Written Representations submitted in response to East Pye Solar
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Submitted by BEPS (Block East Pye Solar [redacted])

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Chapter 11: Transport, Access and Scheme Deliverability

11.1 Introduction: transport is a project-critical gateway issue

BEPS's objection to Chapter 11 is not confined to the environmental consequences of additional traffic. The more fundamental issue is whether the Applicant has demonstrated a lawful, safe and implementable means of constructing the development for which consent is sought.

East Pye Solar is an unusually dispersed scheme comprising multiple solar development areas, an extensive Cable Route Corridor, a BESS, project substations, a new National Grid substation, grid-connection infrastructure, construction compounds, access tracks and associated works spread across a wide area of rural South Norfolk. The Scheme cannot be constructed merely by bringing traffic to one principal entrance and distributing it within a self-contained site. Its implementation depends on a network of public-road routes, new and altered accesses, road crossings, internal haul routes, holding compounds, abnormal-load routes, temporary traffic controls, Public Right of Way management measures and highway works extending across a large number of separate locations.

The Applicant nevertheless treats transport principally as an environmental-effect topic capable of being resolved through embedded management. Chapter 11 concludes that, following implementation of the embedded mitigation, no residual transport effects have been identified during construction or decommissioning. Its summary table categorises the relevant receptors as having high sensitivity or identifies high impacts in relation to severance, non-motorised-user delay and amenity, fear and intimidation, road safety and hazardous or large loads, but then concludes that each resulting effect is not significant. Chapter 11 further states that no additional mitigation is required because no significant effects have been identified once embedded and secondary mitigation are taken into account.

That conclusion is not credible when tested against the current positions of the two highway authorities.

Norfolk County Council, as local highway authority, states in its June 2026 Relevant Representation that the present strategy for Sites 7–10 does not adequately address the significant highway constraints, does not provide sufficient mitigation and 'cannot be supported'. It requires construction traffic to enter and leave by roads of an appropriate standard and to reach the individual development parcels through Cable Route Corridors or internal haul routes.

National Highways, as strategic highway authority, has also lodged a formal objection. It requires further assessment of the operation of Strategic Road Network junctions, particularly the A47/A140 junction; more detailed cumulative assessment; binding traffic limits and monitoring arrangements; a strengthened Construction Worker Travel Plan; further AIL information; and amendment of

Requirement 15. It states expressly that it is unable to remove its objection unless all outstanding matters are resolved before the Examining Authority's recommendation.

The Applicant's conclusion that transport effects are not significant therefore rests on a transport solution which is not accepted by either highway authority in its submitted form. It also rests on treating future route selection, detailed highway design, traffic-control measures, passing places, worker-travel controls, abnormal-load arrangements and detailed management plans as though they were established and effective mitigation. They are not. In several important respects, they remain proposals to be developed, agreed or redesigned after consent.

The Transport Assessment and associated plans disclose a project dependent on 65 construction access and crossing points. The Applicant proposes internal haul routes, construction compounds, vehicle holding areas, call-forward systems, marshals, temporary traffic controls, restricted delivery periods and one-at-a-time HGV release on constrained routes. The need for that level of intervention is itself evidence that the existing network does not naturally accommodate the Scheme.

There are also direct conflicts between the submitted application and NCC's position. NCC's November 2025 targeted-consultation response stated that the proposed access strategy was unacceptable, rejected construction traffic on Hall Lane, rejected the use of Fairstead Lane for construction traffic and required access from appropriate A or B roads followed by internal haul routes. Yet Hall Lane remains within the Applicant's later routeing strategy, including for access to a Cable Route Corridor compound and for AIL movements. The unresolved issue is therefore not merely how Hall Lane will be managed. It is whether that route can lawfully and acceptably form part of the scheme at all.

