Joint Substations Design Guide
Explainer and Feedback Form (Phase 2)

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The Phase 2 document does a good job of outlining the regulatory context of the project and the approach to design post-consent. It is important that the documents referenced (Design Vision, OLEMS/OLEMP) are clearly linked to ensure consistency in the final design. The timeline for the development and detailed design processes appears realistic, but stakeholders should be involved continuously to ensure alignment with their expectations.

It would be helpful to include more information on the long-term operational considerations post-construction, particularly related to maintenance and updates in the substation infrastructure.

1. LAYOUT

Phase 1 question: If it is possible to reduce the size of either substation compound, where do you feel the reduction area(s) should be?
SUMMARY OF FEEDBACK RECEIVED:
General preference for the size of the substation compounds to be reduced where possible – specifically their width.
How the Design Guide has changed as a result
Should a reduction in the AIS footprint be possible, the preferred approach is to reduce the width, allowing for additional planting along the immediate southern boundary. This could provide more flexibility to enhance screening to views from Normans Farm, Jenning's Farm, **Mulberry Lodge** and Ardleigh Road.
For more information, see Design Guide: Section 4 (Layout).

PHASE 2 FEEDBACK

The section emphasises the importance of minimising visual impact through coordination of infrastructure. It is essential to maintain the character of the rural landscape. Further engagement with the local community on potential PRoW enhancements could help ensure that the new layout aligns with local needs and adds value for residents. Visibility from properties in close proximity is paramount and maximum screening should be considered.

Mulberry Lodge should be added.

2. BUILT FORM

Phase 1 question: What are your views on the suggested approach to the design of buildings that would be located within the substation compounds?

SUMMARY OF FEEDBACK RECEIVED:
General preference for substation buildings to resemble agricultural buildings found in the local area and for buildings to be as low profile as possible. Overarching preference for substation buildings to integrate with the surrounding rural landscape in terms of cladding, materials and roof type. The majority of people stated that they would prefer pitched roofs rather than flat roofs so that substation buildings would more closely resemble agricultural buildings.

How the Design Guide has changed as a result
Further analysis of local agricultural structures has fed into the latest version of the Design Guide in order to provide more tailored guidance for built form. Dual pitch and mono pitch roofs are retained as options for substation buildings while flat roof and multiple pitches options have been discounted. There are further considerations added to the Design Guide providing optionality on how the larger buildings, which create longer elevations, could be broken up.

PHASE 2 FEEDBACK

It is crucial to ensure that the materials used are not only functional but also environmentally sensitive. It would be beneficial to explore more sustainable material options for the substations to align with broader sustainability goals. Additionally, the aesthetic impact of these materials in the rural setting should be addressed through consultations with the local community.

3. MATERIALS

Phase 1 question: What are your views on the suggested approaches to the materials for the buildings that would be located within the substation compounds?

SUMMARY OF FEEDBACK RECEIVED:
General preference for materials to be environmentally-friendly and to resemble local agricultural buildings as much as possible. Some people commented that agricultural buildings in the surrounding area are typically steel-framed and that metal cladding would therefore be the most appropriate construction method.

How the Design Guide has changed as a result
The Design Guide notes the preference for built form to echo local agricultural precedents and materials.
Design solutions are focused on those that can be achieved using steel structures and cladding materials.
Further information has been provided and local precedents explored within the Design Guide.

PHASE 2 FEEDBACK

Nothing further to add at present.

4. FENCING

Phase 1 question: Do you have a preference for the fencing types and colour options being considered for the secure boundary to the wider substation sites?

SUMMARY OF FEEDBACK RECEIVED:
The majority of people stated a preference for fencing to be shades of green or brown to blend into the rural landscape. General preference for palisade fencing to the secure boundary with some people calling for access points for hedgehogs and other small mammals.

How the Design Guide has changed as a result
Since the Design Guide was issued for Phase 1, the requirement for an in-depth security review has been identified, in line with emerging Department for Energy Security and Net Zero (DESNZ) guidance. This will be the primary consideration when determining the type and height of fencing to the secure compound perimeter. The preference for fencing in shades of green and brown is noted, and colour options are identified within the Design Guide.
For more information, see Design Guide: Section 5 (Design and Materials).
Plate 09: Palisade fencing. The use of 'standard' green (RAL 6005) contrasts with natural vegetation colours / Source: Oakdale.
Plate 10: Palisade fencing example, showing close tonal and colour relationship to the Winter landscape backdrop (RAL 100 30 20 Olive Green used in this example) / Source: LUC.

