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Dear Sir/Madam,

Weston Marsh to East Leicestershire Stage 2 Consultation under Section 42 of the Planning Act 2008.

Thank you for your email dated 8th September 2026, making Lincolnshire County Council (LCC) aware of your Stage 2 consultation and inviting LCC as a host authority to provide comments in respect of the Stage 2 consultation seeking feedback on the new route, construction proposals and feedback to better understand local considerations and opportunities.

LCC has reviewed the information provided and sets out the comments below in response. LCC's comments are primarily focused on aspects of the scheme that fall within the authority's administrative boundary. The Council previously responded to the WMEL Project Stage 1 Consultation (response dated 6 August 2025) and the Grimsby to Walpole project Stage 1 Consultation (response date 6 March 2024), Stage 2 Statutory Consultation (response date 29 August 2025) and 2025 Weston Marsh Targeted Consultation (response date 24 December 2025).

The comments set out in this response are provided on a without prejudice basis. Please note that LCC's responses to previous consultations remain valid and should be read alongside the additional comments contained within this letter.

As its starting point to this response, on 5 December 2023, LCC adopted an Energy Infrastructure Position Statement which set out the principles that should be applied in responding to NSIPs in Lincolnshire. A principal requirement of this position statement is that all new grid infrastructure required to connect energy development to the grid should be predicated on underground first, or on existing routes. LCC's position is that it does not and will not support any new overhead pylon lines which impact on the county and its vitally important landscapes and LCC should be prepared to explore with developers any new technologies such as smart grids which address the need for energy whilst being sensitive and suitable to the natural environment.

Context and National Policy

National Policy Statement EN-1 recognises that new electricity infrastructure will have to be built to replace output from retiring plants and to meet increased demand. EN-1 indicates that "given the changing nature of the energy landscape, we need a diverse mix of electricity infrastructure to come forward, so that we can deliver a secure, reliable, affordable, and net zero consistent system during the transition to 2050 for a wide range of demand, decarbonisation, and technology scenarios."

EN-1 also states that given the urgent need for new electricity infrastructure and the time it takes for electricity to move from design, conception to operation, there is an urgent need for new (and particularly low carbon) electricity projects to be brought forward as soon as possible, given the crucial role of electricity as the UK decarbonises its economy.

EN-1 defines Critical National Priority (CNP) infrastructure as nationally significant, low carbon infrastructure and includes: electricity grid infrastructure, all power lines in scope of EN-5 including network reinforcement and upgrade works, and associated infrastructure such as Substations.

The Government has asked the National Energy System Operator (NESO), a new body created under the Energy Act 2023, to produce a 'Strategic Spatial Energy Plan' (SSEP) by the end of 2026. The SSEP 'will assess the optimal locations, quantities, and types of energy infrastructure required, across a range of plausible futures, to meet future energy demand with the clean, affordable, and secure supply that we need'.

The purpose of the SSEP is not to make site-specific recommendations nor prescribe or authorise specific projects but is to offer a guide to spatial characteristics, and maps are expected to be produced. The key objectives of the UK's Clean Power 2030 Action Plan are to achieve a fully clean electricity system by 2030, reduce greenhouse gas emissions, and enhance energy security and affordability. This involves a significant shift to renewable energy sources and a reduction in reliance on fossil fuels. It recognises that the deployment of low carbon electricity infrastructure needs to be accelerated through reform of the existing legislative framework.

Set out below is the Council's key strategic response, which is accompanied by detailed comments covering a range of matters and, in relation to Landscape and Visual Impacts and considerations relating to the need case, is supported by detailed technical reports attached to this letter.

Overarching Strategic Comments

In very broad terms the Project proposed by National Grid is consistent with the recently published National Policy Statements (NPSs) EN-1; EN-3 and EN-5; s as they will provide "...a diverse mix of electricity infrastructure to come forward, so that we can deliver a secure, reliable, affordable, and net zero consistent system during the transition to 2050 for a wide range of demand, decarbonisation, and technology scenarios" (EN-1). National Policies (EN-5) support network reinforcement and upgrade works, and associated infrastructure such as Substations.

It is acknowledged that at the national level and based on the current Government's National Policy Statements the infrastructure proposed has a critical national priority (CNP) with a presumption in favour of consent.

The Council's position is that whilst the Government's objectives are set out in the National Policy Statements for this particular project, there are fundamental questions about the need and how this requirement is delivered. Whilst there is a national policy presumption for this grid infrastructure it is not at any cost and there is no clear evidence that Lincolnshire residents will experience any immediate benefits from this Project over and above residents nationwide, with the power flowing, according to NGET, to the Midlands and the South of England.

Therefore, while acknowledging the Government's view of a wider strategic need for energy security; providing more electricity to the Midlands and South of England; and the move away from fossil fuels, the proposal as set out does not bring any direct or immediate benefits to Lincolnshire in terms of providing energy to existing or planned homes and businesses. As currently set out, the Project would see energy passing through the County with no evidence that the electricity could be used in Lincolnshire by communities and businesses to provide resilience to the County's transmission network.

The County has significant planned housing and employment growth and as such consideration should be made by NGET as to how Lincolnshire could potentially benefit from any new electricity infrastructure in terms of clean energy supplies; and resilience of supply. NGET need to actively engage with LCC and other key stakeholders, including the distribution network operators (DNO), to explore how these projects could provide demonstrable strategic benefits for the County such as the WMEL A sub-station being used to distribute energy to local communities by committing to demonstrate a mechanism as to how a reasonable proportion of the energy passing through the County can directly benefit the communities of Lincolnshire.

Key Issues

Technical Review

Attached to this response is a detailed technical report produced by Hoirns Smart Energy Networks. The report evaluates NGET's network reinforcement proposals for the Weston Marsh to East Leicestershire overhead lines and pylons which review the need case for this project.

The need for the project has been quantified in the Strategic Options Report (SOR), and NESO's June 2026 update recommends the project, which NESO assesses as option LRN7. This review finds a genuine need at Walpole from 2033–34, and a B9 need that depends on how far B6 is reinforced. Both drive WMEL. What is not yet demonstrated is when each is triggered, and so whether a new 60 km 400 kV OHL is needed by 2033, later, or at all.

In terms of the need for the project the Council would be grateful to receive a response from NGET on the following points:-

- **Timing:** WMEL relieves both the Walpole outlet and B9. When does each first need reinforcement in NGET's analysis, and which one sets the 2033 in-service date?

- **Walpole outlet**: What overload does the SOR find after losing the Burwell or Necton circuits, and how much flow from Weston Marsh does it assume, with and without WMEL and EGL5? The 6,930 MW quoted is the rating of a double circuit, not the overload.

- **B9 capability**: Does the SOR's 18,288 MW include the existing Weston Marsh–Walpole line as well as the new Grimsby to Walpole line? What B9 capability does WMEL add?

- **Alternatives**: Have power flow control or EGL power-order reduction been tested, alone or staged with new build, as NGET's policy requires? If not, why not?

- **Forecast risk**: B9 forecasts have moved by up to 5,100 MW between ETYS editions. Has building WMEL for 2033 been compared with a staged approach on a regret basis?

Lincolnshire Fire and Rescue (LFR)

After reviewing the Stage 2 consultation documents, Lincolnshire Fire and Rescue (LFR) would request for an emergency response plan(s) to be developed and shared with LFR for the sub-stations for crew awareness and to facilitate the identification of risks; particularly for the WMEL A substation proposed to be located near Corby Glen.

This emergency response plan should include, but not be limited to:

- Clearly defined access and egress arrangements;
- On-site internal emergency response procedures; and
- Wider multi-agency response arrangements.

These details should incorporate relevant contact details, isolation points, and detailed information relating to substations, cable depths, and locations. Site access arrangements should also ensure compliance with Building Regulations, with particular reference to Approved Document B.

Where deemed necessary, LFR would also encourage joint site visits to enable internal and external emergency response arrangements to be fully understood and captured, to support effective operational planning and response.

Public Health

The Council welcomes the inclusion of a dedicated Health and Wellbeing chapter within the Draft Environmental Statement (ES) and notes the refinements made since Stage 1, including route amendments and more detailed proposals for pylons, substations, construction compounds and haul routes. The Council welcome the consideration given to reducing impacts on residential areas, environmental assets and local access routes.

As the ES and associated mitigation develop, Public Health would encourage that the following are addressed:

- **Integration of health impacts:** The Health and Wellbeing assessment should draw together relevant findings from other ES topics, including air quality, noise and vibration, traffic and transport, landscape and visual impacts, socioeconomics and recreation. Consideration should include the combined and prolonged effects of construction and operation on communities, rather than individual environmental impacts alone.
- **Mental health, wellbeing and perceived risk:** Mental wellbeing should be considered alongside physical health, including potential effects from construction disruption, landscape and visual change and anxiety associated with perceived risks from new electricity infrastructure. While LCC recognise the approach agreed through scoping in relation to physical EMF effects, potential anxiety or stress associated with perceived risk should remain a consideration.
- **Health inequalities:** The assessment should consider whether impacts could fall disproportionately on particular communities or population groups, including older people, children, disabled people, those with existing health conditions, people experiencing socioeconomic disadvantage and rural isolation. Mitigation should seek to avoid widening existing health inequalities.
- **Access, physical activity and community connectivity:** Construction traffic and disruption should not adversely affect access to healthcare, pharmacies, schools, care services and other community facilities. Opportunities for walking, wheeling, cycling, recreation and access to green/open space should also be maintained wherever possible, with safe and accessible alternatives provided where temporary disruption is unavoidable.
- **Cumulative effects:** Given the scale of other NSIPs and energy infrastructure development affecting Lincolnshire, the assessment should consider the cumulative health and wellbeing impacts on communities, particularly where construction programmes, traffic routes or geographical areas overlap.
- **Mitigation and monitoring:** Where adverse health and wellbeing effects are identified, appropriate mitigation should be clearly established and monitored. There should also be scope to review and strengthen mitigation where actual community impacts are greater than anticipated.

While recognising the wider strategic benefits of the Great Grid Upgrade, the Council encourages the Applicant to consider how communities hosting infrastructure or experiencing significant disruption can realise meaningful local health and wellbeing benefits. Engagement with affected communities should help identify priorities, which could include warm and healthy homes and energy affordability, active travel, green space or community infrastructure.

Overall, the final Health and Wellbeing assessment should provide an integrated consideration of physical health, mental wellbeing, health inequalities and cumulative impacts, supported by appropriate mitigation, monitoring and opportunities for local health benefit.

Agricultural Land (comments provided by Reading Agricultural Consultants (RAC) on behalf of the Council)

Overall, the stage 2 consultation documents contain limited reference to agricultural land and soils.

The assessment undertaken to date appears to follow the accepted methodologies, with the agricultural land and soil baselines properly assessed. It is acknowledged that the assessment will be further informed by detailed surveys, which will provide the evidence base necessary to assess potential impacts fully and identify appropriate mitigation measures.

The Outline Soil Management Plan (oSMP) remains largely unchanged from the previous consultation stage and continues to be generic in nature. It is recognised that the detailed design findings of forthcoming soil surveys will inform the development of this document, however, further site-specific detail should be provided when available to demonstrate how impacts on soil resources will be managed and mitigated.

Whilst the consultation documents state that pylon locations have been identified and will be further refined through discussions with landowners and farmers, there is limited information provided regarding the factors influencing individual pylon siting decisions. This could comprise a checklist of factors considered, and a summary of stakeholder engagement for each site. This would ensure the consultation is comprehensive and effective and would provide greater confidence that the consultations have been comprehensive in identifying and considering agricultural impacts.

Landscape and Visual (Comments provided by AAH Landscape Consultants on behalf of the Council)

The Council has commissioned AAH Landscape Consultants to undertake an independent technical review of the landscape and visual elements of National Grids WMEL Draft ES, with a focus on Chapter 6: Landscape and Chapter 7: Visual and their associated figures and appendices. This review has been undertaken with reference to Landscape Institute Technical Guidance Note (TGN) 1/20 Reviewing Landscape and Visual Impact Assessments (LVIAs) and Landscape and Visual Appraisals (LVAs), the Guidelines for Landscape and Visual Impact Assessment, Third Edition (GLVIA3, 2013), and relevant supporting guidance cited within Chapter 6 and Chapter 7 of the Draft ES. A full copy of the landscape review is attached to this consultation response, set out below is a summary of the report findings.

This review takes into account previous AAH comments provided on behalf of the Council, including AAH Technical Memorandum 01: Landscape and Visual Scoping Opinion (December 2025) and AAH Technical Memorandum 02: Visual Amenity: Initial Viewpoint Comments (April 2026), together with discussions held in subsequent Landscape and Visual Technical Working Group meetings and consultation with the Applicant's landscape team. Previous comments have been reviewed against the Draft ES to establish where matters have been addressed and where further clarification, assessment or refinement is required.

Overall, the Draft ES provides a comprehensive preliminary assessment of the landscape and visual effects of the Project, supported by an appropriate methodology and a substantial body of baseline information. The assessment identifies a considerable number of significant adverse visual effects across South Holland and South Kesteven, particularly where the proposed overhead line would be experienced at close range by residential and recreational receptors, and around the proposed WMEL-A Substation. The continued development of the design and further assessment work proposed for the final ES are acknowledged and welcomed.

AAH considers that further work is required to ensure that the geographical extent and significance of localised landscape and visual effects are adequately reflected in the final assessment, particularly where more substantial effects may be obscured by the overall conclusions for wider Landscape Character Areas. The final ES should also provide clearer justification for the assessment of landscape character within the open fen landscapes and around WMEL-A, including the influence of prominent towers, skylines and the increasing concentration of electrical infrastructure.

A key recommendation of this review is that the findings of the landscape and visual assessments should continue to inform the design as the Project progresses towards Decision Stage 2.5. Particular attention should be given to the alignment and positioning of towers around Surfleet, Stainfield, Grimsthorpe Castle and the approach to WMEL-A, including opportunities for further micrositing, alternative alignments and targeted undergrounding where these could help reduce significant effects. The findings of the RVAA should also inform this process, with further consideration given to properties around Cuckoo Lane, Beck Bank, Parson Grove and Stainfield, including those beyond the initial 150m study area where justified. Consideration should also be given to reducing the horizontal Limits of Deviation around particularly sensitive residential receptors.

The developing design of WMEL-A and its associated overhead line connections remain a particular concern. Further work is needed to establish the final arrangement of towers, gantries, conductors and connections into the substation, including whether alternative arrangements could reduce the overall concentration and prominence of infrastructure. The Council should have an opportunity to review these emerging options ahead of the design being finalised, particularly given the significant visual effects identified around Corby Glen, Burton-le-Coggles and the surrounding recreational routes. The potential for additional vegetation clearance associated with existing, proposed and reasonably foreseeable future connections should also be considered.

The final ES should be supported by updated/cumulative ZTVs, completed baseline photography and cumulative photomontages in addition to the agreed Type 4 photomontages, taking account of any changes to the design. Further clarity is also required on the scope of the RVAA, the assessment of sequential effects along recreational routes and the relationship between representative viewpoints and nearby residential properties. The final Design Approach Document should explain how the identified significant effects have informed the selected design, including the options considered and reasons for discounting further changes.

Further detail is required regarding the proposed landscape and ecological mitigation, including the extent of vegetation removal and reinstatement, site specific landscape mitigation plans, opportunities for early planting and the anticipated effectiveness of mitigation over time. The final Outline LEMP should establish appropriate maintenance and establishment periods, monitoring and replacement planting requirements, and long-term management responsibilities. Opportunities for additional off-site landscape enhancement and associated funding should also be explored with the relevant authorities, particularly where significant residual effects cannot be adequately reduced through changes to the design or on-site mitigation.

The cumulative assessment should also be developed further to consider the combined influence of Grimsby to Walpole, EGL 3 and 4, the proposed Weston Marsh Substation and other relevant NSIP and TCPA applications. This should include consideration of the overall concentration of infrastructure, rather than assessing WMEL alongside each individual scheme in isolation, together with the potential for overlapping construction activities. Cumulative photomontages should be provided from agreed viewpoints, particularly around Weston Marsh and the eastern end of the route, to illustrate how the different developments would be experienced together. The proposed viewpoints should be discussed with LCC through the TWGs before the photomontages are prepared.

AAH considers that the Draft ES provides an appropriate basis for the continued development of the Project. However, the matters identified within this Technical Memorandum should be addressed through further design refinement, technical engagement and the final ES, with sufficient supporting information to demonstrate how the Project has responded to the landscape and visual effects identified.

Finally, from a landscape and visual perspective the Council requests that design changes are considered at the following specific locations for the reasons set out below.

Surfleet – AECOM has identified Major Adverse (significant) operational visual effects at VP 1B.2 (Surfleet), VP 1B.5 (Cuckoo Lane) and VP 1B.8 (Macmillan Way west of Surfleet). There are also Moderate Adverse (significant) operational effects at VP 1B.3 (Crossgate), VP 1B.4 (Gosberton Cheal) and VP 1B.6 (Spalding Golf Course). Given the concentration of significant effects, the proximity to residential properties and the effects on the Macmillan Way, the Council request that NGET investigate targeted undergrounding through this section. In addition, a design change request covering pylons 7–14 should be investigated rather than looking at individual towers in isolation.

Beck Bank and Parson Grove – The Council also request that the properties around Beck Bank and Parson Grove should also be considered for a design change. AECOM has identified Major Adverse (significant) visual effects during both construction and operation at VP 1C.3 (Parsons Drove). Given the proximity of the proposed overhead line to residential properties and the significant effects already identified in this area, the Council consider there is justification for NGET to investigate targeted undergrounding of cables around pylons 26–29, or whether the alignment could be moved further away from the affected properties. The RVAA should help establish the effects on individual properties in more detail but the design changes should be investigated now.

Stainfield – AECOM has identified a Major Adverse (significant) operational visual effect at VP 2B.4 (Stainfield), with a Very High magnitude of change. There is also a Major Adverse (significant) operational effect at VP 2B.2 (Haconby), although this relates to a separate viewpoint farther east. It is requested that NGET move the alignment further away from the affected properties at Stainfield, looking to move the route further south as was originally proposed at Stage 1 consultation. The RVAA should also help establish whether further changes are warranted.

Grimsthorpe Castle – This is more about the relationship between the pylons and the surrounding landscape, particularly views from the Registered Park and Garden and the potential prominence of towers on the skyline. AECOM has assessed the operational effect at VP 2B.7 (Grimsthorpe Castle) as Minor Adverse (not significant), so the case here is different from the locations where significant effects have already been identified. There wasn't any photography available for this location in the Draft ES, but NGET indicated during the design review meeting on 14th October that an earlier iteration of the route had included a pylon in a prominent view from the castle. Request that NGET demonstrate how the alignment has evolved and whether further routeing or micrositing could reduce any remaining effects on important views.

WMEL-A / Corby Glen – Main concern here is the amount of infrastructure potentially coming together around the substation, particularly the towers, gantries and overhead line connections. AECOM has identified a Major Adverse (significant) operational visual effect at VP 2C.5 (Burton-le-Coggles), alongside Moderate Adverse (significant) operational effects at VP 2C.2 (Corby Glen, west of Mussons Close) and VP 2C.3 (Tanners' Lane, Corby Glen). These findings reinforce the need to consider the combined visual effects of the substation and associated overhead line connections, rather than the substation in isolation. NGET mentioned during the design review meeting on 14th October that consideration is being given to alternative arrangements and pylon routeing and gantry design at this location. The Council would be grateful to be kept informed and to contribute to any alternative options being considered at this location. To consider if the number of towers, overhead line crossings and overall prominence of the infrastructure can be reduced compared with what is currently proposed.

Traffic and Transport

At this stage, as the Local Lead Highways Authority (LLHA), the Council has no specific comments on the Traffic and Transport aspects of the proposals. The information presented within the consultation remains high-level, and the Council is continuing to engage with National Grid regarding the scope of the necessary assessments for Transport and Flood Risk. As these develop and the assessments are undertaken, the Council will be better placed to identify any potential impacts and any mitigation measures that may be required. The Council therefore reserves the right to provide further detailed comments as the project evolves and additional information is submitted.

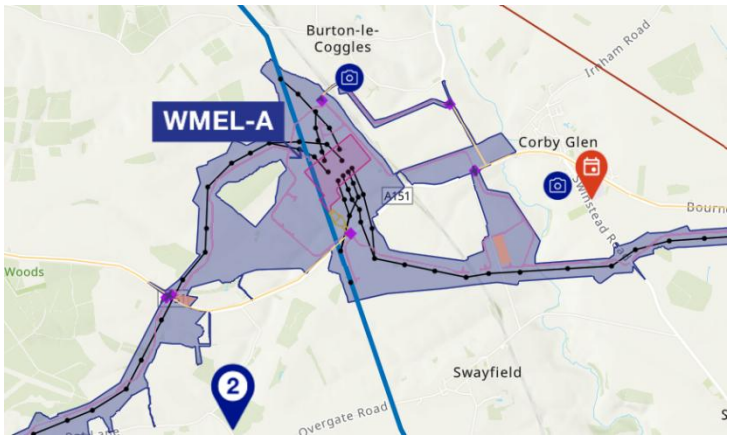
Public Rights of Way

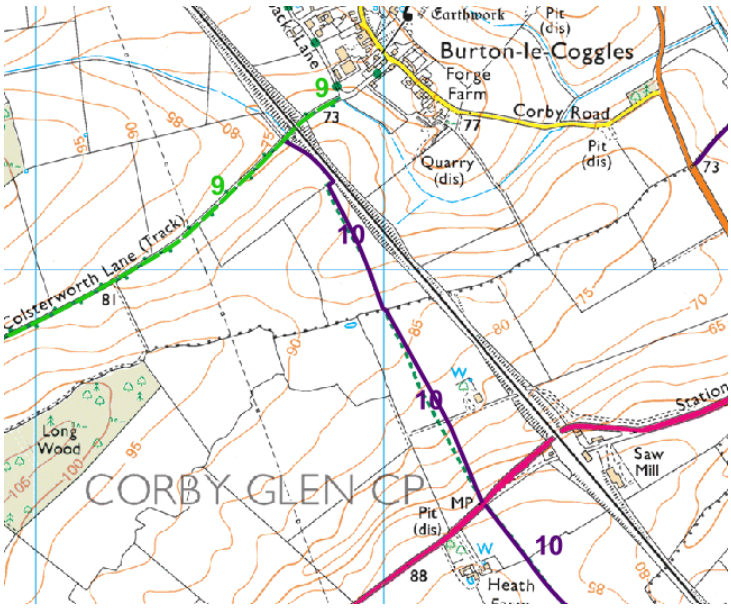
The proposed development, including the installation of pylons and associated infrastructure, will affect 22 Public Rights of Way (PRoW), including the Macmillan Way which runs along Pinchbeck PF 5. It is understood that this affected PRoW will require temporary closure for the duration of the construction works to ensure public safety and facilitate safe working practices.

The Council as the Lead Local Highway Authority should be consulted regarding any proposed temporary closures. No affected route should be closed, diverted, altered or otherwise disturbed without the prior consent and approval of the Lead Local Highway Authority.

It is also noted that the proposed WMEL-A substation will be positioned adjacent to the East Coast Main Line at Burton Coggles. This will necessitate the permanent diversion of Corby Glen PF 10 and Burton Coggles PF 10 onto a suitable alignment to accommodate the infrastructure.

National grid should continue to engage with the Council as the design progresses to ensure that both temporary and permanent impacts of the PRoW network are appropriately mitigated and that opportunities to maintain or enhance public areas, where feasible, are fully explored.





Flood Risk

At this stage, as the Local Lead Flood Authority (LLFA), the Council has no specific comments on the Flood Risk aspects of the proposals. The information presented within the consultation remains high-level, and the Council is continuing to engage with National Grid regarding the scope of the necessary assessments for Transport and Flood Risk. As these develop and the assessments are undertaken, the Council will be better placed to identify any potential impacts and any mitigation measures that may be required. The Council therefore reserves the right to provide further detailed comments as the project evolves and additional information is submitted.

Ecology

The Council has reviewed the following documents provided by the Applicant in relation to ecology:

- Chapter 1: Introduction
- Chapter 4: Description of the Project
- Appendix 4A: Draft Outline Code of Construction Practice
- Chapter 5: EIA Approach and Methodology and associated appendices
- Appendix 6C Draft Outline Landscape and Ecological Management Plan
- Chapter 8: Ecology and Biodiversity
- Appendix 8A: Habitats Regulations Assessment Stage 1: Screening Report
- Chapter 19: Cumulative Effects

Main overarching comments

The Applicant has undertaken a data search against records held in the Lincolnshire Environmental Records Centre hosted by the Greater Lincolnshire Nature Partnership and also used other online data resources. Sites protected or important at international, national and local levels appear to have been correctly identified. The Council agrees with the preliminary assessment of potential effects upon statutory and non-statutory sites in Lincolnshire. Details of appropriate mitigation for potential impacts on sensitive ecological sites will need to be provided in the Environmental Statement.

The Council is of the opinion that the scope of survey work carried out to date appears appropriate and, subject to the comments below, planned further and ongoing survey work also appears appropriate. The Council will be happy to provide further comments when the results of this ongoing and future survey work are available.

The Council welcomes the Applicant's commitment to the development of enhancement measures (8.7.24) for various species and species groups but advises that the applicant should ensure clarity around which measures are mitigation and which are genuine enhancement.