The AIL case remains similarly unsettled. National Highways records that the Applicant has not yet determined the AIL routes and warns that there are existing constraints on parts of the SRN. It expects the use of the nearest suitable port under the water-preferred policy and requires agreement to any route using the SRN. It specifically recommends that a workable and acceptable strategy be established in principle before a decision is made. The Applicant has therefore not demonstrated that the major transformers, cable drums and other abnormal components can be delivered by routes which are physically available, acceptable to the highway authorities, environmentally assessed and contained within the necessary land and powers.

These matters cannot be dismissed as details for a future CTMP. Traffic management can regulate the use of a route that is already shown to be available and acceptable. It cannot establish after consent whether a route exists, whether the highway authority accepts it, whether the necessary land and works are available, or whether an alternative alignment would create new ecological, drainage, heritage, landscape or compulsory-acquisition effects.

The correct examination question is therefore not simply whether construction traffic could in some general sense be 'managed'. It is whether the Applicant has demonstrated an implementable transport and access strategy for the

development actually described in the application. On the current evidence, it has not.

11.1.1 Updated national transport policy

The August 2026 National Planning Policy Framework post-dates the Applicant's ES. The Energy NPSs remain the primary policy framework for this NSIP, but the current NPPF is a relevant material consideration and reinforces several matters raised in this chapter.

Policy TR6 requires significant movement-generating development to be supported by an appropriate transport assessment and travel plan. Importantly for East Pye, the assessment must address reasonable future scenarios, relevant times of day, cumulative impacts and multimodal trip generation. Travel plans should identify fallback measures where the measures initially proposed do not achieve the expected outcomes. Policy TR8 separately requires protection and enhancement of the PRoW network, with suitable diversions agreed with the highway authority, and encourages direct and circular connections between local and long-distance walking, cycling and bridleway routes.

These provisions are particularly relevant where East Pye relies upon future route refinement, worker-travel assumptions, traffic management and later PRoW design to support conclusions of no significant effect. The policy question is not simply whether mitigation is proposed, but whether the assessed strategy remains workable under reasonable future conditions and whether credible fallback arrangements exist if the assumed measures fail.

11.2 The Scheme is structurally dependent on an exceptionally extensive access system

The scale and physical form of East Pye Solar make transport and access integral to the definition and deliverability of the Scheme. They are not ancillary matters capable of being separated from the principal development.

The Scheme is distributed across ten principal site areas, themselves divided into multiple sub-sites, together with the Cable Route Corridor, the BESS, project substations, the proposed National Grid substation, grid-connection works and temporary construction compounds. The development extends across a wide rural area containing numerous public roads, minor lanes, watercourses, PRoWs, promoted trails, settlements, heritage receptors and environmentally sensitive areas.

The Outline CTMP identifies 65 construction access and crossing points serving the Sites and Cable Route Corridor. It also anticipates highway works on constrained parts of the local road network and recognises that narrower sections may require passing places or temporary traffic management. The Access and PRoW plans show that these interventions are spread across the Scheme rather than concentrated at a small number of robust access points.

The physical delivery system includes:

- direct accesses from public roads;
- crossing points where haul routes or Cable Route Corridors intersect roads;
- internal haul routes linking development parcels;
- construction compounds and laydown areas;
- vehicle holding areas;
- call-forward arrangements;
- temporary passing places;
- traffic marshals and banksmen;
- temporary traffic signals and speed restrictions;
- PRoW crossings, closures and managed routes;
- abnormal-load routes;
- and temporary highway, vegetation and street-furniture works.

The Applicant's internal haul-route strategy is presented as mitigation, but it also reveals the Scheme's structural dependence on linked construction infrastructure. The haul routes are intended to reduce use of unsuitable rural roads by moving vehicles internally between site parcels. That means the viability of one parcel may depend upon access being secured through another parcel, upon a Cable Route Corridor being engineered for construction traffic, or upon a road or watercourse crossing being available at the required time.

The construction parcels therefore cannot sensibly be treated as wholly independent sites. The ability to build Sites 7, 8 or 9, for example, depends on the availability of an integrated strategy for reaching and moving between them. Similarly, the ability to construct Sites 1 and 2, the BESS, the National Grid substation and associated substations depends on a coordinated strategy using Station Road, internal routes and highway crossings. If a critical public-road approach, internal link or crossing is unavailable, the problem cannot necessarily be solved by diverting traffic to another independent entrance without creating new traffic, land, engineering or environmental effects.