PHASE 2 FEEDBACK

It is difficult to comment until an in-depth security review has been identified, in line with emerging Department for Energy Security and Net Zero (DESNZ) guidance

5. FENCING

Phase 1 question: Do you have a preference of the fencing types being considered for the perimeter boundary to the wider substation sites?

SUMMARY OF FEEDBACK RECEIVED:
Questions were raised regarding which habitat areas required fencing, how fencing could influence how people use the area around the proposed substation sites, and how fencing could impact PRoWs. We received mixed feedback, with some people stating a preference for timber post and rail fencing. Most people asked for the fence to be set to the centre line of proposed hedge planting. The majority of people stated

a preference for fencing to be shades of green or brown, and of traditional countryside or agricultural style, to blend into the rural landscape.

How the Design Guide has changed as a result
Three types of fencing were suggested within the first draft of the Design Guide. Optionality in fencing type has since reduced due to a requirement by the Department for Food, Environment and Rural Affairs (Defra) and the need to establish a distinct physical boundary at specific locations. Two options for fence type remain: timber post and rail, which is preferred, and a timber post and mesh fence, which may be considered where appropriate. A maximum fence height of 1.2m is recommended. This is subject to an assessment of the risk to planting from grazing wildlife and adequate plant protection measures being put in place.
For more information, see Design Guide: Section 5 (Design and Materials).

PHASE 2 FEEDBACK

No further comments

6. SUSTAINABILITY

SUMMARY OF FEEDBACK RECEIVED:
There were calls for the projects to consider opportunities for innovation, including utilising green roofs, solar panels and multi-functional landscape buffers within the design. People also asked for sustainability to be considered as much as possible through substation design and the materials used.

How the Design Guide has changed as a result
We have included more information about how we have had regard to sustainability throughout the document, and we have included a dedicated section (Section 6) on sustainability, which includes more information on which options it is considered tenderers should explore in designing the substation. Please provide any general feedback you may have on changes made to the updated Design Guide in relation to this section.
For more information, see Design Guide: Section 6 (Sustainability).

PHASE 2 FEEDBACK

See Section 6 – Rainwater Harvesting needs to be considered. Any planting will not survive without watering.

7. COLOURS

Phase 1 question: Do you have a preference on the colours being considered for the buildings that would be located within the substation compounds?

SUMMARY OF FEEDBACK RECEIVED:
Mixed feedback, though generally people stated a preference for ‘winter landscape, mixed’ and ‘landscape subtle’ colour applications for the buildings. There was an

overarching preference for the chosen colours to blend into the rural local landscape and complement nearby agricultural buildings as far as possible. There was general consensus that the ‘electricity’ colour scheme is inappropriate and that colours should not be ‘vivid’ or ‘bold’.

How the Design Guide has changed as a result
The architectural colour palette has been updated to better capture the colours of local agricultural buildings. The colour palette for the substation buildings is drawn from a selection of baseline greys from the architectural palette, combined with subtle accent colours drawn from both local agricultural barns and subtle landscape colours.

PHASE 2 FEEDBACK –

The colour choices for the buildings and fencing are important for visual integration. It is beneficial to consider how these choices align with the surrounding environment.

There are no stripy buildings locally but the proposed irregular horizontal blocks of muted green/brown/grey colour does at least break up what will otherwise look like massive buildings if a block of single colour is used. We would want to ensure panels have a very matt finish so they aren’t reflective on brighter days. We would of course prefer no buildings at all but I think some variation in natural colour and with the addition of tree screening will be helpful.

8. COLOUR APPLICATION

Phase 1 question: Do you have a preference for the colour application methods being considered for buildings that would be located within the substation compounds?

SUMMARY OF FEEDBACK RECEIVED:
No clear majority view other than for the chosen application method to complement the local rural aesthetic as far as possible, and that colours and application methods that help to visually integrate the substation buildings within the landscape would be preferable.

How the Design Guide has changed as a result
The Design Guide recommends that colours to be used for the wall panels of the substation buildings create a visually engaging design that integrates with the local landscape context. The structure of the proposed design uses ‘grey’ colours sampled from local farm buildings as baseline colours for the wall panels of the substation buildings, including subtle accent colours from the landscape and architectural colour palettes. This will help to break up the massing and horizontal nature of the substation building forms, while also relating to the colour and form of blocks of vegetation in the rural landscsape. We are seeking your views on three worked examples, and whether we should retain all three as options or reduce this optionality further.