The delivery of a minimum of 10% BNG is mandatory for NSIPs. The Council notes and welcomes the Applicant's commitment to delivering a minimum of 10% BNG across all its construction projects (Chapter 8, 8.5.46). The Council encourages the Applicant to maximise opportunities for

the delivery of BNG and to seek to deliver significantly in excess of 10% BNG as well as other meaningful ecological enhancements, given the scale of the proposed development.

Little information is currently presented about the detail of any ecological enhancement including opportunities for delivering BNG. The Council would welcome the opportunity to provide further input into options for the delivery of BNG including the design and location of any new habitats to be established within the DCO boundary at the appropriate stage. The Council also encourages the Applicant to seek strategic opportunities to deliver BNG both with other National Grid projects in Lincolnshire and by working with other organisations and developers in the area.

The Greater Lincolnshire Local Nature Recovery Strategy (LNRS) was published in July 2026 and identifies and prioritises the most effective locations and actions for restoring, creating and connecting habitats across Greater Lincolnshire. The LNRS should be used to assign the strategic significance of post-development habitats.

Commitments to the delivery of BNG submitted alongside the DCO application should be sufficiently detailed to give certainty as to the level of BNG that will be delivered and follow guidance set out in the Biodiversity Gain Statement for Energy (June 2026) (NSIPs: biodiversity gain statement for energy - GOV.UK).

Any gains in biodiversity and arrangements for their management and monitoring will need to be appropriately secured in the DCO.

Habitat and species comments

- Botanical interest: The applicant should ensure that they have undertaken sufficiently detailed and appropriately timed botanical survey work to be confident that the presence of any scarce arable plant species occurring on the site is detected and to inform the calculation of the baseline biodiversity values.

- Woodland habitats: As identified in the DES, the project has potential to result in direct impacts on woodland habitats including Dunsby Wood SSSI in South Kesteven. The Applicant should ensure that the most up to date information including from field surveys is being used to assess impacts on woodland habitats.

- LCC advises that there may be opportunities to collaborate with the developing Roots of Kesteven project (https://www.lincolnshire.gov.uk/coast-countryside/roots-kesteven) to deliver ecological enhancements and mitigation. The project aims to celebrate, protect and enhance the rich woodland, natural and cultural heritage of the Kesteven area. The project covers approximately 344km^2 in south-east Lincolnshire, between Grantham and Bourne. The Project is currently in a two-year Scoping and Feasibility phase funded by the National Lottery Heritage Fund. The purpose of the Scoping and Feasibility phase is to produce a strong evidence base, build solid partnerships and develop a clear, shared long-term vision needed to support a future landscape-scale programme of work.

- Bats: LCC notes that bat surveys and tree assessments are ongoing in 2026 and 2027. The applicant should ensure that bat surveys are appropriately timed and detailed to ensure that impacts on bats can be properly assessed in the Environmental Statement.

- Breeding birds: LCC advises that the applicant should ensure that surveys are designed to ensure that species whose breeding activity may not necessarily be encompassed within the scope of a standard breeding bird survey (e.g. due to the timing of their breeding activity) are accurately recorded. Relevant species will include but may not be limited to barn owl and quail.

- LCC notes that surveys have detected the presence of populations of species listed on Schedule 1 of the Wildlife and Countryside Act in several sections. The presence of these species should be taken into account during construction to avoid offences potentially being committed.

- Non-breeding birds: LCC notes that surveys have detected the presence of a range of wintering bird species, which are likely to be associated with nearby designated sites. The applicant should ensure that sufficient data is available to understand the potential for impacts on wintering bird species including from collision risk and disturbance.

- Great crested newt (GCN): LCC notes that records of GCN have been identified within 250m of the order limits in Sections 2,3 and 4 and that surveys have been undertaken of ponds within or within 250m of the draft Order Limits during 2026. The Applicant has recognised that District Level Licensing (DLL) is not currently available in some areas of Lincolnshire and so a bespoke approach to GCN mitigation / compensation may need to be agreed with Natural England if impacts on the species are likely.

- Water vole: LCC notes that water vole surveys are ongoing in 2026 and 2027. LCC advises that there may be opportunities to collaborate with ongoing work overseen by the Greater Lincolnshire Nature Partnership's "Operation Water Vole" project to deliver any necessary mitigation.

- Terrestrial invertebrates: LCC notes the Applicant's proposed approach to terrestrial invertebrate surveys and agrees that this approach is appropriate. LCC advises that records obtained via record centre searches may be useful in aiding the design of ecological mitigation and enhancement measures to cater for the needs of any less common species.

- Invasive non-native plant species (INNPS): LCC notes and agrees with the Applicant's approach to INNPS surveys and that measures (B04) are included in the Draft Outline Code of Construction Practice to ensure that works do not inadvertently cause the spread of INNS.

Other Assessments

- Habitats Regulations Assessment (HRA): The Applicant has produced a Habitats Regulations Stage 1: Screening report at Appendix 8A. This document concludes it is not possible to rule out a Likely significant effect on interest features of several statutorily designated sites in the vicinity of the proposal. The Applicant will need to ensure that sufficient information has been gathered and submitted to allow a HRA to be undertaken.

- Cumulative effects: There are several development proposals of varying scales in the vicinity of this proposal, including other linear cable route developments. A detailed assessment of the cumulative impacts of these proposals on sensitive ecological receptors in the area should be undertaken in the Environmental Statement.

LCC's Infrastructure Ecologist will be happy to work with the Applicant, their consultants and other stakeholders throughout pre-application process to ensure that ecological elements of the application are properly addressed, and that scheme secures the maximum potential benefits for biodiversity.

Archaeology

The Council is broadly satisfied with the approach taken to date for the archaeological assessment process, which has been accompanied by good communication and dialogue with the relevant stakeholders involved.

The non-intrusive assessments are well underway, with the desk-based assessment and Aerial Imagery and Mapping assessment substantially complete and the geophysical survey underway. The archaeological trial trenching is due to commence in November and is anticipated to continue until February 2027, albeit there is concern over trenching within Lincolnshire during the winter months. The Council is awaiting the Written Scheme of Investigation for the forthcoming archaeological trenching and are working with the archaeological consultants to maximise the opportunities from the trench locations following receipt of the geophysical survey results. Overall, the assessment and survey work undertaken to date and forthcoming field evaluation will allow for the scheme design to be appropriately informed and the development of an adequate and fit for purpose mitigation strategy. The Council's concern remains over the timing of the trenching during the winter months, and the impact this will have on the quality of results and damage it may cause to archaeological deposits.

The Draft Environmental Statement Chapter 9 Cultural Heritage contains some sections where the Council would advise further discussions or modifications. The Council does not agree that buried archaeological remains can be scoped out of the decommissioning stage (Chapter 9 Table 9.1 and Scoping Opinion Appendix B). This is particularly the case where there is ground and soil reinstatement consisting of rotavating subsoils to a greater depth than the original disturbance and the addition of ammonium sulphates to soils to offset the acidity of the cement (Draft Outline Soil Management Plan paras 12A.9.3 and 12.10.3). There is potential for harm at decommissioning stage and therefore the Council would expect archaeological matters at decommissioning stage to be included in the remit of the Archaeological Clerk of Works (ACoW); whose role should be added to the list contained within the Draft Environmental Statement Appendix 4A Draft Outline Code of Construction Practice Table 4A.1 Illustrative key roles and responsibilities for the Project.

The table of guidance in paragraph 9.2.3 omits the reference to the Lincolnshire Archaeology Handbook, the formal reference document for undertaking archaeological work within Lincolnshire.

Paragraph 9.8.6 states that an Outline Written Scheme of Investigation will be produced detailing the mitigation strategy. This needs to be revised to consist of an Archaeological Management Plan, comprising the Written Schemes of Investigation, mitigation strategy and public archaeology and community engagement strategy. The naming is intentional to match other disciplines' Environmental Management Plans (Draft Environmental Statement Appendix 4A Draft Outline Code of Construction Practice: Table 4A.2 Environmental Control Plans).

The Council welcomes the recognition that there will be previously unrecorded archaeological activity along the route (Chapter 9 Cultural Heritage: para 9.8.4) but would point out that the magnitudes of impact are overly prescribing and fail to account for the variance of sensitivity or significance within an archaeological site, where not all elements are of the same value. A holistic approach allows more flexibility in the assessment methodology.

The Council looks forward to working with the applicant to develop appropriate and fit for purpose mitigation measures for inclusion in the AMP and WSIs, to be submitted as part of the ES (Chapter 9 Cultural Heritage: para 9.8.6). The Council would point out that sufficient and proportionate archaeological evaluation is required within areas of ground impact to enable understanding of the significance of the archaeological resource to be impacted and the development of the mitigation required by NPPF, EIA Regulations and National Policy Statement EN-1, which states "*The applicant should ensure that the extent of the impact of the proposed development on the significance of any heritage assets affected can be adequately understood from the application and supporting documents"* (EN1 para 5.9.14) and the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 which states *"The EIA must identify, describe and assess in an appropriate manner…the direct and indirect significant impacts of the proposed development on…material assets, cultural heritage and the landscape."* (Regulation 5 (2d)).

The Council disagree with the level of geoarchaeological works proposed (Chapter 9 Cultural Heritage: para 9.10.1). A comprehensive programme of geoarchaeological survey is an essential strand of the assessment process, incorporating information unobtainable by other means. This data set is invaluable within Lincolnshire and will allow a much greater understanding of the archaeological potential, likely significance and mitigation options.

The Council are pleased with the bespoke GIS system that has been created for the geophysical survey and trenching layout. The integration of different strands of data on this platform will be particularly useful in managing and understanding the archaeological assessment and impacts.

Overall, there needs to be greater communication between disciplines, ensuring that all activities that have the potential to cause impacts are identified and considered in the assessment. We have identified a number of activities in other discipline chapters or management plans that have the potential for cross-discipline impacts.

The Draft Environmental Statement Appendix 4A Draft Outline Code of Construction Practice contains several important commitments and requirements that the scheme will follow. There are some omissions, like the role of the ACoW, which should be included, particularly Table 4A.1 Illustrative key roles and responsibilities for the Project. It is currently covered under the broad category of '*Technical specialist advisors*'. The ACoW should also be referenced in all other relevant management plans. The Outline Written Scheme of Investigation (Table 4A.2

Environmental Control Plans and Table 4A.3 Control and management measures GG07) reference needs amending as per our comments above.

The progress and results of the archaeological fieldwork should be included within GG27 (Table 4A.3 Control and management measures). Archaeological finds and work generates great public interest and the timely provision of a reasonable level of information to the local community members and those impacted by the works is an important public benefit of the work.

Within Table 4A.3 Control and management measures GG05, the Council recommends that archaeological remains and finds are included in the list of topics. This should include a protocol for unexpected archaeological discoveries and contact details for the ACoW.

The Council agrees with much of Table 4A.3 Control and management measures HH01 and HH02. The inclusion of the role of ACoW will be invaluable in managing the on-site archaeological matters during the construction phase and, as appropriate, operational and decommissioning phases. Where 'Areas of archaeological preservation, or where archaeological work is planned, will be demarcated using appropriate fencing and signage to prevent unintentional damage' (Table 4A.3 Control and management measures HH01). This fencing should be erected for the duration of the project where areas of preservation have been identified, to ensure no accidental harm occurs.

The Council would welcome further details regarding the location of the 'use and maintenance of temporary lagoons, tanks, bunds, silt fences or silt screens as required in accordance with an approved site-specific erosion and sediment control plan' (Table 4A.3 Control and management measures W02). Lagoons may in particular have archaeological impacts.

The ACoW should also be contacted upon the discovery of bones (Table 4A.3 Control and management measures AS06). It is difficult to discern archaeological and modern skeletal material, and indeed animal and human skeletal material, and the ACoW may be best placed for a rapid assessment on the discovery given their permanent on-site role during construction.

Sections CC03 and CC04 regarding extreme weather conditions need to apply to archaeologists undertaking field work (Table 4A.3 Control and management measures). Given the evaluation trenching is proposed for November-February, poor weather conditions are much more likely during this period and suitable welfare must be provided and where necessary, fieldwork halted should conditions warrant this. Wet or cold weather can impact both archaeological remains and the archaeologists undertaking the work.

The Draft Environmental Statement Appendix 6C Draft Outline Landscape and Ecological Management Plan overarching objective to '*promote the conservation, protection and improvement of the physical, natural and historic environment within the draft Order Limits and setting*' is a statement the Council wholeheartedly agrees with. This objective should be set out across all the scheme management plans, not just the LEMP and archaeological management plans.

The Council would require further clarification to be provided to the archaeological consultants on the location of any woodland creation and integrated drainage solutions and attenuation ponds associated with the wider native scrub planting across the WEML A and B substations

(Draft Environmental Statement Appendix 6C Draft Outline Landscape and Ecological Management Plan para 6C.5.2).

The Council has concerns regarding some elements of the Draft Environmental Statement Appendix 12A Draft Outline Soil Management Plan (DOSMP). The ACOW should be included in Table 12A.1 Illustrative key roles and responsibilities for implementing the SMP. Soil management activities will have potential for impact on below ground archaeological remains and the ACoW should have a supervisory role here to identify potential actions that may cause harm or where works are located in areas of known archaeological activity or areas where archaeological evaluation has not occurred.

The Council are pleased to see archaeological soil stripping and toothless buckets covered in the DOSMP in para 12A.7.3 and 12A.7.4. Request that archaeological groundwork is included when assessing soil moisture conditions (Section 12A.6). Soil movement or plant movement for archaeological works when ground conditions are poor should be avoided. Not only can working during these conditions be harmful to the soils, but it can also be harmful to the archaeological deposits, particularly plant movement and soil stripping.

The DOSMP contains requirements that '*As a broad guide planning of the construction works should take this into consideration and seek to undertake minimal traversing across the site and soil handling during the period early December to early April and/or to develop appropriate procedures to do so such as the use of matting*' (para 12A.8.3). Given the Council's advice to avoid archaeological groundwork in Lincolnshire during the winter and this statement in the DOSMP, question why the archaeological evaluation trenching is planned to start in November and run through to the end of February/March?

Soil stabilisation and decompaction are covered in the DOSMP, sections 12A.9.3 '*For soil stabilisation the subsoils are typically rotavated, towed by agricultural machinery to a depth of approximately 300 mm incorporating a binder (typically containing cement*' and 12.10.3 '*Stabilised soils need preparatory work as part of reinstatement. The stone layer should be first removed to prevent contamination of the subsoils. The binder will typically have resulted in elevated soil pH, to be confirmed by testing. Elevated pH should be balanced, before any physical reinstatement, with a soil amendment (such as ammonium sulphate). A tractor towed winged tine should be drawn to alleviate compaction prior to rotavating to pulverise to 100 mm below the 300 mm deep cementitious layer to alleviate compaction. Soil samples can then be taken to help inform future restoration actions*'. The rotavating of subsoils to a depth of 300-400mm may impact archaeological remains, if present and any areas where this is proposed should be subject to archaeological evaluation trenching in advance of any subsoiling. The Council also have concerns over the addition of cement and ammonium sulphate to soils and the potential for contamination of archaeological remains through leeching and percolation and require additional information on the potential effects.

The Council would also request further information on the proposed soil ripping/subsoiling (DOSMP para 12A12.5 to 12A.12.12) and advise that where this is proposed that archaeological impacts are factored into the consideration.

The Council look forward to the publication of Construction Environmental Management Plan (CEMP) and ensuring that the archaeological management requirements are embedded within the plan. The Council is particularly keen on viewing and contributing to the CEMP and other management plans to ensure activities which may result in harm to archaeological remains have been identified and appropriately considered once the designs have progressed sufficiently for site-specific impacts to be assessed.

Built Heritage

The Council note that there are a number of viewpoints omitted from the assessment, in the Draft Environmental Statement Chapter 7 Figures (2 of 2), which has hindered the effective review and assessment of adequacy of the Stage 2 Consultation documents. This should be rectified at the earliest opportunity and provided to the Council for consideration and further comment.

The Council has concerns regarding the ascribed magnitude of change for a number of designated sites within the construction and operational phase assessments, although we do note that the route selection has now removed potential impacts to the Castle Bytham Scheduled Monument and the Listed Woolsthorpe Manor site, alleviating our earlier concerns for these sites.

The Council note that Wykeham Chapel, a Scheduled Monument containing one Grade I Listed and two Grade II Listed Buildings, is not covered within Chapter 9 Cultural Heritage and within the Chapter 9 Appendix 9C Heritage Impact Assessment Screening, it concludes that due to vegetation screening, it will not be impacted. There is no consideration of the seasonal nature of the foliage, which will mean that the screening will only be in place for parts of the year. In addition, there is no mention of the cluster of designated sites here within Chapter 6 Landscape or Chapter 7 Visual and no consideration within Chapter 19 Cumulative Effects. This latter omission is particularly concerning, given the interaction of Western Marsh to East Leicestershire, Grimsby to Walpole, both OHL schemes part of the National Grid Great Upgrade and the Meridian Solar Farm, which is proposing to connect to the Western Marsh substation using OHL. The Council would strongly urge NGET to reconsider the construction, operational and cumulative assessments as regards Wykeham Chapel in the full ES.

The assessment in Chapter 9 for Newhall Scheduled Monument states that the “proposed overhead line and associated towers would be highly visible from the asset and would also be apparent in views towards the asset from the north” (Section 9.8.15) yet concludes the magnitude of impact would be small. The assessment omits the fact that the OHL will bisect the two moated Scheduled Monuments of Rigbolt (also a Grade II Listed Building) and Newhall, changing their setting and how they are appreciated, both during the construction and operational phases. The Council request further consideration is given to the impacts on this group of Scheduled Monuments and the impact on their shared significance.

With regards to Grimsthorpe Castle, the boundary of the RPG from the closest tower, WMEL73, is approximately 0.76 and the distance between the tower and the Grade I Listed Grimsthorpe Castle is approximately 1.9km. In particular, the elevated upper viewpoints from the castle may be significantly impacted. The key view along North Avenue, a designed viewpoint and access to the entire site, is directly aligned towards the WMEL73 OHL tower. It is noted in Chapter 9 that

there is an extant OHL crossing closer to Grimsthorpe. However, the towers for this are not visible from North Avenue, whilst WMEL73 tower will be directly in line. The Council request the minor magnitude of impact is revisited and the appropriate photomontage made available to review. In respect of Grimsthorpe these comments for built heritage should be considered alongside the design change request requested for this section of the route within the Landscape and Visual impact section of this response.

The assessment has scoped out some non-designated post-medieval farmsteads, fenland drainage systems and ridge and furrow cultivation earthworks (Chapter 9 Cultural Heritage section 9.5.32 and Appendix 9C Heritage Impact Assessment Screening section 9.C.1.2). Although the issue raised was regarding access to heritage assets during the operational phase, the Inspectorate's response in the Scoping Response states "The ES should assess impacts to heritage assets during operation from all permanent infrastructure, including pylons and substations, where significant effects are likely, or information demonstrating agreement with the relevant consultation bodies that there would not be a likely significant effect." (EN0210007-000022-Scoping Opinion.pdf). The Council disagree that the applicant has adequately demonstrated there would not be any likelihood of significant effect and therefore, we would advise that impacts on these categories of non-designated heritage assets are fully reinstated into the assessment. The farmhouses, drainage systems and ridge and furrow are important assets within the Lincolnshire landscape and historic character areas and contribute to the significance.

The collective value of asset types needs to be consistently considered, as per the Inspectorate's Scoping Response (Ibid) and in our earlier consultation responses. There is also some inconsistency in assessing buried archaeological remains. The report identifies the potential Bronze Age barrows or ring ditches at Elsthorpe Grange, Edenham and north east of Haconby village (Chapter 9 Cultural Heritage section 9.8.20) as having a setting, yet most other types of buried archaeological remains have no setting that contributes to their significance. Although it is accepted that barrows would have been placed in significant locations, this does not necessarily lead to other types of buried archaeology having no setting value. Not every archaeological site will derive significance from its setting but each site should be assessed individually.

There is no assessment of the impact on the wider historic landscape character. This should be undertaken in the full Environment Statement. The need for an effective assessment of significance and impact on the Lincolnshire fenlands and limestone uplands and this has been raised in previous comments on the scheme so it is disappointing to see the lack of any such assessment to date. The assessment needs to consider impacts from this scheme and cumulative impacts from multiple other projects in this area,

Socioeconomics

The Council request that the broad information regarding occupancy rates in overnight accommodation included within Table 16.13 is used with caution. While the data indicates an occupancy rate of 83% at peak demand in the East Midlands region, there will be local variations. In particular, within Lincolnshire peak occupation is often higher, and is likely to also face

pressures from the cumulative needs of other NSIPs within the County all heading for construction for a similar period of time.

The Council also notes that conversations regarding green spaces are ongoing.

While an estimated figure of construction employees is given in paragraph 16.8.3, it is noted that the applicant is still to undertake more detailed assessment. The results of this assessment, and distribution of the workforce, will be essential to establish the impacts on the local area and their severity. It would also be helpful for the information provided in paragraphs 16.8.5 - 16.8.8 to be broken down by district, again, due to a likely variation in accommodation capacity/vacancy rates between areas, as well as differing cumulative impacts from other NSIPs and local events.

The Council has significant concerns regarding the potential cumulative impact of projects that are likely to converge on the Weston Marsh area and connect into the proposed new substations. Whilst the Council acknowledges that Chapter 19 of the ES addresses the cumulative impacts of schemes, the impact in this area on non-strategic attractions has the potential to be significant. Impacts are likely to be direct, but also through the changing perceptions of the area. For example, Baytree Garden Centre will have direct sight lines to Weston Marsh, while any visitors arriving at either Baytree or Springfields Outlet and Gardens along the A16 from the north will have to pass the proposed substations and the various overhead cables connecting in as they approach Spalding. It should also be noted that at this point, the A16 is elevated slightly from the land to the east allowing views across Weston Marsh.

In relation to paragraphs 16.8.27 – 16.8.29, the Council would like to make the applicant aware that both the South Kesteven Local Plan, and South East Lincolnshire Local Plan are under review.

In response to Table 16.22 (rows 1-3), the Council wants to highlight that the economy, visitor attractions and visitor accommodation are intrinsically linked. Within Lincolnshire, the potential for cumulative impacts in addition to the project impacts are significant. Therefore, the Council does not consider the likely effect of 'not significant' as appropriate or correct. There is a real prospect of the increase in jobs through construction to be counteracted by a decrease in jobs within the visitor economy. While not measurable, the changing perceptions of the County as a place to visit could have a noticeable impact on both visitor accommodation and the visitor economy, especially when combined.

Finally, the Council would suggest that within the figures for Chapter 16, there are a large number of receptors that have not been identified. These include Parish Churches, historical/cultural attractions, ancient woodland (although this may be picked up in Chapter 6) plus 'destination' retail offerings at Baytree Garden Centre and Springfields Outlet and Gardens.

In addition, the Council reiterate comments made during the Scoping report in November 2025. These are outlined below:

The Council welcomes the commitment to consult with a range of non-statutory consultees in the development of this work. It is recommended that this list includes local skills providers, both public and voluntary, and also Community Services. These may include Boston College, Grantham College and Stamford College all within Lincolnshire.

The Council would like to discuss with NGET the potential for how local communities (incl. Lincolnshire) can benefit from this development in terms of local energy supply. The Study Area (c.16.4) is evidenced to have a significant shortage of energy supply, restricting existing and potential businesses from achieving their potential growth, and limiting and impacting on the decarbonisation of these businesses. Whilst the Council understands that this development will not impact the local distribution electricity network, we expect the EIA to detail how mitigation from the negative impacts felt by the business and residential community will include benefit in the power that these communities receive. This is a local and strategic priority. The Council are happy to have further conversations with NGET about Community Benefit Agreements that can support delivery of this mitigation. In addition, the Council request the securing of employment benefits, skills and training via Section 106 obligations using local colleges by funded courses.

Table 16.5 and Image 16.4 do not show the differences between the local authority areas that the project will be located in. It is likely that there will be notable differences in economic activity and qualification attainment levels between the different authority areas, more detailed data would identify those areas most likely to have skills gaps and where appropriate funding could be best placed.

County Farms

Executive Summary

The Council raises concern over the proposed route where it would cause avoidable loss of Best and Most Versatile agricultural land, materially disrupt County Farms holdings or compromise soil and drainage systems.

Impact on Best and Most Versatile agricultural land and food production

The Draft Environmental Statement reference EN0210007 dated August 2026 ("DES") states at paragraph 12.6.4 "Agricultural Land Classification" that "The predictive ALC grade identifies that all land in Section 1 is BMV land. It is dominated by Grade 1 land with areas of Grade 2 and Subgrade 3a land".

In Section 1 of the DES, all agricultural land is identified as BMV, including 258.9 ha of Grade 1 land, 31.78 ha of Grade 2 land and 65.9 ha of Subgrade 3a land (paragraph 12.6.4 and Table 12.8). Section 2 includes 107.3 ha of Grade 1 land and 474.6 ha of Subgrade 3a land (Table 12.10). Sections 3 and 5 also contain substantial areas of Grade 2 and Subgrade 3a land (Tables 12.12 and 12.16).

The route proposed in the consultation crosses land classified as "Best and Most Versatile" (BMV) agricultural land. This includes land owned by the Council as part of the County Farms Estate. This route includes highly productive agricultural land, and the proposals to construct pylons on this route would permanently prevent areas of this land from being used for agricultural purposes. If the scheme were to proceed as set out in the consultation, this would cause the loss of highly productive food producing agricultural land. The guidance issued by Natural England (https://www.gov.uk/government/publications/agricultural-land-assess-proposals-for-development/guide-to-assessing-development-proposals-on-agricultural-land) highlights

several government policies and legislation relevant to development proposals that affect agricultural land and soils. The policies and legislation aim to protect BMV agricultural land from significant, inappropriate or unsustainable development proposals. NGET are requested to set out how this has been taken into account in the project.