The Applicant also intends to retain access infrastructure beyond the initial construction period. Accesses and internal routes will be required for operation, maintenance, fault response, equipment replacement, panel replacement, BESS replacement, transformer replacement and decommissioning. The transport system is therefore not a temporary adjunct lasting only for the initial construction programme. It is part of the long-term physical infrastructure and operating logic of the Scheme.

This matters because the Applicant repeatedly relies on later management plans to finalise the detailed arrangement. But where a project depends upon dozens of linked accesses and crossings across a constrained rural network, the existence and acceptability of those routes is a prerequisite to consent. A later CTMP may prescribe delivery times, signage, marshal procedures and monitoring. It cannot cure the absence of a proven route, obtain land outside the Order Limits, resolve an unassessed watercourse crossing or convert a route rejected by the highway authority into an acceptable one.

The dependence on vehicle holding and one-at-a-time release arrangements reinforces the point. The Applicant's own technical work proposes that vehicles should be held at compounds and released individually along narrow routes, under the control of traffic marshals, in order to reduce conflicts. For Sites 7A–F, the technical work proposes use of Site 4A as a holding area and one-at-a-time

HGV movements towards the construction sites. The Applicant's own conflict analysis for Fairstead Lane records materially increased conflict probabilities, including particularly high probabilities during certain periods.

Those arrangements are not ordinary details of site management. They are evidence that the road network lacks sufficient width or resilience for normal two-way construction traffic. They also create dependence on the availability and capacity of holding compounds, the effectiveness of communication systems, compliance by suppliers, the continued presence of trained marshals and the ability to maintain the proposed construction programme within a restricted delivery window.

The number and distribution of accesses also have direct implications for land powers and environmental assessment. Each access or crossing may require visibility splays, vegetation removal, road-edge works, drainage provision, temporary occupation, traffic regulation, PRoW management or third-party rights. Each internal haul route may interact with hedgerows, protected habitats, watercourses, archaeology, agricultural land, drainage and other infrastructure. The Applicant has not demonstrated through a single consolidated schedule that all 65 access and crossing points, their necessary highway works and the connecting internal routes are fully contained within the Order Limits, supported by sufficient land powers and environmentally assessed in their final form.

The correct inference is that the access strategy forms part of the essential physical design of the development. It is not a peripheral matter. Without a complete and workable access system the solar arrays, BESS, substations, cable infrastructure and National Grid works cannot be constructed.

Where a scheme depends upon dozens of accesses, crossings and linked haul routes across a constrained rural network, the availability and acceptability of those routes is a precondition of deliverability. It cannot safely be left as a matter of later traffic management.

11.3 The Applicant has assessed a transport strategy that the local highway authority does not support

The most important evidence on local highway deliverability is Norfolk County Council's June 2026 Relevant Representation. It shows that NCC is not merely requesting minor changes to the submitted CTMP. It requires a materially different access architecture.

For Sites 1A–2C, NCC requires only one access from B1134 Station Road, with CRC2 and CRC3 used to distribute vehicles internally. It states that no new or enhanced access should be provided on the A140 and that haul-route crossing facilities should be used at Lodge Road and Frith Way. It also requires HDD beneath the A140.

For Sites 3A and 3B, NCC states that access should be obtained either through Site 5B using CRC6 and CRC5, or through a new access on Alburgh Road connecting to CRC6.

For Sites 4A and 4B, NCC requires rationalisation of the access arrangements. Site 4A should be accessed from the A140 Hempnall Roundabout, while Site 4B should use a single access from B1527 Hempnall Road or alternatively be served through CRC6.

For Sites 5A and 5B, NCC requires both sites to be served by a single access on the B1527, with internal routeing between the parcels. Site 6 may be accessed from Alburgh Road.