PHASE 2 FEEDBACK – see comments under Colours

9. LANDSCAPE AND ECOLOGY

Phase 1 question: What are your views on the planting and species proposed across the substation sites?

SUMMARY OF FEEDBACK RECEIVED:
Questions were raised regarding how landscape features such as hedgerows and shelterbelts will be monitored and maintained in the long-term, and how the projects' planting proposals interact with National Grid's Norwich to Tilbury Project proposals. There were calls for a greater focus on placemaking, ecology and recreation without compromising farming activities. There was a general preference for planting to include a mix of native species and to avoid species that typically suffer in dry conditions. Also calls for planting to be as mature as possible by the time the substations are built. Requests for the project to show consideration and alignment with the Essex Local Nature Recovery Strategy.

How the Design Guide has changed as a result
The Design Guide includes updated information regarding the proposed shelterbelts and hedgerows, including information about species mixes. It recommends that the proposed landscape features will allow for necessary, safe access and maintenance of landscape features, and the landscape and ecology proposals have been updated to reflect recent ditch survey alignments and relevant setbacks to allow room for access and maintenance.
All proposed species lists have been reviewed, and the climate resilience section recommends the selection of diverse native and locally appropriate species which are climate resilient, along with consideration of appropriate stock size and planting timing.
Recommendations for locations where advance planting may be appropriate have been included. The document has been updated to reflect its alignment with the Essex Local Nature Recovery Strategy, and include reference to adjacent projects to the site to illustrate intentions to align with these proposals. The final landscape proposals will come forward in the Landscape and Ecology Management Plan.

To consider when preparing your feedback
All detailed monitoring and maintenance plans, and final planting species lists, will be addressed within the respective projects' Landscape and Ecology Management Plan / Ecological Management Plan. The Design Guide has included a review of opportunities for public amenity in Section 4 (Recreation). You can respond to our approach to recreation use around the substation on question 10.

PHASE 2 FEEDBACK

It is important to ensure that invasive species are avoided, and the proposed vegetation supports local wildlife. Clear maintenance plans for these areas post-construction will be critical for ensuring long-term success.

There are mixed views on hedgerows - whilst this may result in poorer visibility in terms of road traffic, it will naturally result in slower speeds and more careful driving than if we end up with a straight, wide road with good visibility.

NF/FE should use local contractors for tree/hedge planting and ongoing maintenance as they will have better knowledge of local soils and environment etc and will have a vested interest in ensuring that trees/shrubs survive if the site is on their doorstep. We have contacted a local tree supplier (John Fryer) about a tree planting and maintenance scheme and they would be happy to get involved if local contractors could be used.

We understand the desire for instant screening by the use of mature trees/shrubs but the failure rate is likely to be high as the roots will not be sufficiently established to withstand drought or wind unless this can be carefully managed.

10. RECREATION

Phase 1 question: How do you currently use the area in and around the proposed substation sites? Are there opportunities to support how communities use the area, once the substations have been built?

SUMMARY OF FEEDBACK RECEIVED:
Feedback stated that the area around the proposed substation sites is well used by cyclists, walkers and horse riders. There were calls for proposals to facilitate and complement recreational use as far as possible. Some concerns were raised regarding how proposals could impact the safety of those who currently use the area recreationally.

How the Design Guide has changed as a result
The Design Guide has considered how to enhance countryside access for recreational users, identifying a potential footpath route through the site. Further discussions will be undertaken with Essex County Council, Tendring District Council and local parish councils to inform the proposals. Where possible, opportunities to provide managed access within the site will be considered.

To consider when preparing your feedback
• Do you have any views
• What provision within the site on the potential provision do you think would support of a path through the site local communities and including the proposed route, improve access? For example, and potential for other open off-road paths for walking, spaces? cycling or horse riding, or a recreational area with trees and natural landscape.
• Are there any particular routes in the wider area around the site that you use often which could be improved?
For example, clearer path markings or signage, safer crossings, or rest areas.

PHASE 2 FEEDBACK –

Illustration 8.18/8.19 shows Ardleigh Road running across a field – this is wrong.
Barn Lane is heavily used by walkers and horse riders doing a circulate route around Ardleigh Road, Grange Road and Barn Lane.

Little Bromley have joined the Parish Paths Partnership scheme. The Parish Paths Partnership is a community-based, volunteer-driven scheme, primarily funded by Essex County Council, aimed at maintaining, improving, and promoting local Public Rights of Way. Any proposals for new footpaths should be communicated through with the Parish Council.