The 25-Year Environment Plan "A Green Future: Our 25 Year Plan to Improve the Environment" (see: https://www.gov.uk/government/publications/25-year-environment-plan) sets out the government's 25-year plan to improve the health of the environment by using natural resources more sustainably and efficiently. It plans to protect the best agricultural land. NGET are requested to set out how this has been taken into account in the project.

The National Planning Policy Framework at section 15 "Conserving and enhancing the natural environment" states "*Where significant development of agricultural land is demonstrated to be necessary, areas of poorer quality land should be preferred to those of a higher quality.*" NGET are requested to explain how this has been taken into account in the project.

The current assessment in the DES relies on predictive ALC mapping. Detailed ALC and soil surveys for the substation sites and areas where tower micro-siting could avoid BMV land are not yet available and are scheduled for later in 2026 and 2027 (paragraphs 12.5.8 to 12.5.10). These surveys should be completed before the route and permanent infrastructure are fixed.

The routing of the project should follow the NPPF guidance. As a first step, NGET must demonstrate that significant development of agricultural land is necessary. If that necessity is demonstrated, the route should, wherever practicable, cross areas of poorer-quality land rather than higher-quality land. The project would disrupt agricultural use during construction and could reduce the land's future productivity through soil damage, compaction, drainage disruption and constraints on cultivation around permanent infrastructure. If the scheme proceeds as proposed, it could therefore cause both temporary disruption and lasting damage to highly productive food-producing land.

There are also potential adverse impacts from dust or soils blowing from any construction working area or soil storage areas on to crops growing on nearby land. Where high value field vegetable crops are grown this could impact the quality of the crops, rendering them unmarketable.

NGET should demonstrate:

1. why the development cannot reasonably be located on poorer-quality land;
2. whether alternative routes or sites would reduce permanent and temporary loss of BMV land;
3. the effect on agricultural holdings and practical food-producing capacity, rather than relying only on the total hectares affected;
4. how permanent sterilisation, soil damage and interference with agricultural operations will be minimised; and
5. whether the land can continue to deliver productive agriculture alongside the development.

Agricultural Land Holdings and Interference with Agricultural Operations

In addition to the land directly underneath the pylons, and that used for the foundations, which would be rendered impossible to farm, the location of a pylon within a field will cause disruption to agricultural operations in the vicinity of the pylon, reducing efficiency or rendering additional areas as unproductive. Again, this impact is exacerbated on the rarer BMV soils where the farming is more likely to be more intensive. Across Sections 1 to 3, tower foundations are calculated to result in a cumulative permanent loss of 5.5 ha and a moderate significant adverse effect (paragraph 12.8.13 of the DES). The assessment should also account for land around pylons which may become difficult or uneconomic to cultivate because of machinery turning requirements, spray-boom constraints and interference with precision farming operations.

On the Lincolnshire County Council County Farms Estate, which is owned by the Council and let as smallholdings under the Agriculture Act 1970, holdings tend to be smaller than the local average. A pylon and its associated operational constraints are therefore likely to affect a greater proportion of an individual tenant's farmed area than they would on a larger holding. The same issue may arise for third-party farmers occupying smaller holdings. NGET should assess each affected agricultural holding individually, including the proportion of the holding affected and the consequences for its operation and viability.

Chapter 12 of the DES confirms that farm impact assessments and interviews with landowners and long-term tenants remain to be completed (paragraphs 12.5.3 to 12.5.5 and 12.5.11 to 12.5.15). Until this work is undertaken, the effects on individual holdings, including displacement, severance, access, drainage, irrigation and farm viability, cannot be fully understood.

This issue is particularly relevant to pylon reference WMEL29, which the current draft design positions centrally within a rectangular field, creating substantial and avoidable disruption to cultivation. The field forms part of a County Farms holding, and the effect on the tenant is likely to be disproportionate because the pylon would occupy a greater proportion of the tenant's total farmed area than would be the case on an average local holding. Its central position would also cause permanent interference with cultivation of the surrounding land. NGET should consider relocating the pylon towards a field boundary or another less disruptive position and it is requested that a change request for pylon WMEL29 is considered.

Soils

It cannot be assumed that the impacted land will easily be restored back to production, and the Soil Management Plan should adequately consider the potential reduction of productivity over subsequent years, post restoration.

Damage to soil structure can take many years to remedy. There are numerous local examples of engineering schemes in Lincolnshire where adverse effects have persisted because restoration was inadequate. For example, Lincolnshire County Council owns land at Digby Fen as part of the County Farms Estate, where British Gas PLC laid the Hatton to Silk Willoughby pipeline. Rights for the scheme were granted in 1994, yet restoration problems were still being experienced 17 years later, in 2011. Annual compensation was paid during the intervening period, before a final capital settlement was reached in 2011 in lieu of further restoration works or compensation. The

operator was ultimately unable to restore the land adequately, and the damage to soil structure and fertility was treated as irreparable.

The Defra Construction Code of Practice for the Sustainable Use of Soils on Construction Sites recommends an early soil-resource survey by a suitably qualified and experienced soil scientist and incorporation of its findings into the site working strategy.

Before works commence, a suitably qualified soil scientist should undertake a field survey to establish:

- topsoil depth;
- depth and character of each subsoil horizon;
- soil texture, normally by hand texturing supported by particle-size analysis where necessary;
- soil structure and aggregate condition;
- stone content;
- drainage characteristics, mottling and evidence of waterlogging;
- existing compaction, including plough pans;
- organic or peaty horizons;
- erosion risk; and
- variation between fields and soil-management units.

The survey should produce a soil-resource map, showing the different soil types and the stripping, storage and reinstatement requirements for each.

Representative samples should normally be taken from each materially different topsoil and, where relevant, subsoil unit. The Council would expect to see testing for:

- particle-size distribution: sand, silt and clay;
- pH;
- organic matter;
- total nitrogen;
- available phosphorus;
- exchangeable potassium and magnesium;
- electrical conductivity or salinity;
- calcium carbonate where calcareous soils are present;
- stone and coarse-fragment content; and
- dry bulk density where an objective baseline for compaction is required.

This baseline is essential because otherwise NGET may be unable to demonstrate that the restored soil is genuinely comparable with its pre-construction condition.

After soils have been replaced, the developer should demonstrate:

- correct reinstated topsoil and subsoil depths;
- preservation of the original horizon sequence;
- acceptable soil structure;
- freedom from significant compaction;

- appropriate stone content;
- satisfactory drainage and infiltration;
- chemical fertility broadly comparable with the baseline;
- absence of construction contamination and debris; and
- successful crop or grass establishment.

The same test methods used for the baseline should be repeated where practicable, so that the comparison is valid. Testing should cover both the restored area and adjoining undisturbed control locations.

For productive agricultural land, final sign-off immediately after soil replacement is inadequate. The plan should include follow-up inspections through an agreed aftercare period, covering:

- crop emergence and establishment;
- uneven growth or yield;
- waterlogging or drought stress;
- settlement and rutting;
- stone brought to the surface;
- compaction;
- weed infestation;
- drainage performance; and
- need for subsoiling, moling, drainage repair, nutrient correction or reseeding.

Any remedial cultivation should be based on soil investigation rather than applied automatically, because deep loosening in unsuitable moisture conditions can further smear or damage the soil.

The outline SMP assigns a number of roles relating to soil management and compliance to the contractor. The promoter should explain how those functions will be exercised with sufficient independence and objectivity where the contractor is responsible both for undertaking the works and for assessing their adequacy. The final SMP should provide for suitably qualified independent soil-science oversight, including authority to inspect the works, require corrective action and verify restoration and aftercare outcomes.

Agricultural Land Drainage

The agricultural land within the area crossed by the route is reliant on drainage by underground pipes. This drainage maintains the quality of the land and manages water levels to ensure agricultural productivity. This is generally highly productive land but cannot be productively farmed without the benefit of good drainage.

The publication Soils and their Use in Eastern England (Hodge, C. A. H et al. Soil Survey Of England & Wales, 1984) gives commentary on the significance of land drainage stating, “Its aims are to sustain or increase yields, improve management flexibility, reduce production costs and make farming more profitable.” According to the Agriculture and Horticulture Development Board (https://ahdb.org.uk/knowledge-library/field-drainage-benefits-and-costs-to-farm-businesses) land drainage also has the potential to reduce flood risk, improve machinery efficiency, and improve soil structure.

There is the potential for existing field drainage systems to be damaged in the construction process, rendering them useless.

The location of pylons on this land significantly complicates the potential for future re-draining of the land, by adding a physical obstruction through which it would not be possible to lay a new drainage pipe. This is likely to have an adverse impact on the productivity of the land in question.

The impact on land drainage is covered in Section 12.8.6. However, given the fundamental importance of effective drainage for the agricultural use of this land, the Council requests to see further information on how these impacts will be managed, including the mitigation measures proposed to minimise adverse effects on agricultural operations and land quality.

Existing agricultural drainage systems should be surveyed and mapped before construction. Any damaged or interrupted systems should be maintained, diverted or reinstated by specialist agricultural drainage contractors, with post-construction testing and an enforceable remedy for latent defects.

Where the works could interrupt underdrainage or alter soil-water movement, the promoter should commit to providing for:

- identification and mapping of existing field drains;
- pre-works inspection of known outfalls;
- permeability or infiltration testing where appropriate;
- temporary drainage work required during the construction phase to maintain the drainage on adjacent land;
- inspection of trench backfill settlement;
- post construction remedial drainage work;
- testing of repaired drains;
- post-restoration monitoring for ponding, wet patches and crop stress; and
- investigation of drainage complaints during the aftercare period.

On high-quality arable land, visual inspection undertaken during a dry period is not sufficient evidence that drainage has been successfully restored.

<u>Agri-environment Schemes and Natural Capital</u>

The project should explain how impacts on agri-environment schemes, including the Sustainable Farming Incentive and Countryside Stewardship, will be mitigated.

<u>Cumulative Impact</u>

The impact of this proposal could be exacerbated by its cumulative effects when considered alongside other infrastructure schemes affecting the same agricultural holdings and communities.

The Council advises that the cumulative assessment should therefore address the combined loss and disruption of agricultural land, effects on farm operations and viability, pressure on local drainage and access infrastructure, and the cumulative burden of construction activity.

This comes at a time when farm incomes are under pressure, following adverse weather patterns and poor commodity prices, and the industry has also been impacted by adverse changes in Inheritance Tax and reductions in government agricultural policy direct payments. Hence, morale in the farming community is already low. These proposals will contribute to a further reduction in the wellbeing of the local farming community. The Council advises the routing to be chosen carefully to minimise this impact.

Minerals and Waste

The Council's comments submitted at Stage 1 remain largely applicable to the current proposals. In particular, the Applicant should continue to have regard to the adopted Lincolnshire Minerals and Waste Local Plan (LMWLP), specifically Policies M11 (Safeguarding of Mineral Resources) and M12, together with the associated maps. This should feed into the route refinement. Consideration should also be given to the emerging Lincolnshire Minerals and Waste Local Plan. The Council expects these policies and safeguarding areas to inform the ongoing refinement of the route and associated infrastructure.

The consultation documents provide limited information regarding waste management. At present, there is no assessment of the likely waste streams that will arise during construction, operation or decommissioning, nor any indication of how such wastes will be managed. The Council requests detailed information on forecast waste types, quantities and NGET approach to waste management.

Route Alignment and Minerals Safeguarding

The Stage 2 Consultation Documents invite comments on the proposed revised route. The Council notes that in certain locations, the draft Order Limits now extend beyond the preferred corridor presented at Stage 1. From a minerals and waste perspective, several of the issues raised previously remain relevant.

The Council notes and welcomes that the refined route now appears to avoid a number of the safeguarding conflicts identified during Stage 1 consultation, including:

- The Limestone Mineral Safeguarding Area (MSA) at Irham;
- The site-specific MSA at South Witham;
- A number of existing waste management facilities that could potentially have been affected by earlier route options.

Whilst these refinements are welcomed, the Council considers that further assessment is still required in several locations:

Corby Glen to the Lincolnshire Boundary

The proposed route continues to pass through a Limestone MSA for much of the section between Corby Glen and the Lincolnshire Boundary. In accordance with Policy M11 of the Lincolnshire

Minerals and Waste Local Plan, the Council requests NGET prepare and submit a Minerals Safeguarding Assessment for this section of the project This should demonstrate how the proposal has considered the presence of safeguarded mineral resources to address the policy requirements.

WMEL-A Substation

The proposed WMEL-A substation is located within a Limestone MSA, and therefore the Council expects the Applicant to undertake a Minerals Safeguarding Assessment in accordance with Policy M11.

Waste Management Sites

The stage 2 consultation refined route appears to avoid the waste sites which were identified in the stage 1 consultation as potentially being impacted by the scheme. However, the Council still requests NGET to review the mapping in the LMWLP and consider any potential impacts on access and operation, particularly for the Corby Glen STW which is close to the proposed project outline.

Changes since stage 1 consultation

The Council would welcome a clear summary of the amendments made to the route since the stage 1 consultation, and the reasons for those changes. In particular, it would be useful to understand how minerals and waste considerations have influenced route refinement and site selection decisions. The Council has been unable to identify this information within the revised Strategic Options Report (SOR). If this information is available within the consultation documents, please could this be signposted.

The Council trusts that these comments will assist NGET in progressing the development of the projects and welcomes further discussion as the project further develops towards submission in 2028.

Yours faithfully,

Neil McBride

Neil McBride
Head of Planning

Enc: AAH Consultants Technical Report covering Landscape and Visual Impact matters

Hoirns Smart Energy Networks Technical report covering Need matters

Appendix A - Hoirns Smart Energy Networks

Briefing: WMEL Stage 2 Consultation and Strategic Options Report – Need Case and Alternatives

12 October 2026 (revised) · Andrew Hiorns

Contents

1. Executive Summary 2
2. Key concepts 3
3. Project overview 4
4. Strategic Options Report (SOR) Update 5
5. SOR need case 5
6. SOR options appraisal 5
7. Options assessed and non-build alternatives 6
8. B6 capability on published works 7
9. B9 need tested against ETYS 2025 8
    9.1. B9 boundary and secured event 9
    9.2. Capacity, capability and network utilisation 9
    9.3. B9 capability by circuit 10
    9.4. B9 to 2040 12
    9.5. Forecast uncertainty 13
    9.6. B9 capability with Option 4 and basis of sizing 15
10. Sensitivity: Cross Border Connection 15
11. LE1 and EC5 16
12. Connection background, September 2026 17
13. Walpole-area connection need (EC3) 17
14. Assessment and questions for NGET 20
15. Source 21
Annex A: consultation brochure review 22
Annex B: glossary 22
Annex C: B9 boundary reconciliation with ETYS 2025 23

1. Executive Summary

NGET has presented a need case, quantified in its Strategic Options Report (SOR), and NESO's June 2026 update recommends the project, which NESO assesses as option LRN7. This review finds a genuine need at Walpole from 2033–34, and a B9 need that depends on how far B6 is reinforced. Both drive WMEL. What is not yet demonstrated is when each is triggered, and so whether a new 60 km 400 kV OHL is needed by 2033 rather than later, after non-build measures.

Walpole outlet

- From 2033–34, when EGL3 and EGL4 connect, losing either of Walpole's two outlets, the Burwell or the Necton double circuit, takes Walpole to its limit. In summer windy conditions the result ranges from within limits to about 2,400 MW short, depending on how much power arrives from Weston Marsh.
- Power flow control and post-fault reduction of the EGL3–4 power orders could cover the lower end of that range. At the upper end, runback at about 50% effectiveness cannot close the gap on its own.
- EGL5, connecting at LCS-B, adds up to 2,000 MW, taking the shortfall to about 4,400 MW, beyond what non-build measures can credibly cover. WMEL reduces the flow reaching Walpole by giving Weston Marsh an outlet that bypasses it.
- The SOR's 6,930 MW EC3 figure is the rating of one double circuit, not a measured shortfall.

B9 boundary

- The SOR's 7,613 MW shortfall assumes Scottish flow that B6 cannot deliver on published works. Published B6 works, including EGL1–5, reach about 17,900 MW in 2035, capping B9 flow at about 17,000–20,000 MW to 2045.
- NGET's Grimsby to Walpole proposals keep the existing Weston Marsh–Walpole line alongside the new one, but the SOR's B9 figures match a network without it. Counting it, B9 capability is about 22,200 MW at NGET's own utilisation and 27,300 MW with power flow control.
- At NGET's utilisation, published B6 works leave 4,500–5,300 MW spare. The Cross Border Connection (CBC) takes B9 to its limit, and 1,000–1,800 MW short once NESO's operational actions are counted. On NESO's B6 path, which rests on works not yet published, B9 reaches its limit about 2038 and is about 3,000 MW short by 2040.
- With power flow control, B9 has margin to 2040 on every B6 basis, subject to the Walpole outlet, through which much of the added transfer must pass.

What drives WMEL, and when

- WMEL addresses both needs: it reduces the flow into Walpole, and it adds 3,900–5,000 MW of B9 capability.
- The Walpole outlet is triggered by EGL3–4 in 2033–34. B9 is triggered by B6 reinforcement: with the CBC (2033–35) if operational actions are counted, or about 2038 on NESO's B6 path. NGET plans WMEL for 2033; NESO's optimal date is 2036 (Figure 1-1).
- B9 forecasts have moved by up to 5,100 MW between ETYS editions, more than the 2040 B9 shortfall. The timing of new build should be confirmed against later editions.
- No option combining power flow control and power-order management now with new capacity later has been tested against WMEL.

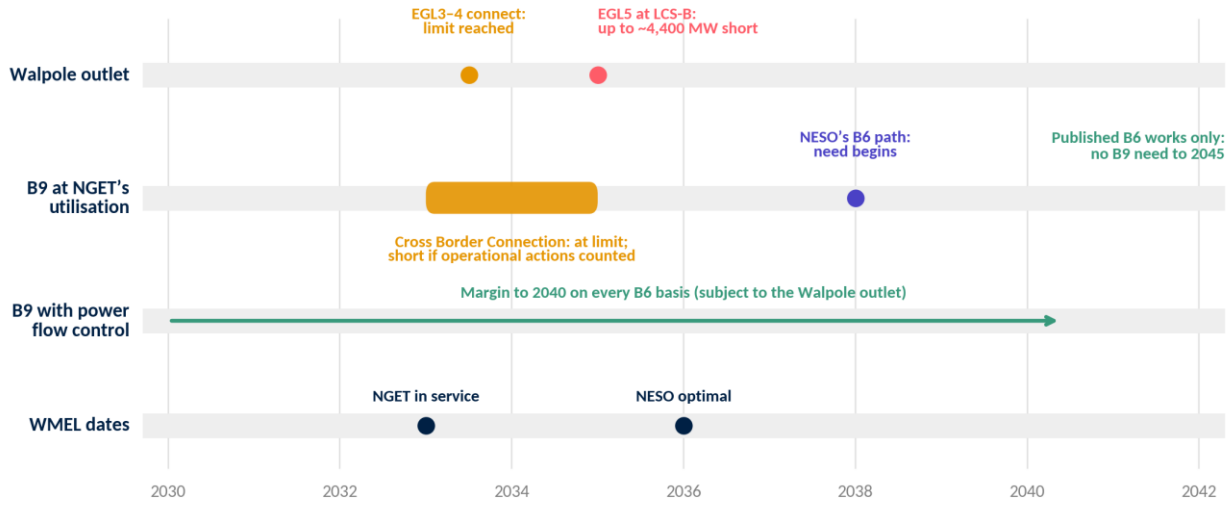


Figure 1-1 When each need is triggered. Summer windy and 95th percentile flows; B9 at NGET's implied utilisation unless stated.

Options assessed

- NESO recommends WMEL (LRN7) "Proceed (Maintain)", with an optimal in-service date of 2036.
- Neither the SOR nor NESO's published assessment presents power flow control or another non-build alternative.

2. Key concepts

A few planning terms carry the argument. Others are in the glossary (Annex B). Figures are in MW; circuit ratings given in MVA are treated as MW.

- Boundary. A notional line across the network, such as B9 between the Midlands and the south. Planners compare the power that needs to cross it with what it can carry.
- Capacity. The combined rating of the circuits crossing a boundary or leaving a substation.
- Capability. How much power can actually cross while every circuit stays within its rating after the worst fault. It is usually well below capacity, because power does not divide evenly once circuits are lost.
- Secured event. The fault the system must be planned to survive, typically the loss of a double circuit (both circuits on one line of pylons).
- Flow sharing. How evenly power divides across the remaining circuits after a fault. If one circuit overloads while others have headroom, capability is lost.
- Network utilisation. The share of post-fault AC capacity that can be used as capability. NGET's figures imply about 58.5% on B9. This review assumes power flow control can raise it to 75%, the figure its Grimsby West–Walpole report used for the existing network, with voltage limits managed by reactive compensation. HVDC links are counted at full output and are not scaled.
- Power flow control. Devices that push power from heavily loaded circuits onto lightly loaded parallel ones, raising capability without new lines.
- HVDC power order and runback. An HVDC link transfers power at a set level, its power order. Reducing it after a fault (runback) moves power onto the AC network, acting like power flow control.

- The Walpole shortfall. Walpole and Walpole B export far more than they use. Their power leaves on two double circuits, south to Burwell and east to Necton. If either is lost, all the export moves onto the other, and where it exceeds that route's rating there is a shortfall. This is NGET's EC3 need.

3. Project overview

WMEL is an NGET Strategic Infrastructure NSIP under the Great Grid Upgrade. It needs a Development Consent Order (DCO) and is due to be fully operational in 2033.

Table 3-1 WMEL scope

Element	Scope
New overhead line	~60 km, 400 kV, steel lattice pylons, from Weston Marsh B (Lincolnshire) to WMEL-B near Wartnaby (Leicestershire)
WMEL-A substation	New 400 kV substation near Corby Glen, ~16 ha, connecting to the existing north–south network
WMEL-B substation	New 400 kV substation SW of Wartnaby, ~12.6 ha
Existing line upgrade	~66 km, 400 kV, WMEL-B to Grendon. One circuit reconductored with higher-temperature conductor; the other kept but run at a higher operating temperature. Some pylons may be modified or replaced

Table 3-2 WMEL programme

Milestone	Date
Stage 1 consultation	11 June – 6 August 2025
Stage 2 consultation	8 September – 3 November 2026
DCO application submission	2028
Secretary of State decision	2029
Construction	2029–2033

WMEL connects at Weston Marsh B. Weston Marsh A and B, the Lincolnshire connection substations and Walpole B belong to the separate Grimsby to Walpole project, which also keeps the existing 400 kV line from Weston Marsh to Walpole. Figure 3-1 shows the arrangement.

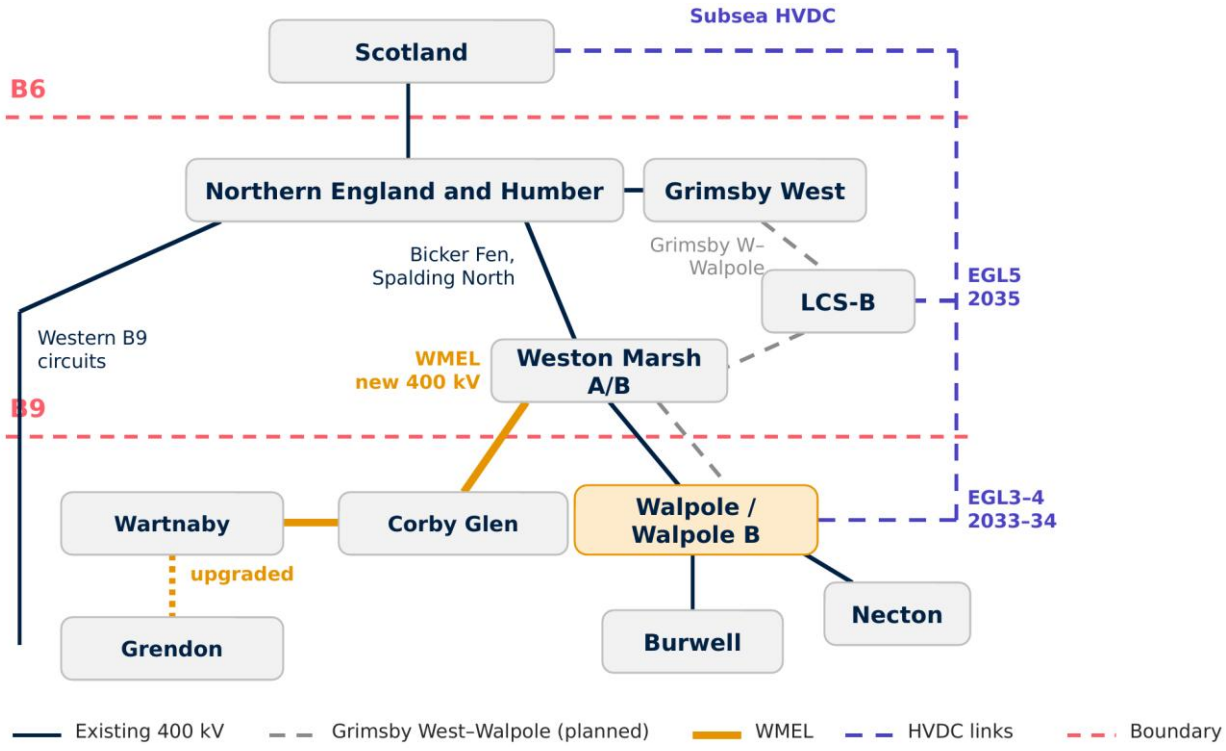


Figure 3-1 Network around Weston Marsh and Walpole, schematic, on the topology in NGET's Grimsby to Walpole and WMEL proposals.