For the most problematic group—Sites 7A–7K, Sites 8A–8B and Site 9—NCC requires all sites to be accessed through CRC8 west of Hempnall, with internal haul routes or Cable Route Corridor connections serving each individual site.

For Sites 10A–10D, NCC requires a shared single access from Harvey Lane with internal haul routes between the parcels, while Site 10E should be accessed through CRC14.

NCC then reaches a clear overall conclusion. Although it records extensive discussions concerning Sites 7–10, it states that the current proposed transport strategy does not adequately address the significant highway constraints, does not provide sufficient mitigation and ‘cannot be supported’. It reiterates that all construction traffic should enter and leave by roads of an appropriate standard and that internal haul routes or Cable Route Corridors should then be used to reach the individual sites.

That position is consistent with, and builds upon, NCC’s November 2025 response to the targeted consultation. In that response, the highway authority said that it had significant concerns about the proposed access strategy and considered it unacceptable. It required access to be limited to appropriate roads, principally B roads, with internal haul routes used to serve individual sites.

The November 2025 response was specific. It stated that:

- construction traffic for the Site 1 infrastructure should be served from Station Road and use internal haul routes;
- development traffic should not use inappropriate roads;
- the authority would not accept a new access on the A140 for Site 2;
- the authority would not accept construction traffic using Hall Lane;
- the authority did not consider Fairstead Lane appropriate;
- and AIL traffic should use roads of an appropriate standard before transferring to internal haul routes.

The final application has not resolved those concerns. Hall Lane remains within the later Transport Assessment as an access route for CRC Compound 2 and within the anticipated AIL routeing. Fairstead Lane and The Krons have continued to form part of the evolving access discussion for Sites 7A–F. The final NCC Relevant Representation continues to reject the overall Sites 7–10 strategy and instead requires access through CRC8 and internal routes.

The history recorded in the Transport Assessment correspondence is particularly revealing. In July 2025 NCC identified Sites 7–9 as the principal highway concern and described Fairstead Lane as very narrow and difficult. In November 2025 the Applicant was still presenting an access strategy for Sites 7A–F based in part on

Fairstead Lane. In December 2025 NCC suggested that The Krons might be preferable on technical highway grounds. By January 2026 the Applicant had accepted routeing using The Krons in preference to the A140/Fairstead Lane route and said that this change would be cascaded through the application evidence.

This sequence demonstrates that the access strategy for the most constrained part of the Scheme remained in material flux shortly before submission. The question was not simply which signs or marshals should be used. It was which public-road corridor should serve the sites at all.

The current NCC position goes further again by requiring access through CRC8 west of Hempnall and internal connections to the individual parcels. That gives rise to a series of unresolved deliverability questions which the Applicant has not answered:

- Is the full route required by NCC contained within the Order Limits?
- Does the Applicant have all necessary land interests and powers?
- Has the route been designed as a construction haul road rather than merely as a cable corridor?
- Can it accommodate the forecast HGV numbers and vehicle dimensions?
- What crossings of roads, PRoWs, watercourses, hedgerows or ecological sites are required?
- Does it require HDD or other trenchless works?
- Has the full environmental effect of that route been assessed?
- Can it be implemented without changing the assessed layout or requiring additional land?
- Can it be delivered in time to support the Applicant’s 24-month construction programme?

These questions are particularly material because the earlier consultation record shows that internal access options were constrained by Hempnall Beck, a County Wildlife Site and other ecological considerations, with HDD likely to be required in some locations. An internal route demanded by the highway authority cannot be assumed to be environmentally or technically available merely because it would reduce use of public roads.

The Applicant therefore faces a fundamental dilemma. If it continues to rely on the submitted public-road strategy, it proceeds contrary to the express position of the local highway authority. If it adopts NCC’s required internal-haul-route architecture, it must demonstrate that the alternative lies within the DCO envelope, is supported by the necessary land and powers, is technically feasible, has been environmentally assessed and does not require a material change to the application.

That is not a minor refinement issue. It concerns the physical route by which entire sections of the Scheme would be constructed.

