process a **Preliminary Environmental Information Report** (PEIR) has been produced which covers the wider approach to the Projects including an EIA.

The emerging landscape and ecological mitigation proposals will seek to respond to The Fens Landscape Character as defined by Natural England. Lessons will be taken from other relevant projects that have been developed in a similar context. **Section 2** has set out some of the patterns that have been identified within the existing landscape context noting that it is very purposeful, a working landscape, and engineered to enable and protect this rural and mostly agricultural way of life.

These considerations, from the PEIR and EIA feed into the decisions regarding preferred siting locations for the converter stations. Responses to the chosen sites will follow design principles to be developed that could cover themes such as:

- Making use of existing tree and landscape screening wherever feasible.
- Align with the existing field pattern wherever feasible taking care to minimise the need for removal of existing landscape features.
- Minimise the land take from productive farmland where feasible and take care to avoid leaving small or inaccessible parcels of land.
- Design multi-functional landscapes that incorporate the engineering features and requirements into the landscape pattern.
- Create a variety of species-rich habitats to boost biodiversity and where feasible maintain and improve networks of habitats.
- Where feasible specify native species of trees and plants that are also well adapted to climate change.
- Create a setting for the proposed buildings and provide as much new screening as is reasonable, mitigating the visual impact of external equipment whilst taking into consideration the openness of the existing landscape character.
- Plan for advance planting, to maximise the screening benefit on completion, where it is feasible and can be planned around the temporary construction compounds and access requirements.
- Maintain, and enhance where feasible, the amenity value of the landscape with a focus on the PRoW network.

Showing Mitigation in the Converter Station Illustrations

The converter station illustrations shown in **Section 5** include artists impressions of the type of landscape mitigation scheme that could be developed. This is for the purposes of showing the buildings in a more representative setting. Where trees are shown these allow for approximately 15 years of growth. The potential for use of earth bunding has been included, however the scope for this will need to balanced with the impacts of importing material.

7. Next Steps

7.1 Working Towards a DCO Submission

Feedback generated through the statutory consultation will be used to inform the next stage of the design process. This will feed into the design related documents and processes that will be developed to support the DCO submission.

Developing a Set of Design Principles

This document will be developed through consultation with the Local Planning Authorities (LPAs) and other statutory stakeholders. They are likely to cover:

- Design Vision for the Projects - a short statement of intent in relation to placemaking, and defining the role of the design champion as the custodian of good design through to delivery.
- The Projects Design Principles - these could be aligned with guidance from the National Infrastructure Commission's Design Group[5] and will set out high-level principles that apply across the Projects.
- Site-Specific Design Principles - these could be defined for each area of above ground permanent infrastructure, structured in line with the National Model Design Code[6].

Developing a Design Approach Document

This document will track the evolution of the design approach as the Projects are developed up to submission. It would show how the approach has responded to feedback from each stage of consultation and engagement with LPAs and other stakeholders. It is likely to cover:

- Response to the Brief/Vision - defining where and why flexibility is required, and the design intent for placemaking and providing a coherent narrative that the Projects should follow.
- Design Process - set out how the design approach will be developed alongside the design principles and in response to feedback.
- Site Analysis - show how the constraints and opportunities inform the design approach and response to the context. What is included in this document is a small sample of this.
- Research - show how the design approach is informed by precedents; whether local projects that have responded to the context, or other converter stations that show how the technical constraints of the development type can be addressed.
- Design Response - show how adverse effects could be addressed, show design evolution in response to consultation exercises and design reviews.

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