4. Strategic Options Report (SOR) Update

NGET's Strategic Options Report (EN0210007, v0.2, August 2026) is the need case and options document behind the consultation; the brochure does not reference it. It updates v0.1 of May 2025 and draws on ETYS 2024, ETYS 2025 and FES 2025.

5. SOR need case

The SOR quantifies three needs by 2036 (para 4.7.1). NGET says it must meet them under Electricity Act s.9 and Licence Condition D3.

Table 5-1 SOR need case (para 4.7.1)

Need	Figure	Basis
B9 capability	7,613 MW deficit	2036 requirement 25,901 MW vs 18,288 MW post-fault capability after Grimsby–Walpole, EGL3 and EGL4
B9 capacity	+2,510 MW surplus	Post-fault capacity 28,411 MW
EC3 capacity	6,930 MW	One additional double circuit, to relieve post-fault overloads after Walpole-area double-circuit faults
East–west	Not quantified	Relieve east coast power-flow constraints

Without any reinforcement, B9 post-fault capability in 2036 would be 14,104 MW (Table 4.1). NESO's June 2026 update attributes WMEL's benefit to B9 and LE1, not EC3/EC5. NGET says this change of boundary names does not alter the need (paras 4.5.7, 4.6.3).

6. SOR options appraisal

Option 4 (Weston Marsh – Ryhall – Market Harborough) is preferred. It has the best east–west power-flow flexibility, median capex, joint-lowest lifetime cost and the fewest settlements crossed.

The longlist of about 50 options (Table 5.1) was screened on technical compliance and then on environmental, technical and socio-economic benefit. Options were discounted mainly for substation constraints (Spalding North, Bicker Fen, Wymondley, Pelham), longer routes, or weak east–west reinforcement. Six were appraised:

Table 6-1 SOR shortlisted options

Option	Description	Capex	40-yr lifetime cost (new circuits)
1	Walpole B – new Wymondley, 100 km	£760.3m	£828.0m
2	Walpole B – new Wymondley via Burwell, 120 km	£1,068.2m	£994.0m
3	Weston Marsh/Walpole B – Ryhall; Eaton Socon – Grendon; 40 km reconductoring	£832.6m	£497.0m
4 (preferred)	**Weston Marsh – Ryhall – Market Harborough, 60 km; 55 km reconductoring to Grendon**	**£783.9m**	**£497.0m**
5	Walpole B – Tilbury, 360 km subsea HVDC	£8,724.4m	£9,378m
6	Walpole B – Norwich, 90 km	£527.0m	£745.0m

"New Ryhall" and "new Market Harborough" are now sited at Corby Glen (WMEL-A) and Wartnaby (WMEL-B). Option 6 is cheapest but was rejected because it gives no east–west flow.

For Option 4, the SOR also costs alternative technologies for the new circuits:

Table 6-2 Option 4: alternative technologies for the new circuits

Technology	Capex, new circuits	Lifetime cost
AC overhead line	£324m	£497m
AC cable	£3,561m	£3,692m
GIL	£4,157m	£4,239m
HVDC	£5,696m	£6,709m

7. Options assessed and non-build alternatives

NESO develops the Future Energy Scenarios, sets the planning assumptions and boundary transfer requirements, and recommends which reinforcement options should proceed. The TOs propose and develop the options and supply their boundary capabilities, costs and delivery dates. Ofgem takes the funding decision and the TO the investment decision. NESO's recommendations are therefore drawn from the options the TO submits.

NESO's assessment of WMEL

In the Beyond 2030 Electricity Transmission Update (June 2026), WMEL (LRN7) is recommended Proceed (Maintain). It is optimal in all four FES 2025 pathways and is credited with uplift on B9 and LE1. Its earliest delivery date is 2033, probable 2035, and optimal 2036 in every pathway. NESO names it among the options most sensitive to delay. This is a clear NESO recommendation for the project as an economic reinforcement. It does not address NGET's EC3 requirement, which NESO does not credit.

Options assessed

- SOR longlist: about 50 options, all new 400 kV routes or subsea HVDC, with reconductoring only as an adjunct to new build. Power flow control, series compensation, phase-shifting transformers or quad boosters, FACTS, dynamic line rating and network reconfiguration do not appear in its 166 pages; "compensation" appears only as shunt compensation for AC cables.
- NESO alternatives: in the region NESO tested another east coast offshore link, further network upgrades and alternative new circuits. The report does not identify any of these as a substitute for LRN7 using the existing B9 and LE1 circuits, and does not say what the upgrades comprised. NESO did recommend power flow control on B9 and LE1 (BWQB, BRQB) as a complement to LRN7.
- HVDC flow control: neither the SOR nor NESO's published assessment presents post-fault adjustment of the EGL3–4 (or EGL5) power orders to redistribute flow onto the AC network, although 4,000 MW of controllable HVDC terminates in the Walpole area.
- NESO's tCSNP2 intention: ETYS says that in the tCSNP2 cycle NESO will assess reinforcement or non-build solutions, including for the LE1 region. The SOR presents no equivalent assessment.

NGET's stated policy

- Amenity Policy: quoted in SOR Appendix B.2.3, NGET commits to building new lines only where existing infrastructure cannot be upgraded technically or economically to meet transmission security standards.
- Consultation brochure: NGET will "always upgrade existing infrastructure where we can".

Why the omission matters

- NGET proposes such options elsewhere. NESO assessed 14 power flow control options in England and Wales in the June 2026 update and recommended seven, all NGET-proposed. These include BWQB on Burwell–Walpole, the outlet that drives the Walpole-area need.

Conclusion on options

The options presented for WMEL, in both the SOR and NESO's published assessment, are new circuits, subsea links and reconductoring as an adjunct to new build. No power flow control, series compensation or reconfiguration option is presented or reported as assessed as an alternative to LRN7. NGET may have screened such options internally; if so, the basis for discounting them has not been published. This does not demonstrate consistency with NGET's stated policy of building new lines only where existing infrastructure cannot be upgraded technically or economically. A non-build or hybrid option should be assessed and reported before a new 60 km 400 kV OHL can be shown to be the most efficient and economical way of meeting the need.

8. B6 capability on published works

Flow from Scotland can reach B9 only if B6 can carry it. This review calculates B6 capability from the circuit ratings and HVDC links in ETYS 2025 Appendix B, because NESO publishes a capability for each year but not the works behind each step.

The secured event is the loss of one 400 kV double circuit, with no operational intertrips. B6 is crossed by two 400 kV double circuits, Harker–Moffat/Gretna in the west and Eccles–Stella West in the east, plus the Western HVDC link and one 132 kV circuit. On the loss of either double circuit, the surviving one carries all AC transfer at its rating, so there is no sharing between parallel routes to lose. That is

why B6 runs at 95–98% utilisation on this review's analysis, consistent with ETYS; it reflects the two-route topology and is not a standard B9 can be held to. The method reproduces NESO's present capability: 6,800 MW against 6,700 MW, which ETYS 2025 states is limited thermally by the Harker–Moffat 400 kV circuit.[1]

From 2030, uprating of the NGET Harker legs and the SPT spans brings both double circuits to 2,770 MVA per circuit, and the series capacitors at Moffat, Gretna and Eccles (2,771 MVA) then set the limit. EGL1–5 add 10,000 MW of HVDC between 2030 and 2035, so by 2035 HVDC provides about two-thirds of B6 capability. Appendix B shows no further B6 works up to 2033/34. On published works B6 therefore reaches 17,900 MW in 2035, and this review holds it there.

CBC adds a third double circuit, and the secured event becomes the loss of CBC, which leaves the existing western and eastern double circuits in parallel. This review assumes power flow control on one of the existing double circuits, not on CBC, so that it remains effective when CBC is lost. With three routes, utilisation falls below the 95–98% of today's two-route boundary; with this control, combined utilisation of the two existing double circuits is taken as 90%, this review's estimate of what is achievable. On this basis CBC adds 4,400 MW.

Table 8-1 B6 capability on published works and with CBC (MW)

Year	Works	Base case	With CBC	ETYS 2025
Today	Existing network and Western HVDC	6,800	6,800	6,700
2030	Harker and SPT circuits uprated; EGL1–2	11,900	11,900	
2033	EGL3–4	15,900	15,900	
2035	EGL5; CBC, with power flow control on an existing double circuit	17,900	22,400	19,300
2036		17,900	22,400	20,000
2038		17,900	22,400	22,900
2040		17,900	22,400	25,400
2041+		17,900	22,400	27,600

Source: this review, from ETYS 2025 Appendix B circuit ratings (Tables B-2-1b/c, B-2-2b/c) and HVDC ratings (Table B.5.1); NESO, ETYS 2025 Boundary Chart Data.

It can be seen from Table 8-1 that NESO's published capability is higher: by 1,400 MW in 2035 and 2,100 MW in 2036, rising to 5,000 MW in 2038, 7,500 MW in 2040 and 9,700 MW from 2041. ETYS 2025 states that its capability line is based on the recommendations of NESO's Beyond 2030 Electricity Transmission Update. That Update added EGL6 (2,000 MW, Newmachar to south-east England), which would account for 2,000 MW of the post-2040 difference and, landing in south-east England, does not add to B9 AC loading. NGET has advised it is progressing the Cross Border Connection (CBC), the project NESO previously identified as WCN2, which would add about 4,500 MW and is tested as a

[1] This refines the method in this review's Grimsby West–Walpole report, which applied 95–98% utilisation to the whole of B6, HVDC included. With two routes the surviving double circuit carries all AC transfer at its rating, and HVDC links are counted at full rating. Ratings are from ETYS 2025 Appendix B; the Harker uprating is now shown in 2030 rather than the 2033 of ETYS 2024.

sensitivity below. Even with EGL6 and CBC counted, about 3,000 MW of NESO's capability from 2041 has no published project behind it.[2]

The B9 analysis that follows therefore uses this review's B6 capability, 17,900 MW from 2035, as the limit on flow reaching B9. NESO's published B6 path is shown alongside for reference, and CBC is treated as a sensitivity.

9. B9 need tested against ETYS 2025

On published B6 works, the SOR's 7,613 MW B9 deficit does not arise. Once flow from Scotland is limited to what B6 can carry on those works, B9 flow is about 17,000–20,000 MW from 2035 to 2045. On the network described in NGET's proposals, B9 carries this at NGET's own utilisation with 4,500–5,300 MW to spare. A need for new B9 capacity arises only if B6 is reinforced beyond published works: at NGET's utilisation with the CBC, if NESO's operational actions are counted, or from about 2038 on NESO's B6 path.

Where NGET's figures come from

- Flow (25,901 MW): exactly the ETYS 2025 three-scenario mean 95th percentile for B9 in 2035, not 2036. The 2036 value is 26,147 MW.
- Capability (18,288 MW): ETYS 2025's published B9 capability for 2036. The SOR says this already includes Grimsby West–Walpole, EGL3 and EGL4. Note: footnote 19 to SOR Table 4.2 attributes this figure to ETYS 2024, while the flows come from ETYS 2025 (para 4.4.10). NGET should confirm the figure is the same in both editions.
- No-reinforcement capability (14,104 MW): ETYS 2025's published value for 2030–2032.

Pairing 2035 flow with 2036 capability does not favour NGET. On same-year figures the deficit is 7,900 MW (2036) or 9,700 MW (2035).

9.1. B9 boundary and secured event

ETYS 2025 states that B9's present capability of 11,500 MW is limited by a voltage constraint for a fault on the Spalding North–Walpole–Bicker Fen 400 kV circuits. SOR Table 4.3 names the B9 secured event as the Lincolnshire–Walpole 400 kV double circuit. This review assumes voltage limits can be managed by reactive compensation, whose cost belongs in any non-build option, so that B9 capability is thermally limited.

NGET's Grimsby to Walpole proposals turn the existing Bicker Fen and Spalding North circuits into two new substations at Weston Marsh, and keep two separate routes south: the existing 400 kV line to Walpole, and a new line from Weston Marsh B to a new Walpole B substation on the Burwell–Walpole circuits. This review draws B9 south of Weston Marsh. All Lincolnshire infeed then crosses B9 on these two double circuits, and the secured event is the loss of either. ETYS 2025 Appendix B shows only the new pair: it removes the existing Bicker Fen and Spalding North–Walpole circuits in 2030 without restoring the section south of Weston Marsh. This review follows NGET's project descriptions, and

[2] The Grimsby West–Walpole report used NESO's B6 capability, rising to 21,500 MW by 2037 with WCN2, plus 1,800 MW of operational actions. WCN2 is the project now known as the Cross Border Connection, so that report's base case corresponds to this review's CBC sensitivity.

takes the existing line as reconductored to the 3,326 MVA per circuit that Appendix B gives the new lines.[3]

A boundary capability measures the boundary only when both the faulted double circuit and the circuits it overloads cross it. After the loss of one Weston Marsh–Walpole pair, the Lincolnshire infeed moves onto the other and then leaves Walpole on the Burwell and Necton routes, which lie wholly south of B9. B9 and the Walpole outlet therefore interact: B9 capability depends partly on what Walpole's outlet can carry.

They remain distinct needs with different triggers. The Walpole outlet is set by EGL3–4 and the flow arriving from Weston Marsh (Section 13); B9 is set by how much Scottish power B6 allows south. This section assesses B9.

9.2. Capacity, capability and network utilisation

NGET's own post-fault capacity is 28,411 MW against capability of 18,288 MW: 64% utilisation, or 58.5% on the AC circuits alone with EGL3–4 at full output (this review's calculations; the SOR states no utilisation figure). Capacity exceeds the flow by 2,500 MW, and it rises with Grimsby West–Walpole and EGL3–4 much faster than capability. The deficit therefore arises from uneven post-fault flow sharing, not a lack of circuits. On the network in NGET's proposals, which includes the existing Weston Marsh–Walpole line, AC post-fault capacity is about 31,100 MW; if NGET's 18,288 MW is on that network, its AC utilisation is only about 46%.

Table 9-1 B9 network utilisation derived from SOR Tables 4.1 and 4.2

SOR figures	Post-fault capacity (MW)	Capability (MW)	Utilisation
Table 4.1: no reinforcement	18,033	14,104	78%
Table 4.2: with Grimsby West–Walpole and EGL3–4, all circuits	28,411	18,288	64%
Table 4.2: AC circuits only, EGL3–4 at full output	24,411	14,288	58.5%

- Utilisation falls as reinforcements are added. If EGL3–4 deliver their full 4,000 MW, the SOR's figures imply AC capability rises by only about 200 MW, from 14,104 to 14,288 MW, although AC post-fault capacity rises by about 6,400 MW.
- The likely cause is the Walpole outlet. Grimsby West–Walpole and EGL3–4 both deliver power into Walpole. Capacity added into Walpole without matching outlet capacity cannot all be used after a fault, which is why B9 capability depends partly on the Walpole outlet (Section 13).
- Caveats. The 14,104 MW figure is ETYS 2025's capability for 2030–2032, not 2036. The reconciliation in Annex C indicates that the SOR's capacities include the ETYS 2024 reconductoring but not the existing Weston Marsh–Walpole line. The SOR does not state any utilisation percentage; all are this review's calculations from its capacity and capability figures.

Headroom for power flow control

[3] The Grimsby West–Walpole report excluded that line from B9, as the project under review, and took the B9 secured event as the Bicker Fen/Spalding North–Walpole double circuit. This review includes Grimsby West–Walpole as part of WMEL's baseline. On NGET's project descriptions it adds a new Weston Marsh–Walpole B double circuit alongside the existing line, which the report already counted. ETYS 2025 Appendix B shows only the new pair; this review follows NGET's descriptions.

- Raising AC utilisation to 75% adds about 5,100 MW. On the full network, B9 capability rises from about 22,200 MW to 27,300 MW, more than WMEL adds at NGET's implied utilisation (3,900 MW); WMEL adds 5,000 MW at 75%.
- 75% is this review's assumption, the figure its Grimsby West–Walpole report used for the existing network, and B9's structure explains why it is credible. B9 is a broad boundary with many double circuits and most of the demand on its eastern side. Flow concentrates on the eastern circuits, at about 84%, while the western circuits run below 50%. That structural imbalance is what power flow control addresses. B6 is not a comparator: with two routes, its high utilisation follows from the topology. A load flow is needed to confirm that 75% is achievable on B9.
- The Walpole outlet constrains it. Much of the added B9 transfer passes through Walpole, whose outlet reaches its limit once EGL3–4 connect (Section 13). Power flow control must act on the Walpole outlet and the parallel routes away from it, combined with EGL3–4 power-order management. A load flow is needed to confirm that 75% is achievable with the outlet as it stands.
- EGL5 changes the scale. With EGL5 at LCS-B the local shortfall rises to about 4,400 MW, beyond what non-build measures can credibly cover.

NGET's own figures show capacity rising much faster than capability, which indicates a network limited by post-fault sharing rather than by the number of circuits. A load flow testing power flow control and HVDC power-order management against the Walpole-outlet constraint should be presented before a new 400 kV OHL can be shown to be the most efficient way to close the gap.

9.3. B9 capability by circuit

B9 is built up circuit by circuit from ETYS 2025 Appendix B winter ratings for 2036, with B9 drawn south of Weston Marsh and the Weston Marsh–Walpole circuits as described in NGET's proposals (Section 9.1). New and reconductored circuits are taken at 3,326 MVA per circuit, the rating Appendix B gives the new lines. The secured event, the loss of one Weston Marsh–Walpole double circuit, is removed, and AC utilisation is applied to the remaining AC circuits. EGL3 and EGL4 are added at their full 4,000 MW output: their flow is set by the power order, so it is not scaled. The build-up is shown in Table 9-2, and the resulting surplus or deficit in Table 9-3.[4]

Table 9-2 B9 circuits, 2036 (winter ratings, MW)[5]

Circuit	Without WMEL	With WMEL	Note
Enderby–Patford Bridge (2 circuits)	6,200	6,200	Uprated 2030
Feckenham–Walham	3,100	3,100	
Feckenham–Minety	2,830	2,830	
Grendon–Market Harborough (2 circuits)	6,200	6,200	Both at 3,100 from 2033

[4] The Grimsby West–Walpole report applied the utilisation factor to the HVDC links; this review counts them at full rating, which raises that report's B8 and B9 capability by 800 MW in 2035 and 1,200 MW in 2040.

[5] Ratings are from ETYS 2025 Appendix B (Tables B-2-1b/c and B-2-2b/c) for 2036. The Grimsby West–Walpole report used ETYS 2024 Appendix B; the main changes are Feckenham–Walham (2,830 to 3,100 MW) and the Enderby–Patford Bridge uprating, now shown in 2030 rather than 2033. New and reconductored circuits, including the existing Weston Marsh–Walpole line, are taken at 3,326 MVA per circuit, the rating Appendix B gives the new lines.

Circuit	Without WMEL	With WMEL	Note
Cottam–New Ryhall (2 circuits)	6,133	6,133	3,326 + 2,807; re-terminated at New Ryhall 2033
Weston Marsh B–Walpole B, Grimsby to Walpole (2 circuits)	6,652	6,652	New line, 3,326 per circuit
Weston Marsh–Walpole, existing line (2 circuits)	6,652	6,652	Retained by Grimsby to Walpole; taken as reconductored to 3,326
WMEL, Weston Marsh–New Ryhall (2 circuits)	–	6,652	Crosses B9
AC intact capacity	37,767	44,419	SOR Table 4.2 less HVDC: 31,341
Less secured event (one Weston Marsh–Walpole pair)	−6,652	−6,652	
AC post-fault capacity	**31,115**	**37,767**	**SOR: 24,411 (without the existing line)**
AC capability at 58.5% (NGET's implied utilisation)	18,202	22,094	(18,288 − 4,000) ÷ (28,411 − 4,000)
AC capability at 75% (power flow control)	23,336	28,325	
EGL3 + EGL4 (HVDC) at full output	4,000	4,000	2 × 2,000 MW, Walpole B; not scaled
B9 capability, NGET's implied utilisation	**22,202**	**26,094**	
B9 capability, 75% utilisation	**27,336**	**32,325**	

Table 9-3 Surplus / deficit against B9 flow by B6 basis (MW)

B6 basis	Year	B9 flow	Without WMEL, 58.5%	Without WMEL, 75%	With WMEL, 58.5%	With WMEL, 75%
SOR as stated (2035 flow, 2036 capability)	2036	25,900	−3,700	+1,400	+200	+6,400
Unrestricted (ETYS 2025)	2036	26,100	−3,900	+1,200	0	+6,200
Published works (B6 17,900 MW)	2036	16,900 / 18,700	+5,300 / +3,500	+10,400 / +8,600	+9,200 / +7,400	+15,400 / +13,600
Published works (B6 17,900 MW)	2040	17,700 / 19,500	+4,500 / +2,700	+9,600 / +7,800	+8,400 / +6,600	+14,600 / +12,800
With CBC (B6 22,400 MW)	2036	21,400 / 23,200	+800 / −1,000	+5,900 / +4,100	+4,700 / +2,900	+10,900 / +9,100
With CBC (B6 22,400 MW)	2040	22,200 / 24,000	0 / −1,800	+5,100 / +3,300	+3,900 / +2,100	+10,100 / +8,300
NESO's published B6 path	2036	19,000 / 20,800	+3,200 / +1,400	+8,300 / +6,500	+7,100 / +5,300	+13,300 / +11,500
NESO's published B6 path	2040	25,200 / 26,800	−3,000 / −4,600	+2,100 / +500	+900 / −700	+7,100 / +5,500

Where two figures are shown, the first is without NESO's 1,800 MW allowance for operational actions and the second with it. B6-limited flow is the unrestricted B9 flow less the amount by which B6 flow exceeds B6 capability, assuming curtailed Scottish output is replaced from south of B9; if it comes from Humber or Teesside plant, part of the reduction is lost. Capability at 75% assumes voltage limits are managed by reactive compensation.

- NGET's capacity omits the existing line. Without the existing Weston Marsh–Walpole line, the build-up gives AC post-fault capacity of 24,500 MW, matching the SOR's 24,400 MW. With it, as NGET's Grimsby to Walpole proposals describe, post-fault capacity is about 31,100 MW. The SOR's B9 figures therefore appear to rest on a network without the existing line (Annex C).

- On published B6 works, the network carries B9 flow. With B6 at 17,900 MW, B9 flow in 2036 is 16,900–18,700 MW. At NGET's implied utilisation the margin is 3,500–5,300 MW; at 75% it is 8,600–10,400 MW.
- The SOR's deficit needs flow that published B6 works cannot deliver. Even the unrestricted 26,100 MW would need only about 71% AC utilisation without WMEL, within reach of power flow control, subject to the Walpole outlet.
- WMEL adds about 3,900–5,000 MW of B9 capability on this method, depending on utilisation, assuming it converts at the same rate as the existing AC circuits. NESO's 2038 capability step of 5,500 MW is consistent with WMEL if utilisation rises to about 64% with the additional Weston Marsh outlet. See below on why the SOR should state this figure.
- EGL5 is not counted. NGET has chosen to connect EGL5 at LCS-B on the Grimsby West–Walpole route, north of B9. Its 2,000 MW therefore adds to the flow across B9 on the AC network, not to B9 capacity.[6]
- Method limits. This is a capacity build-up, not a load flow: it shows the headroom available to flow redistribution, not what the network delivers without it. The location of B9 south of Weston Marsh is inferred from the reconciliation, not from a published boundary definition. Cottam–Market Harborough, re-terminated at New Ryhall in 2033, and the WMEL-B–Grendon upgrade are not counted. The Weston Marsh–Walpole circuits follow NGET's project descriptions, not Appendix B (Section 9.1).

9.4. B9 to 2040

Extending the analysis with the ETYS 2025 boundary chart data, on the same basis (three-scenario mean 95th percentile), shows how B9 flow depends on B6. The B6-limited B9 flow is the unrestricted B9 flow less the amount by which B6 flow exceeds B6 capability. The calculation reproduces the SOR's 25,901 MW (2035) and 26,147 MW (2036).[7]

Table 9-4 B9 flows by B6 basis, ETYS 2025 (MW, without operational actions)

Year	Unrestricted	Published works (B6 17,900 MW)	With CBC (B6 22,400 MW)	NESO B6 path	NESO B6 capability	Published B9 capability
2035	25,900	17,700	22,200	19,100	19,300	16,200
2036	26,100	16,900	21,400	19,000	20,000	18,300
2038	26,500	17,000	21,500	22,000	22,900	23,800
2040	26,800	17,700	22,200	25,200	25,400	23,800
2041–45	26,000–26,800	about 17,000–18,000	about 22,000	No restriction	27,600	26,100

[6] The Grimsby West–Walpole report counted EGL5 across B9 from 2040. NGET has since confirmed that EGL5 connects at LCS-B, north of B9, so this review counts its flow on the AC network rather than as B9 capacity.

[7] The Grimsby West–Walpole report used ETYS 2022–2024. ETYS 2025, published since, shows higher B9 flows and lower B6 flows; see Forecast uncertainty.