The Applicant’s Chapter 11 assessment cannot simply be treated as precautionary because it assumes a high traffic case. A worst-case traffic number does not cure assessment of the wrong route. Nor does a conclusion that percentage effects are not significant establish that the route is accepted by the highway authority or physically deliverable.

The Applicant does not merely face requests for minor refinement. The local highway authority requires a materially different access architecture from that presented and assessed by the Applicant. Until the Applicant demonstrates that the required alternative is available, lawful, environmentally acceptable, within its land and DCO powers and capable of supporting the construction programme, the Scheme is not shown to be deliverable.

11.4 The alternative strategy required by NCC has not been demonstrated to be available or environmentally feasible

NCC’s rejection of the submitted strategy is not, by itself, the end of the analysis. The decisive deliverability question is whether the alternative strategy required by the highway authority is actually available within the Scheme for which development consent has been sought.

The Applicant cannot answer NCC’s objection simply by stating that routes will be refined in the final CTMP. NCC’s preferred solution depends on substantially increased use of Cable Route Corridors and internal haul routes. That may require different physical works, different land, additional crossings and a different balance of environmental effects from the public-road strategy assessed in Chapter 11.

For each NCC-required route, the Applicant must demonstrate:

- the precise alignment of the internal haul route;
- that the alignment lies wholly within the Order Limits;
- that the Applicant possesses or seeks the necessary land and rights;
- that it has been designed for the relevant HGV and construction traffic;
- that it can operate in conjunction with cable installation;
- that all road, watercourse and PRoW crossings are identified;
- that the necessary crossing technique is feasible;
- that drainage and structural requirements have been assessed;
- and that the environmental effects of the route are already within the submitted ES.

Those matters have not been brought together in the application.

Sites 1–2

NCC’s preferred arrangement requires a single Station Road access followed by internal haul routes through CRC2 and CRC3, with crossing facilities at Lodge Road and Frith Way and HDD beneath the A140.

That is materially different from the Applicant’s assessed direct A140 accesses for Sites 2A–2C. The Applicant must therefore demonstrate that CRC2 and CRC3 have been designed and assessed not merely as cable corridors but as construction haul routes capable of carrying the full Site 2 traffic.

It must also show:

- the proposed road-crossing arrangements at Lodge Road and Frith Way;
- how cable works and construction traffic would be coordinated;
- whether the internal route would require temporary surfacing or widening;
- whether it affects hedgerows, drainage features or private accesses;
- and whether all necessary works and rights are included within the application.

The fact that a Cable Route Corridor passes between locations does not establish that it is capable of functioning as an HGV haul road.

Sites 3–6

NCC's preferred strategy would connect Sites 3A and 3B through Site 5B and CRC5/CRC6 or through a new Alburgh Road access linked to CRC6. Sites 5A and 5B should have one B1527 access and be connected internally. Site 4B should similarly be rationalised to a single B1527 access or CRC6.

This would concentrate a substantial amount of construction traffic within a linked internal system centred on CRC5 and CRC6. The Applicant must demonstrate that those corridors can safely and practically perform that function while also accommodating their primary cable-route purpose.

The necessary evidence includes:

- internal haul-road widths and construction;
- crossing details;
- construction sequencing;
- drainage;
- interaction with Site 5 infrastructure;
- PRoW management;
- soil and agricultural effects;
- ecological constraints;
- and whether the single B1527 access has capacity for the consolidated traffic.

Without that evidence, the NCC alternative cannot be assumed to be a straightforward substitution for the multiple accesses assessed by the Applicant.

Sites 7–9 as the principal test of deliverability

The most important example is NCC's requirement that Sites 7A–7K, Sites 8A–8B and Site 9 should all be reached through CRC8 west of Hempnall, followed by internal haul routes or Cable Route Corridor connections to the individual parcels.

The Applicant's submitted strategy is not based on such a consolidated route. It distributes traffic over several distinct rural corridors:

- The Krons and Fairstead Lane for Sites 7A–7F;
- Shotesham Road, Woodton Road, Fylands Road and Bussey's Loke for Sites 7G–7L;
- Heath Road, Baxter's Lane and Market Lane for Sites 8A–8B;

- and Littlebeck Lane for Site 9.

The alternative required by NCC therefore appears to involve a much more extensive internal construction route than the one assessed in Chapter 11. It would have to connect widely separated development parcels north of the B1527 while avoiding or crossing public roads, PRoWs, watercourses, hedgerows, ecological receptors and drainage features.

The consultation record shows that internalisation was not previously treated as unconstrained. During route discussions, alternatives were affected by the presence of Hempnall Beck, ecological interests and the likely need for trenchless crossing techniques. The access discussion moved between Fairstead Lane, an alternative from the B1527, The Krons and internal-haul-route options.

That history matters. It demonstrates that the present conflict is not simply a failure to draw an obvious internal road. The available alternatives may move the problem from highway safety into water, ecology, land, drainage and engineering feasibility.

The Applicant must therefore provide a complete plan showing how the CRC8 strategy reaches:

- Sites 7A–7F;
- Sites 7G–7L;
- Sites 8A and 8B;
- and Site 9.

For every part of that route, the Applicant should identify:

- whether the route is already shown as an internal haul road in the application;
- whether it is only shown as a cable corridor;
- the proposed construction width and surfacing;
- each public-road crossing;
- each PRoW crossing;
- each watercourse or ditch crossing;
- each hedgerow opening;
- each protected or priority habitat interaction;
- the drainage design;
- land ownership and rights;
- and the environmental document in which its effects have been assessed.

The need for this evidence is reinforced by NCC’s wider findings. Its June Relevant Representation states that HDD is required beneath all affected A and B roads. It also records the LLFA’s conclusion that the application is incomplete because of inconsistencies and limited information and does not yet demonstrate that changes in surface-water runoff can be managed without increasing flood risk. A new or intensified internal haul route would create compacted or impermeable surfaces and cannot be presumed to have no drainage consequences.

The potential PRoW consequences are also substantial. Chapter 11 confirms that Boudicca Way is adjacent to Site 7A on Fairstead Lane and interacts with the

Cable Route Corridor. A consolidated internal route across the wider Sites 7–9 group may reduce traffic on some public lanes but increase construction interaction with PRoWs, promoted routes and open countryside elsewhere. Those effects must be assessed, not assumed away.

ISH1 has subsequently exposed a further infrastructure constraint within this routeing problem. The ExA issued a specific action concerning the proposed haul-road crossing of the high-pressure gas transmission pipeline at Site 7. That issue must be resolved as part of the access solution itself. A haul route cannot be assumed to be available merely because an indicative alignment exists across the Order Limits: the Applicant must demonstrate that the crossing can safely carry the relevant construction vehicles, can satisfy the pipeline operator's protection requirements, and can be engineered without introducing materially different land, drainage, ecological or programme consequences.

Sites 10A–10E

NCC requires Sites 10A–10D to share a single Harvey Lane access, with internal routes between the parcels, and Site 10E to be served through CRC14.

The Applicant's submitted strategy uses three accesses and includes continued use of Seething Road for access A65. A single-access arrangement would therefore concentrate the traffic currently distributed between several access points and require additional internal connections.

The Applicant must demonstrate:

- that the Harvey Lane access can accommodate the combined traffic for Sites 10A–10D;
- that the internal haul roads between the parcels have been designed;
- whether road or PRoW crossings are required;
- whether the route passes through land used for solar panels, mitigation or cable works;
- whether the construction sequencing allows those internal routes to remain available;
- and whether CRC14 can physically carry the construction traffic for Site 10E.

It is not sufficient to say that internal routes will be finalised after contractor appointment. The physical ability to reach each site must be established before consent.

Future redesign cannot be treated as ordinary mitigation

The central distinction is between refinement and redesign.

Refinement might include:

- final sign locations;
- marshal positions;
- delivery booking arrangements;
- or the precise operating hours of a route already assessed and accepted.