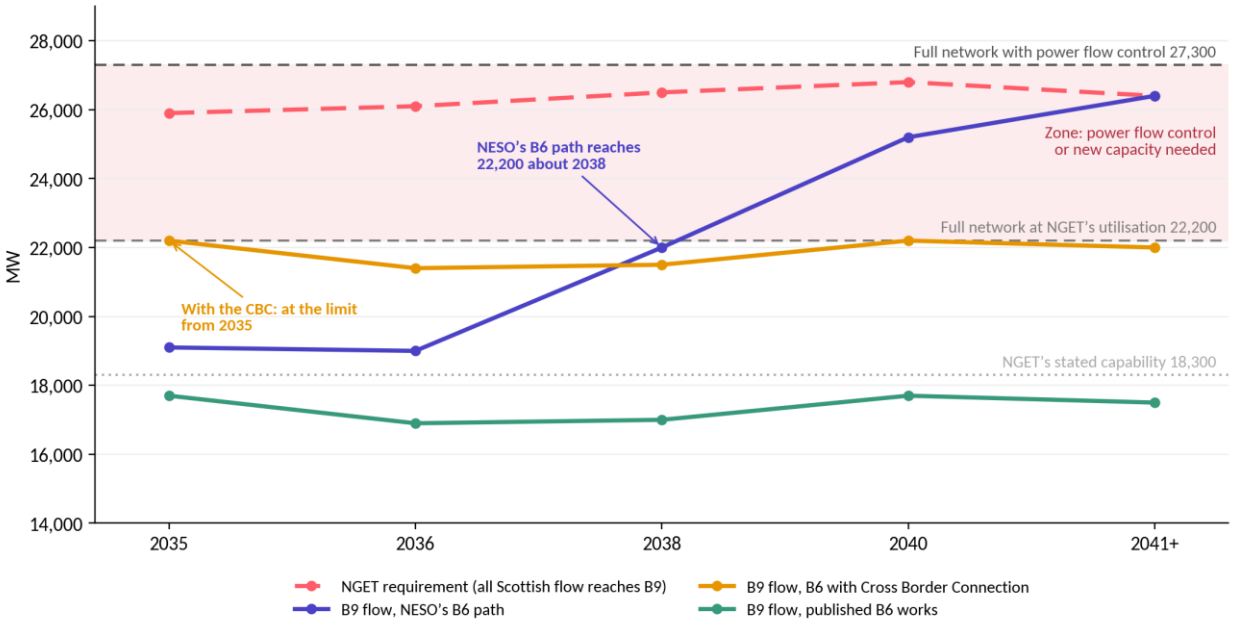


Figure 9-1 B9 transfer for each B6 basis against B9 capability on the full network. ETYS 2025 three-scenario mean 95th percentile, without NESO's 1,800 MW operational actions.

- On published B6 works, B9 flow stays flat. With B6 at 17,900 MW, B9 flow is about 17,000–20,000 MW from 2035 to 2045. The full network carries it at NGET's own utilisation with 4,500–5,300 MW to spare, before operational actions.
- B9 flows plateau. They level off at about 26,000–27,000 MW from 2036 to 2045, so there is no continuing growth driving ever-larger reinforcement.
- The SOR's need rests on B6 growth with no published project. NESO's B6 capability rises to 25,400 MW by 2040 and 27,600 MW from 2041, 7,500–9,700 MW above published works. On that path B9 flow reaches 25,200–26,800 MW in 2040. At NGET's utilisation the full network reaches its limit about 2038 and is 3,000–4,600 MW short by 2040; with power flow control it has 500–2,100 MW to spare. EGL6 accounts for 2,000 MW of the B6 difference and bypasses B9; CBC is tested as a sensitivity below.
- WMEL and power flow control both close it. On NESO's B6 path in 2040, WMEL at NGET's implied 58.5% leaves B9 at about its limit (+900 to −700 MW); power flow control on the existing network gives 500–2,100 MW. This supports NESO's treatment of power flow control (BRQB, BWQB) as a complement to LRN7, and suggests it could defer it.
- NESO's published B9 capability steps up in 2038 and 2041, by about 5,500 MW to 23,800 MW and then by 2,300 MW to 26,100 MW. The 2038 step is consistent with WMEL (Annex C). NGET should confirm what the steps comprise.

On published B6 works there is no B9 need for new capacity to 2045: B6 caps B9 flow at about 17,000–20,000 MW, which the full network carries. A B9 need arises only if B6 is reinforced beyond published works. At NGET's utilisation it arises with the CBC, if NESO's operational actions are counted, or from about 2038 on NESO's B6 path, reaching 3,000–4,600 MW by 2040 (Figure 9-1). With power flow control, the full network has margin to 2040 on every B6 basis, subject to the Walpole outlet. The question is therefore what B6 reinforcement is assumed, and when. A combined option of power flow control now and new capacity once further B6 reinforcement is confirmed should be tested against WMEL's optimal 2036 date. EGL5 may bring the local Walpole need forward.

9.5. Forecast uncertainty

B9 forecasts have not moved in one direction. They fell between ETYS 2022 and 2024, then rose in ETYS 2025. B6, which governs how much Scottish flow can reach B9, has fallen in every edition.

Table 9-5 Mean of the three net-zero scenarios, 95th percentile (MW)

Flow	ETYS 2022	ETYS 2023	ETYS 2024	ETYS 2025
B9, 2035	28,700	25,500	24,300	25,900
B9, 2040	30,000	26,600	24,900	26,800
B6, 2040	37,600	32,200	28,300	27,000

NESO ETYS boundary chart data, 2022–2025. Falling Short is excluded from ETYS 2022 and 2023 so that all editions are comparable; the Grimsby West–Walpole report's figures for those editions included it. ETYS 2024 publishes Hydrogen Evolution flows identical to Holistic Transition on every boundary checked.

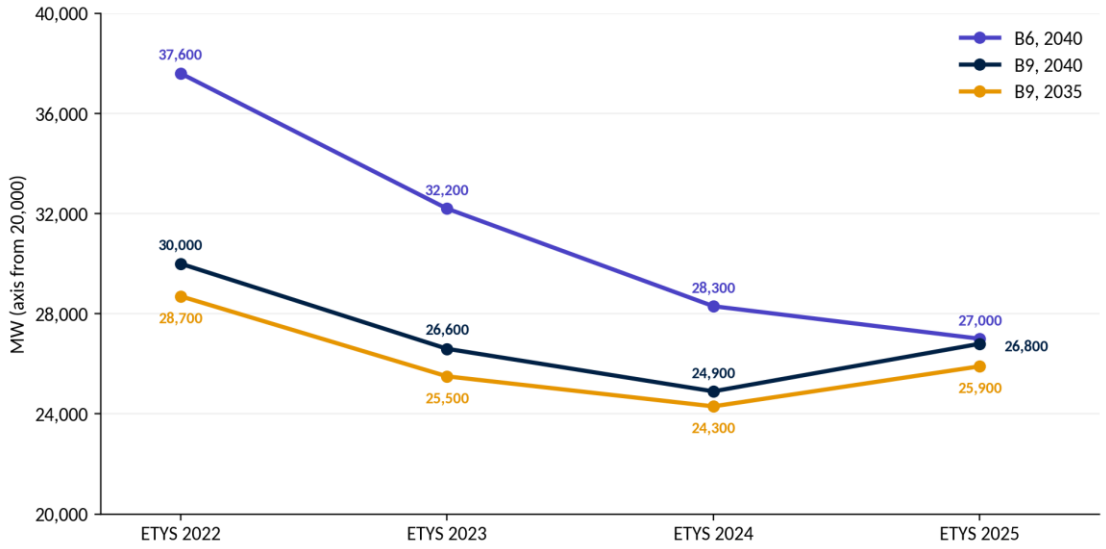


Figure 9-2 B6 and B9 required transfers by ETYS edition, mean of the three net-zero scenarios, 95th percentile.

- The movement is larger than the margins. The 2040 B9 forecast has moved by up to 5,100 MW between editions (ETYS 2022 to 2024), and the ETYS 2025 scenarios span 25,300–27,900 MW in 2040. On NESO's B6 path, the 2040 shortfall at NGET's utilisation is 3,000–4,600 MW, less than that movement.
- The figures are the tail of the distribution. The 95th percentile is the flow exceeded in 5% of hours. The ETYS 2025 75th-percentile mean for 2040 is about 17,000 MW, well within existing capability. The size of the need depends heavily on sizing to the 95th percentile rather than testing the 75th–95th band.
- The inputs are still moving. FES 2025 largely predates the outcome of connections reform, with Gate 2 offers still being issued. Offshore wind delivery, demand growth and NESO's spatial planning could all change B9 flows. Ofgem has already said, in its decision on WCN2, now the Cross Border Connection (quoted in this review's Grimsby West–Walpole report), that the scope or optimal date of B6 reinforcement may look quite different after connection reform and the Strategic Spatial Energy Plan.
- B6 is falling faster than B9. If B6 flows continue to fall, the B6 restriction could persist beyond 2040, extending the period in which non-build measures are sufficient.

A medium-term B9 need is credible if B6 is reinforced beyond published works, but its timing and size are not settled. That favours an adaptive approach: deploy measures that work under most outcomes now, such as modular, relocatable power flow control and HVDC power-order management; keep WMEL in development; and confirm the timing of new build against further ETYS editions. NGET should compare the regret of building WMEL for 2036 if flows come in low with the regret of later delivery if they come in high, with power flow control bridging the gap. Neither the SOR nor NESO's published assessment presents that comparison.

9.6. B9 capability with Option 4 and basis of sizing

The SOR sets the B9 need at 7,613 MW but does not quantify the B9 capability uplift of any option. Para 6.8.41 says only that all options provide a B9 boundary uplift "with minimal differential between them". Paras 7.2.5–7.2.7 state that Option 4 meets the B9 need without a post-reinforcement capability figure.

NGET's own tables suggest a large gap:

- Capacity added: between Table 4.1 and Table 4.2, Grimsby–Walpole plus EGL3–4 add about 10,900 MW of pre-fault capacity (24,411 to 35,341 MW) and 10,400 MW of post-fault capacity (18,033 to 28,411 MW).
- Capability gained: post-fault capability rises by only about 4,200 MW (14,104 to 18,288 MW), roughly 40% conversion.
- Implication for WMEL is uncertain: at the same overall 40% conversion, a 6,652 MW double circuit would add about 2,700 MW of B9 capability against a stated 7,600 MW need. The circuit build-up above gives 3,900–5,000 MW. If WMEL converted no better than the AC part of Grimsby West–Walpole appears to, it would add much less.

This is a linear reading of a non-linear problem. The SOR should state B9 capability with Option 4 in service so that this can be checked.

Para 4.4.11 notes that ETYS indicates a possible need for reinforcement where capability lies between the 75th and 95th percentile bands of annual flows. Para 4.4.12 then sets the requirement at the average 95th percentile. A trigger for considering reinforcement has become the sizing target.

Para 4.4.10 also says the boundary assessments on the SQSS Economy Planned Transfer already account for generation contribution, then uses ETYS percentile flows instead. The SQSS basis of the 25,901 MW requirement is therefore unclear.

10. Sensitivity: Cross Border Connection

NGET has advised that it is progressing the Cross Border Connection (CBC), the project NESO previously identified as WCN2, a new 400 kV double circuit from Gala North via Teviot to a new substation in the Carlisle area, connecting to the existing Harker–Hutton line. NGET states CBC will carry up to 6,900 MW and be operational by 2033. CBC is not shown in ETYS 2025 Appendix B up to 2033/34. The English section requires a DCO, and the Scottish section requires Section 37 consent. At this stage there is significant uncertainty about when CBC will be commissioned.

This section assesses the impact of CBC on the need case for WMEL, assuming commissioning in 2035, the earliest realistic date on recent NGET overhead line timescales. The base case holds B6 at 17,900 MW on published works; this section adds CBC.

B6 capability with CBC is shown in Table 8-1, the resulting B9 flows in Table 9-4 and the margins in Table 9-3. With CBC, B9 flow rises by 4,500 MW to about 22,000 MW from 2035, or 23,000–24,000 MW with operational actions, and then stays flat because B6 at 22,400 MW caps it.

- CBC takes B9 to its limit. With CBC in 2035, the full network is at its limit at NGET's implied utilisation (0 to +800 MW), and 1,000–1,800 MW short once NESO's operational actions are included. Power flow control at 75% covers it with 3,300–5,900 MW to spare.
- With CBC, power flow control alone covers the B9 transfer on the full network, subject to the Walpole outlet. WMEL at NGET's utilisation gives 2,100–4,700 MW of margin. The SOR tests neither power flow control nor a staged option.
- CBC flow crosses B9 mainly in the west. CBC lands its flow at Carlisle and Harker, so the added transfer crosses B9 mainly on its western circuits, which are loaded below 50%, rather than through the Walpole outlet.
- Beyond CBC, the need grows with further B6 reinforcement. Each further B6 reinforcement that loads B9's AC network adds to the B9 requirement. EGL6 does not, and no other such project has been published.
- CBC timing is material. Before CBC, published B6 works cap B9 flow at about 17,000–20,000 MW, which the full network carries at NGET's utilisation. CBC is the first project NGET is progressing that takes B9 to the limit at NGET's utilisation, so its date sets the earliest point at which B9 reinforcement, by power flow control or new capacity, is needed.

The analysis assumes each MW of B6 restriction reduces B9 flow by one MW, and 2041+ B6 flows are estimated. It addresses boundary totals; the Walpole-area findings elsewhere in this review are unchanged. NGET should confirm the CBC programme, the CBC date assumed in its WMEL need case, and the B6 capability and reinforcements it assumes after 2038.

11. LE1 and EC5

On NESO's published figures, LE1 is within about ±1,000 MW of capability from 2033 and EC5 is in surplus to 2036. Neither shows a need on the scale of the SOR. EC3 is not published in any ETYS chart data, so the SOR's 6,930 MW can't be checked from public data.

Table 11-1 LE1 and EC5 flows against published capability (MW)

Year	LE1 flow / capability (MW)	LE1 surplus (MW)	EC5 flow / capability (MW)	EC5 surplus (MW)
2030	15,600 / 10,600	−5,000	10,000 / 4,900	−5,200
2033	17,800 / 18,400	+500	12,100 / 12,300	+200
2035	18,700 / 18,400	−300	11,400 / 12,300	+900
2036	19,300 / 18,200	−1,100	10,900 / 12,300	+1,300
2040	20,600 / 20,500	−100	13,700 / 12,300	−1,400

ETYS 2025, three-scenario mean 95th percentile against published capability. ETYS 2024 showed LE1 in surplus by 2,700–3,600 MW from 2035.

- 2030 is an outlier at both boundaries. Published capability dips to 10,600 MW (LE1) and 4,900 MW (EC5), the same pattern as the B8 dip to 10,500 MW. That looks like outage or construction sequencing, not structural need.
- LE1 depends on whether WMEL is already in the published capability. LE1 capability steps up by about 2,200 MW in 2033, when WMEL is due. If that step is WMEL, LE1 without WMEL would be about 2,500 MW short in 2035, and WMEL would be adding only about 2,200 MW of LE1 capability from a new double circuit.

- EC5 is not affected by WMEL. Its published capability is flat at 12,300 MW from 2031 to 2045, with no step in 2033. That is consistent with NESO's June 2026 update attributing WMEL's benefit to B9 and LE1. EC5I in ETYS 2024 is the same boundary with the Beyond 2030 capability path.

A circuit build-up at 75% utilisation, using the ratings in this review's 2023 East Anglia report with Sea Link at full rating, gives about 10,700 MW with Bramford–Twinstead, 12,700 MW with Sea Link and 17,700 MW with Norwich–Tilbury. That is below NESO's 12,300 MW until Sea Link connects, so the need test uses NESO's published capability. On that basis EC5 is adequate to 2036: flows are 10,900–12,100 MW from 2033 to 2036, and the 1,400 MW shortfall in 2040 is covered by Sea Link alone.

- WMEL is not needed for EC5, as the SOR (paras 4.6.1–4.6.2, which include EC5 only "for completeness" and state no EC5 requirement) and NESO's attribution of LRN7's benefit to B9 and LE1 both indicate.
- EC5 and the Walpole outlet share the Burwell circuits. The worst EC5 fault after Bramford–Twinstead is the loss of the Walpole–Burwell double circuit, which pushes Walpole power through East Anglia to Bramford. The same circuits carry the Walpole outlet, so power flow control on Burwell–Walpole (NESO's BWQB) acts on both. As Sea Link and Norwich–Tilbury take East Anglian export south, less of it is likely to reach Walpole via Necton, easing the outlet case.

12. Connection background, September 2026

Connections reform has not changed the Walpole-area need: the projects that drive it are committed. The September 2026 TEC and interconnector registers were compared with the June 2025 register.

Table 12-1 Connection background, September 2026

Project	Status (September 2026)	Effect on WMEL
EGL3 + EGL4 (4,000 MW, Walpole B)	Committed TO projects, 2033–34	Main driver of the windy case
Outer Dowsing / GT R4 (1,500 MW, Weston Marsh)	Consent granted February 2026; first power 2030	Windy case
Walpole Flexible Generation (2,000 MW)	Scoping, Gate field blank	Calm case only
Norfolk001 (860 MW solar and storage)	Scoping, Gate field blank	Marginal
Mablethorpe Storage (1,500 MW)	No longer on the register	Removes Lincolnshire calm-case infeed
Mablethorpe Green Energy Centre (1,025 MW) and EcoMablethorpe (249 MW)	Gate 1	Removes Lincolnshire infeed
Seneca / NU-Link (1,200 MW, Mablethorpe)	Scoping, 2031, Gate field blank	Calm-case infeed via Grimsby West–Walpole
Viking Link (1,500 MW, Bicker Fen)	Built	Affects B9, not the Walpole group

- The binding Walpole case is unchanged. The summer windy export is EGL3–4 plus Outer Dowsing, both committed.
- The calm cases depend on uncommitted projects. Walpole Flexible Generation and Seneca are both at scoping stage.
- Lincolnshire infeed arriving via Grimsby West–Walpole has largely gone. Excluding Gate 1, only Seneca remains at Mablethorpe. The Lincolnshire infeed case in the Walpole-area section below now rests mainly on Seneca.

13. Walpole-area connection need (EC3)

There is a genuine SQSS connection need out of the Walpole area once EGL3–4 connect. Walpole and Walpole B export far more than they use, through two outlets: south to Burwell and Pelham, and east to Necton and Norwich (Figure 13-1). NGET's EC3 trips are the loss of either outlet double circuit (SOR Image 4.4), which moves all of the export onto the other. In summer windy conditions the result ranges from within limits to about 2,400 MW short with EGL3–4, and up to about 4,400 MW short with EGL5. That is well below the 6,930 MW the SOR quotes, which is the rating of one double circuit, not a measured shortfall.

Table 13-1 Infeed, winter windy / winter calm / summer windy / summer calm (MW)

Source	Scaled export
Walpole contracted generation (5,112 MW TEC, 1,560 MW built)	54 / 3,564 / 161 / 2,161
Weston Marsh (Outer Dowsing 1,500 MW plus 1,230 MW solar and storage)	1,322 / 62 / 1,444 / 184
EGL3 + EGL4 at Walpole B	4,000 / 0 / 4,000 / 0
Walpole and Weston Marsh group	**5,376 / 3,626 / 5,605 / 2,345**

Scaling: wind at 84% when windy (the credible maximum east-side loading with B9 secure), HVDC links at 100%, gas plant (CCGT) only when calm, solar 5% winter and 15% summer, storage 0.

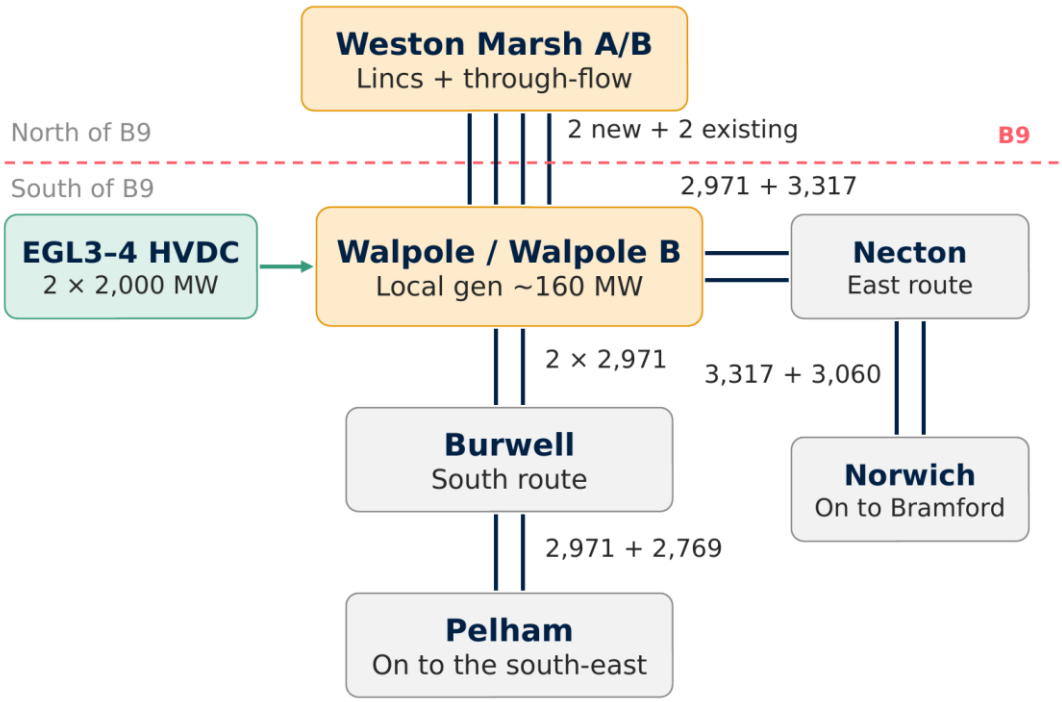


Figure 13-1 Circuits at Walpole and Walpole B, 2033/34 summer ratings (MVA). Pairs of lines are double circuits; four circuits run north to Weston Marsh, two existing and two new.

Table 13-2 Walpole outlet circuits, 2033/34

Circuit	Winter (MVA)	Summer (MVA)
Walpole B–Burwell 1	3,326	2,971
Walpole B–Burwell 2	3,326	2,971
Burwell–Pelham 1	3,326	2,971
Burwell–Pelham 2	3,326	2,769
Walpole–Necton 1	3,326	2,971

Circuit	Winter (MVA)	Summer (MVA)
Walpole–Necton 2	3,326	3,317
Necton–Norwich 1	3,326	3,317
Necton–Norwich 2	3,326	3,060

Source: ETYS 2025 Appendix B, 2033/34. With power flow control equalising loading within each pair, the Burwell route is limited to about 5,740 MW in summer by Burwell–Pelham, and the Necton route to about 6,290 MW, before Necton generation. In winter both carry about 6,650 MW.

Necton is one of Walpole's two outlets. After the loss of Walpole–Necton, Necton's own generation leaves via Norwich and plays no part at Walpole, and Walpole's export must go south on the Burwell route. After the loss of Walpole–Burwell, all of it moves onto the Necton route, together with any Necton generation.

The export depends on how much power arrives from Weston Marsh. The local infeed (Outer Dowsing, solar and the Lincolnshire infeed) is about 1,730 MW in summer windy conditions, and Humber through-flow arriving on the Lincolnshire circuits adds to it. This review takes a range, from no Weston Marsh flow reaching Walpole after the fault to about 4,000 MW persisting. With two lines from Weston Marsh into the Walpole group, more of that flow is likely to reach Walpole, so the upper end is the more realistic; only a load flow can fix where the result falls. Viking Link at Bicker Fen does not help: it sits outside the group.

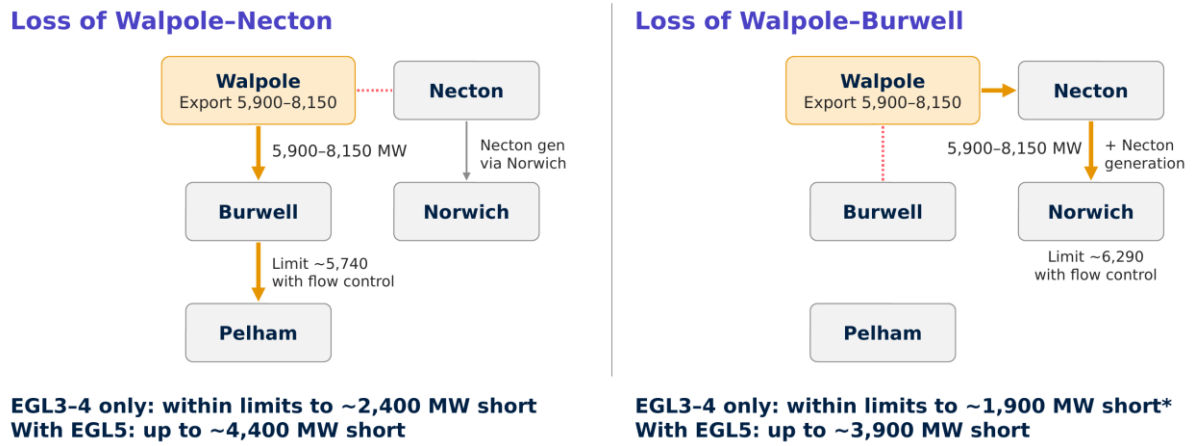


*Figure 13-2 NGET's two EC3 trips (SOR Image 4.4), summer windy. Range: from no Weston Marsh flow reaching Walpole after the fault, to about 4,000 MW persisting. * Plus any Necton generation.*

- The need follows the EGL3–4 programme. Before EGL3–4 connect, the summer windy export is about 1,900–4,150 MW, within the capacity of either outlet. The limit is reached in 2033–34, matching WMEL's 2033 date.
- The landing decision drives it. EGL3–4 supply 4,000 MW of the windy export. With one link landed elsewhere, the export falls by 2,000 MW and the summer windy case is within limits, or about 400 MW short at the top of the range. No test of this is presented.
- Power flow control is already in these figures. The route limits assume flow control equalises loading within each pair, which adds about 200 MW on Burwell–Pelham. Beyond that, closing the shortfall needs a reduction in what reaches Walpole.
- The SOR does not use the HVDC links to manage the fault. The SOR treats EGL3 and EGL4 as fixed 2,000 MW infeeds (paras 4.4.7, 4.5.2) and does not mention EGL5. Reducing the EGL3–4 power order after the Walpole double-circuit fault would move part of the north–south transfer from the DC path onto the parallel AC routes. No generation is tripped or curtailed: the links act as a power flow control device would. The B6 circuits are intact after the

Walpole fault and loaded within their ratings; B6 capability binds only after its own critical fault, which is not a second secured event. Re-securing after a rare Walpole double-circuit fault is an operational matter.