Redesign includes:

- changing the public-road approach;
- removing or adding access points;
- constructing a new internal haul route;
- introducing new road or watercourse crossings;
- widening a Cable Route Corridor for HGV use;
- acquiring additional land;
- or transferring impacts to previously unaffected ecological, heritage or hydrological receptors.

NCC's preferred strategy appears capable of involving the latter. If the acceptable access solution depends on a different haul-route alignment, new crossings, additional land or materially different environmental effects, it is a change to the physical scheme, not merely the later management of the submitted scheme.

The Examination must therefore establish whether NCC's required strategy:

1. lies wholly within the submitted Order Limits;
2. is authorised by the Works Plans and draft DCO;
3. is supported by the necessary compulsory-acquisition or temporary-possession powers;
4. has been included in the Book of Reference where appropriate;
5. is environmentally assessed;
6. can be constructed without unacceptable effects;
7. and can support the Applicant's construction programme.

Until that exercise is completed, there is an unresolved risk that the submitted routes are unacceptable while the alternative routes are unavailable, unassessed or outside the current DCO envelope.

BEPS therefore requests a route-by-route feasibility matrix covering every site and major work. It should identify the submitted route, NCC's required route, all public and internal links, necessary land and powers, vehicle specifications, required engineering, road and watercourse crossings, PRoW interactions, ecological and heritage constraints, drainage requirements, status of highway-authority agreement, and the consequence if the route cannot be used.

Without such evidence, the Applicant has not shown that NCC's objection can be resolved within the submitted scheme.

11.5 Hall Lane demonstrates that highway objections remain unresolved in the final application

Hall Lane provides the clearest documentary example of the failure to resolve highway-authority objections before submission.

In its November 2025 targeted-consultation response, NCC stated expressly that it would not accept construction traffic using Hall Lane. It required the relevant area to be served through an internal haul route rather than by construction traffic on the lane.

The Applicant nevertheless retained Hall Lane in the final Transport Assessment.

The Transport Assessment identifies ‘Compound 2: Hall Lane’, served through access A14. The route is described as travelling from Ipswich Road east along Hall Lane and then south into access A14. The anticipated AIL route to the same compound also includes Hall Lane.

Hall Lane is therefore not an historic consultation issue overtaken by later design evolution. It is an unresolved conflict between the final submitted transport strategy and the highway authority’s stated requirements.

The significance of that conflict is greater than the number of vehicles assigned to the route. It demonstrates that the Applicant submitted its DCO application while retaining a construction and abnormal-load route which the local highway authority had already rejected.

That gives rise to two alternatives, neither of which has been adequately addressed.

First, Hall Lane may be indispensable to access CRC Compound 2 or to deliver the abnormal components assigned to that compound. If so, that part of the Scheme depends on a route which NCC has said it will not accept.

Second, Hall Lane may not be indispensable. If so, the Applicant must identify the substitute route and demonstrate:

- where it lies;
- whether it is within the Order Limits;
- whether the Applicant controls the land;
- whether it has been assessed;
- what highway or internal-haul-route works it requires;
- whether it creates different ecological, drainage, heritage or residential effects;
- and whether it can accommodate the relevant AIL.

The Applicant cannot leave both possibilities open until the final CTMP. The substitute route may not be a management detail. It may require a new access, internal haul route, road crossing, temporary rights or environmental assessment.

The AIL dimension makes the issue especially serious. An ordinary construction delivery might, in some circumstances, be transferred to a smaller vehicle or an alternative access. An abnormal load may be determined by the indivisible dimensions and weight of the equipment. If Hall Lane cannot be used, the Applicant must demonstrate that the relevant component can physically reach its destination by another route.

National Highways’ Relevant Representation confirms that the wider AIL strategy remains unresolved. It records that the Applicant has not yet determined the AIL routes, that some SRN routes are constrained, and that an acceptable strategy should be established in principle before the DCO decision. The continuing inclusion of Hall Lane therefore forms part of a broader failure to establish an end-to-end AIL delivery solution.