- Scale of adjustment. Runback is taken as about 50% effective, because part of the redistributed AC flow returns to Walpole, for example via Weston Marsh. At the lower end of the range little or no runback is needed. At the upper end without EGL5, clearing about 2,400 MW would need about 4,800 MW of runback, more than the 4,000 MW EGL3–4 power order. With EGL5, a shortfall of up to about 4,400 MW is beyond runback. The required adjustment should be quoted as an order of magnitude until a load flow gives the sensitivity factor.
- Relation to EGOS. NESO's June 2026 update recommends EGOS, an operational tripping scheme on the East Coast that manages flows from two eastern offshore links and is credited on B9 and LE1. HVDC power-order adjustment is a different measure: flow control, not tripping. Neither appears to be included in the SOR's need figures.
- Part of the need depends on Grimsby West–Walpole. It brings Humber through-flow and EGL5 to Weston Marsh, and on to Walpole. Without it, the local need would sit nearer the lower end of the range.
- EGL5 connects at LCS-B, north of Weston Marsh on the Grimsby West–Walpole route. NGET's EGL5 consultation confirms this connection point, which is NGET's choice. EGL5 was designed around Grimsby West–Walpole, so it can't independently justify either line. The whole-system comparison is EGL5 at LCS-B plus reinforcement, against EGL5 extended to Walpole or further south.

The tables below apply this balance to a range of cases. They represent an extreme condition: the HVDC links at full output when the Walpole double-circuit fault occurs, and AC-connected infeeds north of Walpole at 84%, the credible maximum east-side loading while B9 remains secure.

Table 13-3 Post-fault balance: summer windy

Case	Export (MW)	Loss of Walpole–Necton (MW)	Loss of Walpole–Burwell (MW)	Worst balance (MW)	Runback to clear worst case, 50% effectiveness
EGL3–4, local infeed only	5,890	−150	+400	−150	300 MW (8% of 4,000 MW)
EGL3–4, Weston Marsh flow ~4,000 MW	8,150	−2,410	−1,860	−2,410	4,820 MW (more than 4,000 MW)
+ EGL5, local infeed	7,890	−2,150	−1,600	−2,150	4,300 MW (72% of 6,000 MW)
+ EGL5, Weston Marsh flow ~4,000 MW	10,150	−4,410	−3,860	−4,410	8,820 MW (more than 6,000 MW)
EGL3–4 + WMEL	5,890–8,150	Within limits†	Within limits†	–	Not needed
+ EGL5 + WMEL	7,890–10,150	Within limits†	Within limits†	–	Not needed

Table 13-4 Post-fault balance: winter windy

Case	Export (MW)	Surviving route, worst trip (MW)	Balance (MW)
EGL3–4, local infeed only	5,660	~6,650	+990
EGL3–4, Weston Marsh flow ~4,000 MW	8,050	~6,650	−1,400
+ EGL5, local infeed	7,660	~6,650	−1,010
+ EGL5, Weston Marsh flow ~4,000 MW	10,050	~6,650	−3,400

Case	Export (MW)	Surviving route, worst trip (MW)	Balance (MW)
+ WMEL	–	–	Within limits†

Local infeed: Outer Dowsing, solar and the Lincolnshire infeed (Table 13-1). The Weston Marsh flow of about 4,000 MW includes Humber through-flow. † WMEL gives Weston Marsh an outlet that bypasses Walpole, so less of its flow reaches Walpole; to be confirmed by load flow. Necton generation adds to the loss-of-Burwell case.

What the tables show

- The HVDC links and the Weston Marsh flow set the result. EGL3–4 provide 4,000 MW of the export; the rest depends on how much power arrives from Weston Marsh.
- Without EGL5, the shortfall ranges from within limits to about 2,400 MW. Power flow control and EGL3–4 runback cover the lower part of the range; at 50% effectiveness, runback cannot clear the upper end.
- With EGL5, the shortfall reaches 2,150–4,400 MW, beyond what non-build measures can credibly cover, so the case for new outlet capacity is strong.
- WMEL reduces the flow into Walpole. It gives Weston Marsh an outlet that bypasses Walpole, so less Lincolnshire infeed, through-flow and EGL5 reaches Walpole. Every case is expected to move within limits, to be confirmed by load flow.
- Summer is binding. Winter shows a deficit only once Humber through-flow or EGL5 is added.

14. Assessment and questions for NGET

The findings are summarised in Table 14-1. The need for WMEL is driven by Walpole exports and by B9 transfers. The open question is when each is triggered: the Walpole outlet with EGL3–4 in 2033–34, and B9 with the CBC or NESO's further B6 reinforcement (Figure 1-1). No option combining power flow control now with new capacity later has been tested. Given that B9 forecasts have moved by up to 5,100 MW between ETYS editions, an adaptive approach that confirms the timing of new build against later editions would reduce the risk of building too early or too late.

Table 14-1 Summary of findings

Driver	Verdict	Basis
Walpole outlet (EC3), EGL3–4	Genuine need from 2033–34	Losing the Burwell or Necton double circuit leaves Walpole from within limits to about 2,400 MW short in summer windy conditions, depending on the flow from Weston Marsh. Power flow control and runback cover the lower end. The SOR's 6,930 MW is a double-circuit rating, not the shortfall.
Walpole outlet, with EGL5	Genuine need, conditional	Up to about 4,400 MW short, beyond what flow control and runback can credibly cover. Depends on EGL5 connecting at LCS-B, NGET's choice. WMEL reduces the flow reaching Walpole.
B9 boundary (SOR: −7,613 MW)	Depends on B6 reinforcement	On the network in NGET's proposals, B9 capability is about 22,200 MW at NGET's utilisation and 27,300 MW with power flow control. Published B6 works: 4,500–5,300 MW spare. CBC: at the limit, 1,000–1,800 MW short with operational actions. NESO's B6 path: limit about 2038, 3,000–4,600 MW short by 2040. With power flow control, margin to 2040 on every basis, subject to the Walpole outlet.
B9 capability (SOR: 18,288 MW)	To be confirmed	Matches a network without the existing Weston Marsh–Walpole line, which NGET's Grimsby to Walpole proposals retain. Counting it adds about 6,650 MW of post-fault capacity.
LE1 (NESO's boundary for WMEL)	Not assessed in the SOR	Within ±1,000 MW of published capability from 2033. Depends on whether WMEL is already in the published capability path.

Driver	Verdict	Basis
Timing of WMEL	Not demonstrated	NGET plans 2033 and NESO's optimal date is 2036. The Walpole outlet triggers in 2033–34; B9 about 2038 on NESO's B6 path, or with the CBC if operational actions are counted. No staged option is presented.

Questions for the consultation response

1. **Timing:** WMEL relieves both the Walpole outlet and B9. When does each first need reinforcement in NGET's analysis, and which sets the 2033 in-service date?
2. **Walpole outlet:** What overload does the SOR find after losing the Burwell or Necton circuits, and how much flow from Weston Marsh does it assume, with and without WMEL and EGL5? The 6,930 MW quoted is the rating of a double circuit, not the overload.
3. **B9 capability:** Does the SOR's 18,288 MW B9 capability include the existing Weston Marsh–Walpole line as well as the new Grimsby to Walpole line? ETYS 2025 Appendix B omits it. What B9 capability does WMEL add?
4. **B9 transfers:** What B6 reinforcement and CBC date does the B9 need assume, and does it count NESO's operational actions? Which projects make up the steps in ETYS 2025's B9 capability in 2038 and 2041?
5. **Alternatives:** Have power flow control or post-fault reduction of the EGL3–4 power orders been tested, alone or staged with new build, as NGET's policy requires? If not, why not?
6. **Forecast risk:** B9 forecasts have moved by up to 5,100 MW between ETYS editions. Has building WMEL for 2033 been compared with a staged approach on a regret basis?

15. Source

National Grid, Weston Marsh to East Leicestershire – Stage 2 Consultation Document, September 2026 (uploaded PDF). National Grid, Weston Marsh to East Leicestershire – Strategic Options Report Update (EN0210007, v0.2), August 2026 (uploaded PDF). NESO, ETYS 2025 Boundary Chart Data (uploaded workbook). NESO, ETYS 2025 Appendix B, Supplementary Technical Data (uploaded workbook). NESO, Beyond 2030 Electricity Transmission Update, June 2026. National Grid, Cross Border Connection Stage 1 consultation, October 2025. National Grid, Grimsby to Walpole – Preliminary Environmental Information Report, Chapter 3, June 2025; Weston Marsh targeted consultation document, November 2025. NESO, ETYS 2022, 2023 and 2024 Boundary Chart Data.

Annex A: consultation brochure review

The September 2026 Stage 2 consultation brochure rests the need on four general drivers: a legacy network built in the 1960s, the shift of generation offshore and to the east coast, demand forecast to more than double by 2050, and the government's target of 50 GW of offshore wind. It adds that NESO "has identified" the need. It does not quantify the need or cite the NESO publications behind it. Its alternatives are route and siting choices and overhead line versus underground cable; power flow control, dynamic line rating, network reconfiguration and uprating other corridors are not mentioned, and none of the documents it names deals with the need case. The SOR is therefore the basis of this review.

Annex B: glossary

Table B-1 Glossary

Term	Meaning
Allowance for unequal sharing	The adjustment applied to post-fault capacity to allow for power dividing unevenly between circuits after a fault. Expressed as network utilisation.

Term	Meaning
B6, B8, B9	NESO boundaries: B6 Scotland–England; B8 northern England to the Midlands; B9 the Midlands to the south.
LE1, EC5	NESO boundaries around London and the south-east (LE1) and East Anglia (EC5).
EC3	A local boundary around the Walpole area used in NGET's SOR; not published by NESO.
BRQB, BWQB	NESO-recommended power flow control options: on the new East Midlands circuit (BRQB) and on Burwell–Walpole (BWQB).
CBA	Cost-benefit analysis: comparing an option's cost with the constraint costs it avoids.
CCGT	Combined-cycle gas turbine power station.
DCO	Development Consent Order: the planning consent for a nationally significant project.
EGL3, EGL4, EGL5	Eastern Green Links: 2,000 MW HVDC subsea links from Scotland. EGL3–4 land at Walpole B; EGL5 at LCS-B on the Grimsby West–Walpole route.
EGOS	NESO-recommended operational tripping scheme on the East Coast.
ETYS	Electricity Ten Year Statement: NESO's annual publication of boundary flows and capabilities.
FACTS, SSSC	Flexible AC transmission devices; an SSSC is a series device used for power flow control.
FES	Future Energy Scenarios: NESO's pathways for demand and generation.
Gate 1, Gate 2	Stages in the reformed connections queue; Gate 2 projects have firm connection offers.
GIL	Gas-insulated line: an underground alternative to cable.
GW–W	Grimsby West to Walpole: the separate NGET 400 kV project that builds Weston Marsh A and B, the Lincolnshire connection substations and Walpole B, and keeps the existing Weston Marsh–Walpole line.
HND, NOA, tCSNP2	NESO's successive network planning assessments: Holistic Network Design, Network Options Assessment and the transitional Centralised Strategic Network Plan.
HVDC	High-voltage direct current: links whose power transfer can be set and controlled.
LCS-B	Lincolnshire Connection Substation B, on the Grimsby West–Walpole route.
LRN4, LRN6, LRN7	NESO option codes for successive versions of this reinforcement; LRN7 is WMEL.
MVA	Unit of circuit rating; treated as MW in this note.
NESO, NGET, TO	National Energy System Operator; National Grid Electricity Transmission; transmission owner.
NSIP	Nationally significant infrastructure project.
OHL	Overhead line.
Proceed (Critical), Proceed (Maintain)	NESO investment signals: needed on its earliest date; or development should continue, with an optimal date within three years of earliest delivery.
Reconductoring	Replacing a line's conductors with higher-rated ones on the existing pylons.
RIIO-T3	Ofgem's price control for transmission, 2026–2031.
Post-fault capacity	The combined rating of the circuits crossing a boundary after the secured event has removed the faulted double circuit.
SOR	NGET's Strategic Options Report for WMEL.
SQSS	Security and Quality of Supply Standard: the planning standard the network must meet.
TEC	Transmission Entry Capacity: a generator's contracted export to the network.
95th percentile	The flow exceeded in only 5% of hours in NESO's modelled year.
Walpole B	New 400 kV substation near Walpole, on the Burwell–Walpole circuits, built by Grimsby to Walpole and coupled to the existing Walpole substation. EGL3–4 connect here.
Weston Marsh A, B	Two new 400 kV substations near Spalding, linked by a 3 km cable, built by Grimsby to Walpole. The existing Bicker Fen and Spalding North circuits turn in here; WMEL connects at Weston Marsh B.

Annex C: B9 boundary reconciliation with ETYS 2025

This annex compares ETYS 2025's annual B9 capability and the SOR's B9 figures with a circuit build-up, and sets out the network topology this review uses. The method is the one used for B6: winter ratings by year, the secured event as the loss of the faulted double circuit, a utilisation factor applied to the remaining AC circuits only, and HVDC added at full rating.

ETYS 2025 annual B9 capability

Table C-1 ETYS 2025 B9 capability (MW, all scenarios)

Years	Capability	Step
2025	11,500	
2026–29	12,900	+1,400
2030–32	14,104	+1,204 (SOR Table 4.1)
2033–35	16,223	+2,119
2036–37	18,288	+2,065 (SOR Table 4.2: Grimsby West–Walpole, EGL3–4)
2038–40	23,768	+5,480
2041–45	26,082	+2,314

Source: NESO, ETYS 2025 Boundary Chart Data.

Weston Marsh and Walpole

NGET's Grimsby to Walpole proposals turn the existing Bicker Fen and Spalding North circuits into two new substations at Weston Marsh, linked by a 3 km cable, and keep two routes south: the existing 400 kV line to Walpole and a new line from Weston Marsh B to Walpole B. ETYS 2025 Appendix B differs. It removes the existing Bicker Fen and Spalding North–Walpole circuits in 2030 and shows only the new Weston Marsh B–Walpole B pair from 2033, which would leave Walpole with no northern connection between 2030 and 2033. This review follows NGET's project descriptions (Figure C-1).

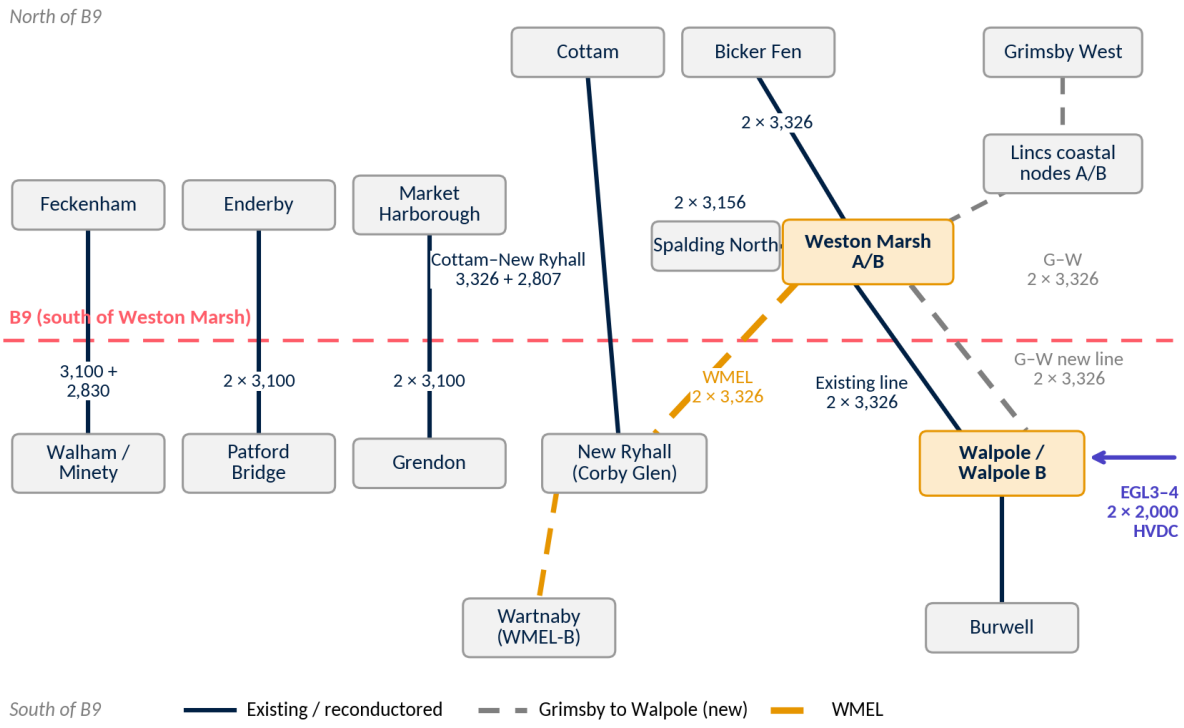


Figure C-1 B9 crossing circuits in 2036 on the network in NGET's proposals, schematic, winter ratings (MVA). Boundary location inferred from the reconciliation below.

Table C-2 Reconciliation with the SOR, 2036 (AC only, MW)

	Build-up without the existing line (as Appendix B)	Build-up with the existing line (NGET's proposals)	SOR Table 4.2, less 4,000 MW HVDC
Intact capacity	31,115	37,767	31,341
Post-fault capacity	24,463	31,115	24,411
AC utilisation at ETYS 18,288 MW	58.4%	45.9%	58.5%

It can be seen from Table C-2 that the SOR's figures agree, within about 200 MW, with a build-up that leaves out the existing Weston Marsh–Walpole line. This indicates two things. First, the SOR's capacities include the ETYS 2024 reconductoring. Second, the SOR's B9 figures appear to rest on the same network as Appendix B, without the existing line that NGET's Grimsby to Walpole proposals retain. Counting it adds about 6,650 MW of post-fault capacity. Either NGET's 18,288 MW capability understates B9, or, if the existing line is included, NGET's network converts only about 46% of its post-fault AC capacity into capability. NGET should confirm which network the SOR used. Counting the Lincolnshire–Walpole line as a B9 crossing is the method used in this review's Grimsby West–Walpole report.

Assumptions and open points

- Boundary location. B9 south of Weston Marsh is inferred from the reconciliation, not taken from a published boundary definition.
- Weston Marsh substations. NGET proposes Weston Marsh A and B, linked by a 3 km cable; WMEL connects at Weston Marsh B. They are treated as one hub.
- Cottam–Market Harborough. In 2033 this circuit is re-terminated at New Ryhall. If New Ryhall is south of B9 it would add about 3,300 MW of crossing capacity. It is not counted here.

- B6 timing. NESO's B6 capability steps up in 2027 and 2029 but not in 2033, which suggests NESO assumes earlier EGL1–2 and later EGL3–4 than Appendix B. It does not change the 2035+ comparison.
- Loading basis. HVDC links at 100% and AC infeeds at 84% is presented as an extreme condition. Confirm the 84% east-side maximum against B9 secured-event studies.
- Method. Capacity balance, not a load flow. Humber through-flow is represented as a range, up to about 4,000 MW of Weston Marsh flow reaching Walpole.
- Ratings. ETYS 2025 Appendix B, 2033/34 for the Walpole outlet and 2036 for B9. New and reconductored circuits are taken at 3,326 MVA per circuit, the Appendix B rating for new lines; the existing Weston Marsh–Walpole line is assumed reconductored to this rating.
- WMEL rating. 3,326 MVA winter and 3,320 MVA summer per circuit, from ETYS 2025 Appendix B. NGET's 6,930 MW is its generic figure for a new double circuit.
- Runback effectiveness. About 50%, because part of the redistributed flow returns to Walpole via Weston Marsh. The true factor needs a load flow.
- Sharing. Power flow control is assumed to equalise loading within each outlet pair. Without it, the weaker circuit sets the limit and the Burwell route carries about 200 MW less.
- Infeeds. Outer Dowsing at 84% (1,260 MW) plus solar; Lincolnshire infeed 282 MW (now mainly Seneca); Humber through-flow as a range, up to about 4,000 MW of Weston Marsh flow in total; EGL5 up to 2,000 MW reaching Weston Marsh via LCS-B (confirmed by NGET's EGL5 consultation).
- Planning background to confirm. The Walpole results assume the SQSS treats the Walpole group with EGL3–4 at full output coincident with the fault. If an economy-scaled background applies, the requirement is smaller.

Appendix B – AAH Technical Memorandum 03

Technical Memorandum 03 (AAH TM03): Comments on Draft ES – Landscape and Visual

Lincolnshire County Council, South Holland District Council, South Kesteven District Council: Review of National Grids Weston Marsh to East Leicestershire (WMEL) Draft Environmental Statement - Landscape and Visual

Introduction

AAH Consultants have reviewed the *Weston Marsh to East Leicestershire (WMEL) Draft Environmental Statement* and supporting documentation, submitted as part of the 2026 Stage 2 Consultation, on behalf of Lincolnshire County Council (LCC), South Holland District Council (SHDC) and South Kesteven District Council (SKDC), in relation to Landscape and Visual matters.

This review focuses on the sections of the Project within Lincolnshire, specifically those affecting South Holland and South Kesteven, and the associated landscape and visual effects relevant to those authorities.

Information has been downloaded from: Document library WMEL | National Grid, and the documents that have been reviewed are as follows:

Stage 2 Consultation Documents

- Stage 2 Consultation Document.
  - Route Section 1 – South Holland: Stage 2 proposal plans and environmental constraints plans;
  - Route Section 2 – South Kesteven: Stage 2 proposal plans and environmental constraints plans;
  - Relevant Stage 2 photomontages;
  - Relevant Stage 2 operational fly-throughs; and
  - Relevant Stage 2 construction animations.

Draft Environmental Statement

- Chapter 3 – Main Alternatives Considered, and associated figures;
- Chapter 4 – Description of the Project, and associated figures;
- Appendix 4A – Draft Outline Code of Construction Practice;
- Chapter 5 – EIA Approach and Methodology;
- Appendix 5B – Scoping Opinion;
- Appendix 5C – Preliminary Scoping Opinion Responses;

- Chapter 6 – Landscape;
- Appendix 6A – Landscape Assessment Methodology;
- Appendix 6B – Preliminary Landscape Baseline and Assessment;
- Appendix 6C – Draft Outline Landscape and Ecological Management Plan;
- Chapter 6 Figures – Part 1 of 2;
- Chapter 6 Figures – Part 2 of 2;
- Chapter 7 – Visual;
- Appendix 7A – Visual Assessment Methodology;
- Appendix 7B – Preliminary Visual Baseline and Assessment;
- Chapter 7 Figures – Part 1 of 2;
- Chapter 7 Figures – Part 2 of 2; and
- Chapter 19 – Cumulative Effects.

The purpose of this Technical Memorandum is to provide the findings of the independent technical review of the landscape and visual elements of National Grids WMEL Draft ES, with a focus on *Chapter 6: Landscape* and *Chapter 7: Visual* and their associated figures and appendices. This review has been undertaken with reference to Landscape Institute Technical Guidance Note (TGN) 1/20 *Reviewing Landscape and Visual Impact Assessments (LVIAs) and Landscape and Visual Appraisals (LVAs)*, the *Guidelines for Landscape and Visual Impact Assessment, Third Edition* (GLVIA3, 2013), and relevant supporting guidance cited within Chapter 6 and Chapter 7 of the Draft ES.

This review takes into account previous AAH comments provided on behalf of the Councils, including AAH Technical Memorandum 01: *Landscape and Visual Scoping Opinion* (December 2025) and AAH Technical Memorandum 02: *Visual Amenity: Initial Viewpoint Comments* (April 2026), together with discussions held in subsequent Landscape and Visual Technical Working Group meetings and consultation with the Applicant's landscape team. Previous comments have been reviewed against the Draft ES to establish where matters have been addressed and where further clarification, assessment or refinement is required.

The comments provided are intended to assist in guiding the continued development of the Scheme, refinement of the Landscape and Visual Impact Assessment (LVIA), associated mitigation and design proposals, and preparation of the final Environmental Statement. This review does not represent a final assessment of the landscape and visual effects of the Scheme, which will remain subject to review as the design and assessment are further developed for the DCO application.

AAH undertook site visits on 16th June 2026 and the 13th October 2026 to review the landscape context of the proposed development, consider the potential landscape and

visual effects on surrounding receptors, and inform its review of the Draft ES. AAH also attended a Design Appraisal Session on 14th October 2026, providing an opportunity to discuss the developing proposals and consider opportunities for further design refinement and mitigation. The findings from these visits and discussions have informed the observations and recommendations set out in this Technical Memorandum.

Summary of PINS scoping opinion and NG response

In relation to landscape matters, PINS agreed that landscape designations and Landscape Character Areas (LCAs) located outside the final Zone of Theoretical Visibility (ZTV) may be scoped out, subject to the final ZTV and study area being informed by fieldwork and the methodology being agreed with relevant consultation bodies, including the local authorities. PINS recognised that the final ZTV may extend beyond the initially proposed 3km study area.

PINS also considered the proposed scope of assessment for individual landscape receptors and different phases of the Project, including Registered Parks and Gardens and the proposed reconductoring works. Where matters were agreed to be scoped out, this was generally dependent upon the nature, extent and duration of the anticipated change and the evidence available at the scoping stage.

In relation to visual matters, the Scoping Opinion considered the proposed scope of visual receptors and effects associated with the construction, operation and maintenance of the Project. The final scope of assessment should continue to reflect the evolving design and evidence base, including consultation undertaken with the relevant local authorities.

The Scoping Opinion should also be read in the context of PINS' overarching comments regarding the proposed use of the Rochdale Envelope approach. PINS expects the application-stage Project description to provide sufficient detail regarding the design, size, technology, location, footprint and height of the proposed infrastructure to enable the likely significant environmental effects of the Project to be properly identified and assessed. Where flexibility is retained, maximum design parameters and the resulting reasonable worst-case scenario should be clearly identified and consistently applied throughout the assessment.

National Grid has provided its preliminary response to the matters raised within the Scoping Opinion at Appendix 5C of the Draft ES. National Grid notes that the Scoping Report was prepared on the basis of a broad corridor before an alignment, construction compounds or haul roads had been identified, and that the Draft ES now presents draft Order Limits. National Grid confirms that matters PINS requested to be discussed with

consultees and included within the scope of the ES have either been considered within the Draft ES or are intended to be addressed within the final ES.

The relevant matters raised within the Scoping Opinion, together with National Grid's preliminary responses, have therefore been considered as part of AAH's technical review, with particular regard to whether the Draft ES provides sufficient information to demonstrate that these matters have been appropriately addressed, or whether the Draft ES identifies a clear commitment to their resolution within the final ES.

Review of Draft ES – General Comments on LVIA

This section is a review of the LVIA, associated figures and appendices in accordance with Landscape Institute Technical Guidance Note *TGN 1/20 (10 Jan 2020): Reviewing Landscape and Visual Impact Assessments (LVIAs) and Landscape and Visual Appraisals (LVAs)* together with reference to GLVIA3 (2013) and relevant supporting guidance cited within the LVIA.

Limitations of the Draft LVIA

It is acknowledged that the information presented within the Draft ES is preliminary and that the Project design, assessment and associated mitigation will continue to evolve prior to submission of the DCO application. Chapter 5 confirms that the design of the Project, Limits of Deviation (LoD) and Order Limits have not yet been finalised, and that the assessment has therefore sought to apply a realistic worst-case scenario where flexibility remains.

Chapter 4 identifies a number of areas where design flexibility remains. In particular, the horizontal and vertical LoD for the proposed substations have not yet been defined, while flexibility is also retained in relation to the alignment of the proposed overhead line, construction methodology and access arrangements. It is understood that these parameters will continue to be refined through the ongoing design, assessment and consultation process.

Chapters 6 and 7 acknowledge that the landscape and visual assessments have been undertaken using initial Project design information and that survey and assessment work remains ongoing. Further targeted landscape survey is proposed, while the visual assessment currently provides an initial indication of anticipated levels of change and effects from representative viewpoints and longdistance recreational routes. The final ES will therefore need to clearly identify any material changes to the design, baseline, assessment parameters or assumptions which have occurred following Stage 2 Consultation and demonstrate how these have been accounted for within the final assessment.

The Draft ES also makes a number of assumptions regarding vegetation removal and reinstatement. The preliminary assessment assumes that vegetation removed during construction will generally be reinstated, except where planting restrictions apply or vegetation is permanently lost to operational infrastructure. The extent of vegetation removal is not yet fully defined and will be influenced by the evolving design and construction requirements. This should be appropriately quantified and illustrated within the final ES, with the assessment updated where necessary to reflect the anticipated extent and permanence of vegetation loss.

The preliminary landscape and visual assessments consider operational effects without reliance on proposed mitigation planting, representing a precautionary approach at this stage. This is welcomed. The final ES proposes to assess effects at Year 1 and Year 15 where mitigation planting is relevant. Any mitigation relied upon in determining residual effects should therefore be clearly defined, deliverable, and appropriately secured, with realistic assumptions regarding establishment and growth.

Overall, the limitations associated with the preliminary nature of the Project are understood and are not considered unusual for this stage of the DCO process. However, as the design and assessment are refined, sufficient information will need to be provided within the final ES to demonstrate that the reasonable worst-case landscape and visual effects of the Project have been assessed.

Chapter 4 identifies a horizontal Limit of Deviation (LoD) for the proposed overhead line of generally 75m either side of the centreline (150m in total), together with an upwards vertical LoD of approximately 6m for standard lattice towers. Flexibility is also retained in relation to the longitudinal positioning of towers, while the horizontal and vertical LoD for the proposed substations have yet to be defined.

Furthermore, discussions during the in-person design review indicated that further refinement of the proposed overhead line alignment may be considered at specific locations, including Surfleet, Stainfield, the vicinity of Grimsthorpe Castle and the approach to WMEL-A Substation. These potential changes may have implications for the nature and extent of landscape and visual effects, including effects on residential receptors, recreational routes and valued views. Any material changes to the alignment or tower positions should therefore be accompanied by a review of the need for further Residential Visual Amenity Assessments (RVAAs), particularly where the proximity, scale or positioning of the proposed infrastructure could give rise to exceptionally adverse visual effects on individual and groups of residential properties and potentially reach the Residential Visual Amenity Threshold.

The final ES should therefore clearly identify any changes to the alignment, tower positions and heights, substation parameters and associated LoD, and demonstrate

how these have informed the landscape and visual assessments. Changes to construction areas, compounds and access arrangements, vegetation removal and mitigation proposals should also be reflected in the final ZTV, viewpoint analysis and assessment conclusions, where relevant.

Presentation of the Draft ES

The Draft ES is generally well structured and easy to follow, with landscape and visual matters presented separately within Chapters 6 and 7 and supported by their respective methodology, baseline and assessment appendices and figures. This approach works well for a project of this scale, allowing the different considerations and assessment findings for landscape and visual receptors to be clearly presented, whilst recognising the relationship between landscape character, visual amenity and perceptual qualities.

Given the length of the Project and the range of landscapes it passes through, the use of Project Sections and Visual Receptor Areas (VRAs) provides a useful way of breaking down and navigating the assessment. This is particularly helpful within the visual assessment, which includes 67 representative viewpoints and eight long-distance recreational routes.

The main LVIA chapters provide a useful summary of the assessment, with the more detailed assessment provided within Appendices 6B and 7B. The summary tables within Chapters 6 and 7 are welcomed and make the main assessment conclusions relatively easy to identify.

However, care should be taken when presenting effects on geographically extensive landscape receptors. For example, the preliminary assessment identifies an overall Minor Adverse, Not Significant effect on the Kesteven Uplands Landscape Character Area (LCA), whilst also acknowledging the potential for localised Significant effects in the vicinity of the proposed WMEL-A Substation. This distinction is not inherently inconsistent, as the magnitude and geographical extent of effects may vary across an LCA. Nevertheless, the final ES should ensure that areas experiencing more substantial localised landscape effects are clearly identified, with sufficient explanation of their geographical extent and the landscape characteristics affected. Particular attention should be given to the area surrounding WMEL-A, including the potential for cumulative landscape effects arising from the concentration of existing and proposed electrical infrastructure, so that these effects are not obscured by the overall assessment conclusion for the wider LCA.

The visual assessment considers residential and recreational receptors, using a series of representative viewpoints and long-distance recreational routes, with the detailed assessment provided within Appendix 7B. The grouping of visual receptors into Visual

Receptor Areas (VRAs) provides a useful framework for presenting the assessment. However, the final ES should ensure that the relationship between the identified visual receptors, representative viewpoints, ZTVs, visualisations and assessment conclusions remains clear, including how the findings from individual viewpoints are considered representative of the wider receptor groups. This will be particularly important where receptors experience sequential views along recreational routes, where views include multiple elements of the Project, or where individual residential properties may experience materially different effects from those identified at the nearest representative viewpoint.

Appendix 7A sets out the proposed methodology for the preparation of visualisations, including Type 1 annotated baseline panoramas and Type 4 photomontages in accordance with Landscape Institute TGN 06/19. It is noted that the Type 1 baseline photography identifies the use of a Sony A1 Mk1 mirrorless camera, although the camera make and model are not specified within the methodology. This should be clarified within the final ES, including confirmation of the camera and lens specifications used. As agreed through the Landscape and Visual Technical Working Groups, Type 4 photomontages should be provided from the agreed representative viewpoints to support the final assessment, with the methodology and supporting technical information clearly documented. It is noted that baseline photography is currently unavailable for a number of the representative viewpoints identified within Figure 7.3. It is assumed that these omissions will be addressed and a complete set of Type 1 annotated baseline panoramas provided within the final ES, as outlined in Appendix 7A.

Overall, the landscape and visual information is considered to be presented to an appropriate level of detail for the Draft ES stage. The general structure provides a good basis for the more detailed assessment to be presented within the final ES.

LVIA Methodology

The landscape and visual assessment methodologies are set out within *Appendices 6A* and *7A* respectively. Both methodologies are based on the principles set out within GLVIA3 and relevant Landscape Institute guidance and are considered appropriate.

The LVIA and methodology clearly draws a distinction between landscape effects and visual effects, and the LVIA identifies the key landscape and visual matters appropriate to the development.

The assessment methodology broadly accords with the principles established within GLVIA3 and relevant Landscape Institute guidance. The assessment process includes the establishment of baseline conditions, consideration of mitigation measures,

appraisal of receptor sensitivity through value and susceptibility, and appraisal of magnitude of change through consideration of scale, geographical extent, duration and reversibility. These components are then combined to determine the significance of landscape and visual effects through the application of professional judgement and a significance matrix. The approach is generally logical and transparent.

The methodology defines short-term effects as those occurring for between 0 and 5 years. Chapter 4 identifies an overall construction period of approximately five years, although construction of the overhead line would be more transient, with works moving along the route over time. The Draft ES does not currently provide sufficient detail on how long construction compounds, access tracks and other temporary working areas would remain in individual locations. This is particularly relevant around WMEL-A, where construction activity could occur for a relatively prolonged period. The final ES should therefore provide greater clarity on the anticipated duration and phasing of construction activities at individual locations and demonstrate how these have informed the assessment of the magnitude and significance of effects on landscape and visual receptors.

Further consideration should also be given to the potential for cumulative and sequential construction effects associated with other major electricity transmission projects, particularly Grimsby to Walpole and Eastern Green Link 3 and 4. Where construction programmes overlap or infrastructure is delivered in successive phases, landscape and visual receptors may experience prolonged periods of disturbance, including from construction compounds, haul roads, temporary working areas, vegetation removal and associated construction activity. The potential for shared construction facilities or access arrangements should be clarified, together with the anticipated timing of cable installation, testing, commissioning and the removal and reinstatement of temporary infrastructure. In particular, the final ES should establish whether any temporary compounds, haul roads or working areas would need to remain in place to support later phases of construction or other associated projects, potentially extending the duration of effects experienced by nearby receptors. This should be informed by coordinated construction programmes for relevant projects and reflected in the cumulative landscape and visual assessment, with clear commitments regarding the timing of reinstatement and landscape mitigation.

The assessment considers effects during construction, at Year 1 of operation and at Year 15 of operation, with Year 1 representing the position before establishment of mitigation planting and Year 15 allowing the effectiveness of landscape mitigation to be considered. This is a standard approach but is welcomed and should be retained within the final ES.

Overall, the proposed landscape and visual methodologies are considered suitable to inform the assessment. The main consideration for the final ES will therefore be how the methodology has been applied in practice and whether the judgements made are sufficiently supported by the baseline information, fieldwork, ZTVs and visualisations.

RVAA

The requirement for a Residential Visual Amenity Assessment (RVAA) will be determined at the ES stage, with an initial study area of 150m proposed. Whilst this distance draws upon the indicative guidance within *Landscape Institute TGN 2/19*, the Draft ES does not provide sufficient project specific justification for its adoption. The scope of any RVAA should be informed by the findings of the wider LVIA, supported by ZTV analysis, fieldwork and consideration of the relationship between individual residential properties and the proposed infrastructure, rather than relying principally on a standard distance threshold.

Through desk based review, site visits, discussions undertaken during the design review process and with local authority representatives, a number of locations have been identified where residential receptors may experience particularly substantial visual effects, including properties around Cuckoo Lane, Beck Bank, Parson Grove and Stainfield. Some of these receptors may fall beyond the indicative 100–150m distance referred to within TGN 2/19, but could nevertheless experience significant adverse visual effects and warrant further consideration as part of the RVAA screening process. The final ES should therefore demonstrate that the potential for effects approaching the Residential Visual Amenity Threshold has been appropriately investigated at these locations, taking account of the scale, proximity, orientation and positioning of the proposed overhead line infrastructure, including any further alignment or tower-position refinements.

Particular consideration should also be given to the visual effects experienced from Grimsthorpe Castle and its associated designated landscape, including the relationship between proposed tower positions and important views, although these should be considered through the relevant visual and heritage assessments rather than automatically through the RVAA process.

The final ES should provide a clear justification for the RVAA study area and the selection or exclusion of individual properties, including those beyond the initial 150m distance where the LVIA identifies potentially substantial effects.

LVIA Study Area

The adoption of a 3km Study Area is considered reasonable for the purposes of the preliminary landscape and visual assessments, having regard to the scale of the proposed infrastructure, the available ZTV analysis and consultation undertaken to date. However, the appropriateness of this extent will vary along the route, particularly between the open, low-lying landscapes of South Holland and the more undulating terrain of the Kesteven Uplands. The proposed overhead line towers, potentially reaching 63m above ground level, may remain prominent over considerable distances, particularly where there is limited intervening vegetation or built development, or where infrastructure is positioned on elevated ground or prominent skylines.

The Draft ES acknowledges that elements of the Project may be visible beyond 3km but considers that significant landscape and visual effects are unlikely at greater distances. It also confirms that the Study Area will be reviewed through further fieldwork, consultation and updated ZTV modelling as the design develops. This approach is generally supported; however, as previously raised by AAH and consistent with the PINS Scoping Opinion, the 3km Study Area should not be treated as a fixed geographical limit. The final ES should demonstrate that the adopted extent remains sufficient to encompass all landscape and visual receptors with the potential to experience significant effects, taking account of the developing design, updated ZTV analysis and fieldwork. Where evidence indicates the potential for significant effects beyond 3km, the assessment should be extended accordingly, with particular consideration given to long-distance views across open landscapes and from elevated or otherwise sensitive locations.

Review of Landscape Assessment

Landscape Baseline

The landscape baseline is set out within *Chapter 6* and *Appendix 6B* and has been informed by desk study and field survey undertaken between January 2025 and June 2026. The baseline considers landscape character at national, regional and local scales, with the assessment principally based on the local landscape character areas identified within the relevant published landscape character assessments. Fieldwork has been undertaken during winter, spring and summer conditions to date, with further targeted survey proposed to inform the final ES.

The range of published landscape character assessments used to establish the baseline is considered appropriate and provides a good understanding of the wider landscape context through which the Project passes. The use of local landscape

character areas as the principal receptors for the assessment is also considered appropriate given the scale and linear nature of the Project.

Appendix 6B provides an initial description of each local landscape character type, largely based on its published key characteristics, together with an initial evaluation of sensitivity. As previously raised by AAH, the final ES should ensure that the landscape baseline is not solely reliant on published landscape character assessments, but also reflects the LVIA authors' own fieldwork, observations and professional judgement regarding the character of the landscape within the Study Area. This is particularly important given the length of the Project and the geographical extent of the identified landscape character areas, where local variations in openness, enclosure, landscape condition, tranquillity, existing infrastructure, settlement pattern and other perceptual qualities may differ considerably from the wider published character descriptions. The final ES should ensure that these variations are clearly identified and appropriately reflected in the assessment of landscape receptor sensitivity, magnitude of change and significance of effects, particularly where the proposed infrastructure could alter locally distinctive landscape characteristics.

The Draft ES confirms that further detail, including separate consideration of landscape value and susceptibility, will be provided within the final ES. This is welcomed, and should provide a clearer basis for the sensitivity judgements applied to individual landscape receptors.

Landscape Assessment

The preliminary assessment of landscape effects is provided within *Chapter 6* and *Appendix 6B* and considers effects on the identified landscape receptors during construction and operation. The assessment generally provides a clear explanation of the anticipated nature of change and distinguishes between direct and indirect effects. The majority of effects on the overall extent of the LCAs are assessed as Minor Adverse (not significant), although the Draft ES also identifies the potential for locally Significant effects, particularly around the proposed WMEL-A Substation. The distinction between effects on the wider LCA and more localised effects is recognised and welcomed. However, the final ES should ensure that the geographical extent of the landscape receptor does not unduly reduce the assessment of magnitude where more substantial changes to landscape character would occur within particular parts of an LCA.

Effects on Lincolnshire County Council Landscapes

At a county level, the Project would pass through a range of landscapes, from the open and low-lying fen landscapes of South Holland, through The Fens and Fen Margin and into the more undulating Kesteven Uplands within South Kesteven. Whilst assessment against the individual LCAs is appropriate, the final ES should also consider the wider

landscape implications of introducing a continuous new overhead line across these adjoining character areas including the extent to which the Project would alter their defining characteristics and perceptual qualities.

In particular, consideration should be given to how the influence of the overhead line changes as it passes from the open fen landscapes, where long views and largely uninterrupted skylines are characteristic, into the more varied and undulating landscapes further west. Particular attention should be given to the siting of towers on or near prominent skylines and ridgelines, and the potential for the overhead line to alter the perceived scale, rural character and tranquillity of the landscape. This should include consideration of the creation or intensification of wirescapes, particularly where the proposed pylons and conductors would become prominent features within open landscapes or be experienced alongside existing overhead lines. The assessment should not rely solely on the relatively small proportion of each individual LCA affected when determining the magnitude of change.

The Draft ES frequently identifies existing overhead lines, major roads, railways and settlement as factors which reduce the impression of change. While the existing infrastructure context is relevant, its presence should not automatically be taken to indicate that the landscape has a greater capacity to accommodate further development. The final ES should also consider whether the Project would increase the concentration and influence of electrical infrastructure within particular parts of the landscape, including where the proposed overhead line would be experienced cumulatively alongside existing electrical infrastructure, creating an infrastructure stacking effect.

Given the number of other major electricity infrastructure projects proposed across Lincolnshire, including Grimsby to Walpole and Eastern Green Link 3 and 4, the landscape assessment should also consider the wider context of change across the county. In particular, consideration should be given to whether the combined influence of these projects could result in electrical infrastructure becoming a more defining or dominant characteristic of the landscape, particularly where the presence of existing infrastructure is used to support a reduced magnitude of effect.

The final ES should also consider whether the sensitivity and defining characteristics of particular landscapes indicate a limited capacity to accommodate further infrastructure without substantial adverse change. The cumulative assessment should clearly distinguish the additional effects attributable to WMEL from the combined landscape effects of the wider programme of infrastructure development.

Effects on South Holland District Council Landscapes

The preliminary assessment identifies Minor Adverse (not significant) effects during construction and operation for both the Settled Fens and Peaty Fens LCAs. Both landscapes are assessed as having Medium sensitivity, with the magnitude of change assessed as Low.

The overall conclusions are considered reasonable at this stage. However, both LCAs are characterised by relatively open landscapes and the Peaty Fens in particular is identified as having large-scale extensive views, a largely uninterrupted skyline and a local sense of remoteness. The assessment acknowledges that the proposed overhead line would result in some local interruption of skylines and influence perceptual characteristics including isolation and tranquillity. Given that approximately 11km of overhead line is proposed, the final ES should therefore provide a clear justification for the magnitude of change within those parts of the LCAs directly crossed by the Project, including the effects of the proposed towers on openness, sense of remoteness, long views and skylines.

Chapter 6 considers that the proposed overhead line towers would relate well to the large-scale nature of the landscape. While landscape scale is relevant to the ability of a landscape to accommodate development, the open nature of the Fens, extensive views and largely uninterrupted skylines are also characteristic of these landscapes. These characteristics should be given appropriate consideration when determining susceptibility, magnitude and the resulting significance of effect.

Within South Holland, particular consideration should be given to the increasing concentration of energy and transmission infrastructure, including G2W, the proposed Weston Marsh substation, existing Spalding Power Station and other proposed grid infrastructure. The final ES should consider whether the combined influence of these developments, together with WMEL, could result in a greater or unacceptable change to landscape character than identified for the Project in isolation.

Effects on South Kesteven District Council Landscapes

The preliminary assessment identifies Minor Adverse (not significant) effects on The Fens, Fen Margin and Kesteven Uplands LCAs during construction and operation. The assessment nevertheless identifies the potential for locally Significant effects within the Kesteven Uplands LCA around the proposed WMEL-A Substation.

For The Fens LCA, the baseline identifies low, flat terrain; level horizons, large skies, sparse woodland cover; and a local sense of isolation. As with the fen landscapes within South Holland, the final ES should ensure that sufficient consideration is given to

the influence of the proposed overhead line on these characteristics, particularly openness and skylines.

The assessment of the Fen Margin LCA identifies a more transitional landscape, with greater variation in topography, vegetation and settlement. The preliminary conclusion of Medium sensitivity, Low magnitude and a Minor Adverse effect appears reasonable at this stage, subject to further justification through the final design and assessment.

The Kesteven Uplands LCA requires greater consideration. Approximately 20km of overhead line and the proposed WMEL-A Substation would be located within this LCA. The preliminary assessment identifies an overall Low magnitude and Minor Adverse effect across the wider LCA, while acknowledging locally Significant effects around WMEL-A. Given the scale and extent of the proposed infrastructure, including the substation, adjoining overhead line and towers, fencing, lighting, hardstanding and access infrastructure, the final ES should provide greater clarity on how the scale and geographical extent of change have informed the overall magnitude judgement for the Kesteven Uplands LCA. As highlighted within the GLVIA3 Clarifications 2024, the geographical extent of an effect should not unduly influence the assessment of its magnitude. The final ES should therefore clearly distinguish between the overall effect on the wider LCA and the geographical extent and magnitude of more pronounced localised effects around WMEL-A and the associated overhead line. Consideration should also be given to the susceptibility of the landscape surrounding WMEL-A to accommodate the proposed concentration of electrical infrastructure without substantial changes to its defining characteristics, including its rural character, landform, landscape pattern and perceptual qualities. The presence of existing infrastructure should not, in itself, be taken as evidence that the landscape has sufficient capacity to accommodate further development without significant adverse effects. It should also demonstrate how the developing design and mitigation have responded to these effects.

The operational assessment of Grimsthorpe Castle RPG identifies a Minor Adverse (not significant) effect, with the route located outside the RPG and existing woodland providing a degree of separation and screening. This conclusion appears reasonable at this stage, but would remain subject to the final alignment and assessment confirming the anticipated extent of indirect effects.

Visual Effects

Visual Baseline

Appendix 7B sets out the preliminary visual baseline and assessment. The baseline identifies a comprehensive range of residential and recreational receptors within the

3km Study Area, informed by field survey, ZTV analysis and representative viewpoints. The assessment is based on 67 representative viewpoints and eight long-distance recreational routes - an increase from the original proposed 59 representative viewpoints, with receptors grouped into a series of Visual Receptor Areas (VRAs). Users of the road and rail network have been scoped out of the visual assessment in accordance with the Scoping Opinion.

Within South Holland and eastern South Kesteven, the baseline identifies a predominantly flat and open landscape, with relatively sparse vegetation and long-distance views across the surrounding fenland. Views become more varied further west within South Kesteven, where changes in topography, hedgerows, trees and woodland provide greater local containment. Existing infrastructure, including overhead lines, settlement, agricultural development, and Spalding Power Station, is also recognised within the baseline.

AAH previously raised concerns through TM01, TM02 and previous TWG's regarding the identification of receptors and gaps in the emerging viewpoint coverage. The viewpoint set has since been expanded and many of these comments appear to have been addressed, which is welcomed. The final ES should nevertheless confirm that the receptor and viewpoint selection has been reviewed against updated ZTVs, fieldwork and design as the route is further defined through the various National Grid stages, particularly where there remains potential for significant effects beyond the 3km Study Area.

Overall, the visual baseline is considered to provide an appropriate description of the principal visual receptors and existing viewing context at this stage subject to further refinement.

Visual Assessment

The preliminary visual assessment is set out within *Chapter 7* and *Appendix 7B* and considers effects during construction and operation. The assessment identifies a number of significant visual effects across both South Holland and South Kesteven, including Major Adverse effects where the Project would be experienced at close range or across a substantial part of the view. The precautionary approach adopted at this stage is welcomed.

Visual Assessment relating to Lincolnshire County Council

The Project would introduce a new overhead line across a substantial part of South Lincolnshire, passing through landscapes which vary considerably in their openness and visibility. Within the Fens, the generally flat and open landscape allows for long-

distance views, while further west the more undulating landform and increased vegetation would provide greater screening in some locations.

The final ES should consider how the Project would be experienced along PRoWs and recreational routes, particularly where people may see the overhead line repeatedly or over longer sections of a route. This should not be limited to the effects identified at individual viewpoints. Consideration should also be given to changes in the overhead line alignment, tower spacing and orientation, particularly where these may draw greater attention to the infrastructure. Changes in direction, or towers positioned on prominent skylines and ridgelines, could make certain sections of the route more noticeable and increase the visual effects experienced by receptors.

The assessment should also consider the increasing amount of energy and transmission infrastructure proposed across Lincolnshire. Whilst existing overhead lines already form part of some views, this does not necessarily mean that additional infrastructure can be accommodated without substantial adverse visual effects. The final ES should consider whether WMEL, alongside other existing and proposed developments, could result in electrical infrastructure becoming a dominant feature in certain views, potentially resulting in significant cumulative visual effects. This is particularly relevant around WMEL-A and the connection point at Weston Marsh, where the concentration of infrastructure could substantially change views experienced by nearby residents and recreational users. The assessment should consider whether these combined effects could be unacceptable and how changes to the design could help reduce them.

Particular concern is raised around WMEL-A, where discussions with National Grid during the design review indicated that the existing and proposed overhead line circuits may need to be separated and reconfigured to connect into the substation. This could result in a considerable number of towers, gantries and conductors being concentrated within a relatively small area. The arrangement of this infrastructure, particularly where overhead lines converge or cross one another, could result in substantial adverse visual effects. It is understood that National Grid is looking at alternative arrangements ahead of Stage 2.5, including reducing the number of towers, changing alignments and considering different gantry arrangements. This is welcomed, but the final ES should explain what options have been considered, how these have helped reduce visual effects and what the resulting arrangement would look like from nearby residential properties and recreational routes.

Whilst the proposed photomontages will be useful in understanding the visual effects of WMEL, it would also be useful to provide cumulative photomontages showing other proposed developments in the area. This should include relevant NSIP and TCPA schemes such as Weston Marsh Substation, Grimsby to Walpole, EGL 3 and 4, Meridian

Solar and other proposed energy infrastructure where these would potentially be visible within the same views. This is particularly important towards the eastern end of the route, where there is already a considerable amount of proposed infrastructure. The final ES should therefore consider providing cumulative photomontages from key viewpoints to better illustrate how these developments would be experienced together and whether the combined visual effects could be greater than those identified for WMEL alone.

Where substantial adverse visual effects are identified, particularly where there is potential for the Residential Visual Amenity Threshold (RVAT) to be reached, the final ES should demonstrate whether alternative alignments, tower positions or targeted undergrounding have been considered to avoid or reduce these effects. Particular consideration should be given to residential receptors around Cuckoo Lane, Beck Bank, Parson Grove and Stainfield, where the proximity and scale of the proposed infrastructure may result in particularly adverse visual effects. Further consideration should also be given to the vicinity of Grimsthorpe Castle and the proposed WMEL-A Substation, where alternative alignments, tower arrangements or targeted undergrounding may help reduce effects on important views, nearby residential receptors and the wider landscape. The findings of the LVIA and any RVAA should be used to inform these design options, with the final ES explaining why alternatives have been taken forward or discounted.

Visual Assessment relating to South Holland District Council

The preliminary assessment identifies a relatively high number of significant visual effects within South Holland. Significant construction effects are identified at nine representative viewpoints, including Major Adverse effects at VP 1B.2 (Surfleet), VP 1B.8 (Macmillan Way west of Surfleet), VP 1C.3 (Parsons Drove) and VP 1C.4 (South Forty Foot Drain). During operation, significant effects are identified at 12 viewpoints, including a number of Major Adverse effects where the overhead line would be seen at close range or across a large part of the view.

These findings are understandable given the open nature of the fen landscape and the long-distance views available across much of South Holland. In a number of locations, the overhead line would introduce large vertical structures into otherwise open, predominantly agricultural views. At Crossgate, for example, the assessment identifies towers breaking the skyline and contrasting with the horizontal nature of the landscape, resulting in a Moderate Adverse (significant) operational effect.

Particular attention should be given to the significant effects around Surfleet, Crossgate and Pinchbeck, where a number of nearby residents and recreational users could be affected. Concerns have also been raised about properties around Cuckoo Lane,

including the listed building, Beck Bank and Parson Grove. The final ES should look more closely at the effects on these receptors, including whether any residential properties could experience effects approaching the Residential Visual Amenity Threshold through the RVAA process. Given the potential scale and proximity of the infrastructure, National Grid should also look at whether changes to the alignment, individual tower positions or targeted undergrounding could help reduce these effects. It would be useful for the final ES to explain which options have been considered and why any have been ruled out.

The assessment identifies a Minor Adverse (not significant) operational effect on the Macmillan Way as a whole, despite recognising that there would be more substantial changes where the Project crosses the route. The final ES should make sure that the overall assessment does not overlook the effects experienced by people using the affected section of the route, particularly where the overhead line would be seen at close range or for longer periods.

Further consideration should also be given to the connection into the proposed Weston Marsh Substation (WMSS), where a considerable amount of new energy infrastructure is planned. The assessment needs to look at how the proposed overhead line, terminal towers and associated infrastructure would be experienced alongside WMSS and other developments in the area, rather than looking at WMEL in isolation. This is particularly important given the proposed Grimsby to Walpole and EGL 3 and 4 projects, alongside other NSIP and TCPA developments. The combined visual effects could be considerably greater than those identified for WMEL alone.

Whilst the proposed photomontages will help illustrate the visual effects of WMEL, it would also be useful to confirm whether cumulative photomontages will be provided as part of the final ES. These should show WMSS, Grimsby to Walpole, EGL 3 and 4 and other relevant developments where they could be seen together. Particular attention should be given to viewpoints around the eastern end of the route and the connection into WMSS, where cumulative photomontages would help SHDC better understand the overall scale of infrastructure being proposed and the potential combined visual effects.

Visual Assessment relating to South Kesteven District Council

The preliminary assessment identifies a substantial number of significant visual effects within South Kesteven. Significant construction effects are identified at 11 representative viewpoints, including Major Adverse effects at VP2B.2 (Haconby) and VP2B.4 (Stainfield). During operation, significant effects are identified at 18 viewpoints, with Major Adverse effects at locations including Haconby Drove, Haconby, Stainfield,

Burton-le-Coggles, the PRoW near Heath Farm, Wooley's Lane, Colsterworth Lane and North Witham.

Particular concern is raised around Stainfield, where the assessment identifies a Very High magnitude of change and Major Adverse (significant) operational effects at VP2B.4. The proximity of the proposed overhead line to residential properties and recreational routes is a concern, particularly given the potential for substantial changes to views from individual properties. Discussions during the design review indicated that further changes to the alignment around Stainfield may be considered. This is welcomed, but the final ES should demonstrate whether these changes would reduce the effects on nearby residents and whether further changes to tower positions or targeted undergrounding could be considered. The need for a Residential Visual Amenity Assessment (RVAA) should also be reviewed, including properties beyond the proposed 150m study area where there is potential for particularly substantial adverse visual effects or effects approaching the Residential Visual Amenity Threshold.

The potential visual effects around Grimsthorpe Castle also require further consideration. Although the preliminary assessment identifies a Minor Adverse (not significant) operational effect at VP2B.7, the final ES should ensure that the proposed overhead line has been considered in relation to important views from the Castle and its Registered Park and Garden. Discussions during the design review indicated that further alignment changes may be considered in this area. The final ES should explain how these have been considered, including whether changes to individual tower positions, heights or targeted undergrounding could help reduce effects on important views across the designed landscape.

The concentration of significant effects around the proposed WMEL-A Substation is particularly concerning. At VP2D.2 (Heath Farm), the proposed overhead line and substation would be visible in the foreground, resulting in a Very High magnitude of change and Major Adverse (significant) operational effect. Similar Major Adverse effects are identified at VP2D.6 (Wooley's Lane) and VP2D.7 (Colsterworth Lane). Significant effects are also identified around Corby Glen and Burton-leCoggles, including Major Adverse effects at VP2C.5 (Burton-le-Coggles), where the proposed infrastructure would have a substantial influence on views.

There is also considerable uncertainty around the final design of WMEL-A and the associated overhead line connections. The Draft ES shows a substantial amount of proposed infrastructure in this area, but the final number, arrangement and positioning of towers, gantries and conductors have yet to be confirmed. Discussions with National Grid during the design review indicated that existing and proposed overhead line circuits may need to be separated and reconfigured to connect into the substation, potentially resulting in a large concentration of infrastructure. This is a particular concern for

nearby residents in Burton-le-Coggles and Corby Glen, where the combined effects of the substation, overhead lines and associated infrastructure could be considerably greater than those associated with the individual elements.

It is understood that National Grid is considering alternative connection arrangements ahead of Stage 2.5, including reducing the number of towers, changes to the overhead line alignments and alternative gantry arrangements. This is welcomed, but it is important that SKDC has an opportunity to review the emerging options before the design is finalised. Further consideration should also be given to the siting and height of individual towers, particularly where these would be positioned on prominent skylines or close to residential properties. The final ES should explain how the different options have been considered, including whether targeted undergrounding could help reduce particularly substantial visual effects around WMEL-A and the approach to the substation.

The final ES should also provide clearer visual information showing the combined infrastructure around WMEL-A, rather than relying on separate views of the overhead line and substation. This should include photomontages from representative locations around Corby Glen, Burton-le-Coggles and the surrounding PRoW network, taking account of the final tower and gantry arrangements. Given the number of significant effects identified, the assessment should also clearly explain how the findings from individual viewpoints relate to nearby residential properties and recreational receptors, including whether further RVAA screening is required.

Overall, whilst the preliminary assessment identifies a considerable number of significant visual effects within South Kesteven, further work is needed to demonstrate how these findings are being used to inform the design. Particular attention should be given to Stainfield, Grimsthorpe Castle and the approach to WMEL-A, where changes to the alignment, tower positions and connection arrangements may provide opportunities to reduce effects before the final ES is prepared.

Review of Future Baseline

The future baseline is considered within Sections 6.6 and 7.6 of the Draft ES. Both chapters recognise that landscape character and views will change over time, including through settlement expansion, renewable energy development, transmission infrastructure and changes to vegetation. It is also noted that the future baseline will be developed further within the final ES.

Whilst the Draft ES sets out the general factors that will inform the future baseline, there is currently limited detail on what changes are actually anticipated in the absence of WMEL. Given the number of major energy and transmission projects proposed across

Lincolnshire, the final ES should clearly identify which developments have been considered, their likely timescales and how they could change the landscape character and views along the route.

Particular attention should be given to the Weston Marsh area, including the proposed Weston Marsh Substation, Grimsby to Walpole and EGL 3 and 4. It would be useful to understand which of these developments National Grid expects to be in place in the absence of WMEL, and whether any other relevant developments have been overlooked. This would provide a clearer understanding of the likely future landscape and visual conditions against which the Project is being considered.

Review of Project Design Development

Chapter 3 provides a useful account of the design development undertaken to date, including the options appraisal, application of the Holford and Horlock Rules, and subsequent refinements informed by environmental assessment and consultation. The changes made since Stage 1 are welcomed, particularly the development from broad route corridors and environmental constraints mapping to a more defined alignment with indicative tower positions.

Following the design review, it is understood that the Project is at Stage 2.0, with further design work expected at Stage 2.5 ahead of the DCO submission. Whilst individual towers have now been positioned, these have not yet been subject to detailed micrositing. Discussions also indicated that further routeing options, construction access routes, haul roads and compound locations are being considered. This is encouraging, but it is important that the landscape and visual findings continue to inform these decisions as the design develops, rather than simply assessing the effects of a largely fixed design.

The recently published NESO Electricity Transmission Design Principles should also be considered as the design develops towards Stage 2.5. These provide further guidance on the selection and design of transmission infrastructure, including consideration of alternative technologies and their environmental and community impacts. The final Design Approach Document should clarify how these principles have been taken into account, where relevant, alongside the Holford and Horlock Rules. This would be particularly useful in understanding the options considered for locations experiencing substantial landscape and visual effects, including alternative alignments, targeted undergrounding and the connection arrangements around WMEL-A.

Particular attention should be given to the positioning of towers around Stainfield, Burton-leCoggles, Corby Glen and other locations where significant visual effects have been identified. Further micro-siting should consider opportunities to reduce effects on

nearby residential properties, prominent skylines and recreational routes. The findings of the RVAA should also inform this process, particularly where there is potential for effects approaching the Residential Visual Amenity Threshold. Consideration should be given to reducing the horizontal Limits of Deviation around the nearest residential properties, to provide greater certainty over the eventual positioning of towers and avoid subsequent changes that could worsen visual effects. Where further refinements or alternative alignments have been considered but discounted, the reasons should be explained.

There are particular concerns around the developing design of WMEL-A and the associated overhead line connections. The current proposals show a considerable concentration of electrical infrastructure, although the final arrangement of towers, gantries, conductors and connections into the substation has yet to be established. Discussions during the design review indicated that alternative connection arrangements, including opportunities to reduce the number of towers and revise their positioning, are being explored. This should be a priority for Stage 2.5, particularly given the potential effects on nearby residents around Burton-le-Coggles and Corby Glen. SKDC should be given an opportunity to review the emerging options and understand how the final arrangement has been selected.

The detailed design of WMEL-A should also consider the positioning of existing, proposed and reasonably foreseeable future overhead line and underground cable connections. These could require further vegetation clearance, easements and access arrangements, with potentially substantial effects on the surrounding woodland and tree belts. The final design should demonstrate how these connections have been considered alongside the substation footprint, equipment configuration, platform levels, earthworks, drainage and permanent access arrangements. Where future connections are reasonably foreseeable, their potential landscape and visual implications should also be considered, including the extent of any additional vegetation clearance required.

It is understood from the design review that targeted undergrounding has not yet been explored in detail, but could remain an option as the design develops. Given the significant effects identified at a number of locations, particularly around Stainfield, Grimsthorpe Castle and the approach to WMELA, the potential benefits and constraints of undergrounding should be considered alongside further alignment changes and tower micrositing. This does not necessarily mean that undergrounding would be appropriate in each location, but the final design should demonstrate whether it has been considered and explain the reasons for the preferred approach.

Along the overhead line route, the design should continue to minimise the loss and fragmentation of hedgerows, trees and woodland belts through careful positioning of

towers, access routes and construction working areas. Where vegetation cannot be reinstated due to operational clearance requirements, appropriate replacement or compensatory planting should be identified. Landscape mitigation should respond to the differences between the open fen landscape of South Holland and the more undulating and wooded landscape of South Kesteven.

Whilst *Appendix 6C* establishes the broad principles for landscape and ecological mitigation, detailed mitigation proposals have not yet been developed. These principles include retaining and reinstating existing vegetation where possible, habitat creation and enhancement, and long-term management. The next stage should provide greater clarity on where planting and other landscape measures are proposed, how these relate to the developing design, and what they could realistically achieve in reducing the identified effects. Particular attention should be given to WMEL-A, where the location of future connections and associated clearance requirements could limit opportunities for effective screening.

The Design Approach Document currently provides a relatively broad account of the design principles and should be developed further to explain how the findings of the landscape and visual assessments, consultation responses and ongoing design appraisals have informed the selected design. In particular, it should show how significant effects have been considered through changes to the alignment, tower positions, substation layout and associated infrastructure before reliance is placed on landscape planting. Where engineering or operational constraints prevent further changes, the reasons should be clearly explained.

Review of Landscape and Ecological Mitigation

Appendix 6C provides a useful initial framework for landscape and ecological mitigation, including the retention and reinstatement of existing vegetation, habitat creation and enhancement, and long-term management. It is acknowledged that the proposals remain at an early stage and will be developed further within the Outline Landscape and Ecological Management Plan (LEMP) accompanying the final ES.

The developing mitigation strategy should demonstrate how landscape and ecological objectives have been considered together, with proposals responding to local landscape character and identifying opportunities to strengthen existing habitat networks. Particular consideration should be given to the reinstatement and reinforcement of hedgerows, woodland edges and field boundaries, including appropriate compensatory planting where permanent operational clearances prevent reinstatement. Around WMEL-A, the landscape framework should integrate visual

screening mitigation, habitat creation, drainage and access arrangements, while ensuring that proposed planting is appropriate to the surrounding landscape context.

The final Outline LEMP should provide greater clarity on the location, extent and composition of proposed planting and habitat creation, together with implementation timescales, establishment, long-term management and monitoring arrangements. Opportunities for early planting should be pursued where practicable, particularly in locations where significant landscape and visual effects have been identified. The mitigation proposals should also be clearly coordinated with the landscape and visual assessments to demonstrate their anticipated effectiveness over time.

Whilst the Draft Outline LEMP establishes the broad principles for landscape and ecological mitigation, detailed landscape proposals have not yet been presented. It is recommended that the final ES is supported by landscape mitigation plans illustrating the location, extent and nature of proposed planting, habitat creation and other landscape interventions, particularly around WMEL-A. These should demonstrate how the proposed mitigation responds to local landscape character, integrates with the substation layout and addresses the significant landscape and visual effects identified through the assessment.

The final Outline LEMP should also set out the proposed maintenance and establishment periods for new planting, including arrangements for monitoring, replacement of failed planting and any remedial works required to ensure the mitigation establishes successfully. Further clarity should be provided on the reinstatement of temporary construction areas, particularly where existing hedgerows, trees and field boundaries have been removed or disturbed. This should include realistic timescales for reinstatement and the longer-term management responsibilities, particularly where planting is relied upon to reduce landscape and visual effects.

Given the scale of the Project and the number of significant residual landscape and visual effects identified, consideration should also be given to opportunities for additional landscape enhancement beyond the immediate Order Limits. This could include targeted hedgerow and woodland restoration, improvements to the landscape setting of recreational routes, and measures to strengthen local landscape character. Where appropriate, opportunities for securing additional funding or contributions towards wider landscape improvements should be explored with the relevant authorities, particularly where the effects of the Project cannot be adequately reduced through on-site mitigation alone. Such measures should be clearly distinguished from mitigation that directly reduces the assessed landscape and visual effects of the Project.

Review of Cumulative Effects

Chapter 19 provides an initial consideration of cumulative effects arising from the Project alongside other proposed and committed developments. This is welcomed, and it is acknowledged that a more detailed cumulative assessment will be undertaken as the design progresses towards submission of the DCO application.

The final ES should provide a comprehensive assessment of cumulative landscape and visual effects, particularly where the Project interacts with other major energy infrastructure proposals, including Grimsby to Walpole, EGL 3 and 4, the proposed Weston Marsh Substation and other relevant NSIP and TCPA developments. As highlighted elsewhere in this review, particular attention should be given to the Weston Marsh area, where there is potential for a considerable concentration of new infrastructure.

The assessment should consider WMEL alongside individual developments, but also the combined effects of all relevant developments within the same area. Whilst the effects of WMEL alongside one other project may not be significant, the combined effects of several developments could result in a much greater change to landscape character and views. The assessment should distinguish between cumulative effects on landscape character, combined visual effects where developments are experienced within the same views, and sequential effects experienced by people travelling through the landscape, particularly along PRoWs and longer-distance recreational routes.

The cumulative assessment should be informed by the latest available design information, including proposed alignments, tower positions, substation layouts and ZTVs for relevant developments. Combined ZTVs should be considered where these would help identify areas of overlapping visibility. Cumulative photomontages should also be provided as part of the final ES, particularly around Weston Marsh and the eastern end of the route, showing WMEL alongside the proposed Weston Marsh Substation, Grimsby to Walpole, EGL 3 and 4 and other relevant developments where they would be visible together. These should illustrate the combined infrastructure rather than WMEL in isolation, allowing the councils to better understand the overall scale of change and potential cumulative visual effects. The proposed cumulative photomontage locations should be discussed and agreed with the relevant authorities through the TWGs before they are prepared.

The shortlist of cumulative schemes should be reviewed before submission, taking account of any changes to their designs, planning status and construction programmes. Particular consideration should be given to the potential for overlapping construction activities, including a reasonable worstcase scenario where construction programmes are uncertain. This should consider whether concurrent construction, access routes,

compounds and associated vegetation clearance could increase the extent or duration of adverse landscape and visual effects.

Opportunities for coordinated design and landscape mitigation should also be explored where developments share a common landscape setting. The final ES should demonstrate that the selected viewpoints and assessment approach adequately represent the potential cumulative effects, including through reference to the viewpoint strategies and visual assessments prepared for other relevant projects where appropriate.

Summary of LVIA Review

Overall, the Draft ES provides a comprehensive preliminary assessment of the landscape and visual effects of the Project, supported by an appropriate methodology and a substantial body of baseline information. The assessment identifies a considerable number of significant adverse visual effects across South Holland and South Kesteven, particularly where the proposed overhead line would be experienced at close range by residential and recreational receptors, and around the proposed WMEL-A Substation. The continued development of the design and further assessment work proposed for the final ES are acknowledged and welcomed.

AAH considers that further work is required to ensure that the geographical extent and significance of localised landscape and visual effects are adequately reflected in the final assessment, particularly where more substantial effects may be obscured by the overall conclusions for wider Landscape Character Areas. The final ES should also provide clearer justification for the assessment of landscape character within the open fen landscapes and around WMEL-A, including the influence of prominent towers, skylines and the increasing concentration of electrical infrastructure.

A key recommendation of this review is that the findings of the landscape and visual assessments should continue to inform the design as the Project progresses towards Stage 2.5. Particular attention should be given to the alignment and positioning of towers around Surfleet, Stainfield, Grimsthorpe Castle and the approach to WMEL-A, including opportunities for further micrositing, alternative alignments and targeted undergrounding where these could help reduce significant effects. The findings of the RVAA should also inform this process, with further consideration given to properties around Cuckoo Lane, Beck Bank, Parson Grove and Stainfield, including those beyond the initial 150m study area where justified. Consideration should also be given to reducing the horizontal Limits of Deviation around particularly sensitive residential receptors.

The developing design of WMEL-A and its associated overhead line connections remains a particular concern. Further work is needed to establish the final arrangement of towers, gantries, conductors and connections into the substation, including whether alternative arrangements could reduce the overall concentration and prominence of infrastructure. SKDC should have an opportunity to review these emerging options ahead of the design being finalised, particularly given the significant visual effects identified around Corby Glen, Burton-le-Coggles and the surrounding recreational routes. The potential for additional vegetation clearance associated with existing, proposed and reasonably foreseeable future connections should also be considered.

The final ES should be supported by updated/cumulative ZTVs, completed baseline photography and cumulative photomontages in addition to the agreed Type 4 photomontages, taking account of any changes to the design. Further clarity is also required on the scope of the RVAA, the assessment of sequential effects along recreational routes and the relationship between representative viewpoints and nearby residential properties. The final Design Approach Document should explain how the identified significant effects have informed the selected design, including the options considered and reasons for discounting further changes.

Further detail is required regarding the proposed landscape and ecological mitigation, including the extent of vegetation removal and reinstatement, site specific landscape mitigation plans, opportunities for early planting and the anticipated effectiveness of mitigation over time. The final Outline LEMP should establish appropriate maintenance and establishment periods, monitoring and replacement planting requirements, and long-term management responsibilities. Opportunities for additional off-site landscape enhancement and associated funding should also be explored with the relevant authorities, particularly where significant residual effects cannot be adequately reduced through changes to the design or on-site mitigation.

The cumulative assessment should also be developed further to consider the combined influence of Grimsby to Walpole, EGL 3 and 4, the proposed Weston Marsh Substation and other relevant NSIP and TCPA developments. This should include consideration of the overall concentration of infrastructure, rather than assessing WMEL alongside each individual scheme in isolation, together with the potential for overlapping construction activities. Cumulative photomontages should be provided from agreed viewpoints, particularly around Weston Marsh and the eastern end of the route, to illustrate how the different developments would be experienced together. The proposed viewpoints should be discussed with the relevant authorities through the TWGs before the photomontages are prepared.

AAH considers that the Draft ES provides an appropriate basis for the continued development of the Project. However, the matters identified within this Technical Memorandum should be addressed through further design refinement, technical engagement and the final ES, with sufficient supporting information to demonstrate how the Project has responded to the landscape and visual effects identified. This will be important in allowing LCC, SHDC and SKDC to reach an informed view on the likely residual effects of the Project ahead of the DCO submission.

Separate Design Change Requests

In addition to the comments submitted through the Stage 2 Consultation and ongoing Technical Working Groups, the local authorities should consider submitting separate, location specific design change requests directly to National Grid through the relevant DCO project officer. It is understood that this provides a separate mechanism for stakeholders to formally request changes to the developing design and seek a direct response from National Grid, outside the general stakeholder consultation response process. This may be particularly useful where the authorities have identified a preference for alternative alignments, tower micrositing or targeted undergrounding, including around Surfleet, Stainfield, Grimsthorpe Castle and WMEL-A. Any requests should clearly identify the location, the landscape and visual concerns, the changes being sought and the anticipated benefits. Given that further design refinement is expected at Stage 2.5, it is recommended that the authorities consider progressing these requests at an early stage, allowing National Grid sufficient opportunity to review the options and respond before the design is finalised.

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