The Hall Lane issue should be resolved through an express written position from NCC. The Applicant should be required either:

- to remove Hall Lane from all construction and AIL routeing and provide a fully assessed substitute; or
- to obtain NCC's written agreement that a defined and limited use is acceptable, supported by complete technical evidence.

Unless one of those outcomes is achieved, the relevant compound and associated works are not shown to be deliverable.

11.6 Sites 7–10 are not shown to have a deliverable access solution

Sites 7–10 are the clearest geographical expression of the Scheme's transport problem. They are distributed north and east of the B1527 across a network of narrow rural roads and lanes, while NCC's final position is that the submitted strategy does not adequately address the highway constraints and cannot be supported.

The unresolved issue is not confined to the level of traffic on any one road. It concerns the absence of an agreed physical routeing system for a substantial part of the Scheme.

11.6.1 Fairstead Lane

Fairstead Lane was central to the Applicant's earlier strategy for Sites 7A–7F and remains part of the route described in the submitted Chapter 11.

Chapter 11 routes vehicles from the A140 to Site 4A, where they would wait for call-forward, before travelling east along the B1527, north along The Krons, west along Fairstead Lane and then into the Sites 7A–7F accesses.

The Applicant's own baseline describes Fairstead Lane as a single-track road with overhanging trees and potentially challenging two-way vehicle movement. NCC's consultation record similarly identifies it as very narrow and raises concerns about carriageway width, visibility and the junction with the A140. The targeted-consultation response ultimately stated that Fairstead Lane was not appropriate and that the relevant construction traffic should be served through a haul route from the B1527.

Chapter 11 predicts that traffic on the western part of Fairstead Lane would increase from a future baseline AADT of 86 vehicles to 186 vehicles during peak construction, an increase of 116%. It categorises the severance impact as high.

The Applicant then concludes that the effect on non-motorised-user amenity is negligible and not significant because construction would be staggered and existing pedestrian and cyclist activity is said to be low. That reasoning is not persuasive.

First, the 116% increase is the Applicant's own assessed reasonable worst case. It cannot be dismissed by assuming that the construction programme will operate more favourably when the detailed programme is not fixed.

Second, the claim of low pedestrian and cyclist activity does not address the road's function as part of Boudicca Way. Chapter 11 identifies Boudicca Way as a 58 km long-distance trail between Norwich and Diss, adjacent to Site 7A on Fairstead Lane and interacting with the Cable Route Corridor. NCC's November response said that the trail would be closed for a considerable period, that likely diversion arrangements could result in the loss of a loop through Tasburgh, and that a clear assessment and mitigation plan were required.

Third, the Applicant's own response depends on exceptional operational controls. Vehicles are to wait at Site 4A and be called forward. The technical work proposes one-at-a-time HGV release, with traffic marshals and stop arrangements to manage conflicts. Those measures do not demonstrate that Fairstead Lane is suitable. They show that ordinary two-way construction operation is not considered workable.

The Applicant's own technical analysis also identified materially increased probabilities of vehicle conflict on Fairstead Lane, with particularly high probabilities in the peak periods under the modelled scenarios. The mitigation response was to rely on single-vehicle release and the possible provision of a passing place.

That gives rise to further unresolved matters:

- the final location and dimensions of any passing place;
- whether it lies within the highway boundary;
- whether third-party land is required;
- whether vegetation or hedgerow removal is necessary;
- whether drainage can be provided;
- and whether the intervention is acceptable within the sensitive historic and landscape setting.

The final NCC Relevant Representation does not endorse this Fairstead Lane solution. It requires Sites 7–9 to be served through CRC8 and internal connections and says the current strategy cannot be supported.

Fairstead Lane therefore cannot be treated as an agreed fall-back route. Its continued presence in the submitted assessment illustrates the gap between the Applicant's traffic modelling and the highway authority's deliverability requirements.

The independent heritage report has also identified heritage harm to two Listed buildings in widening Fairstead Lane at the junction with the A140.

11.6.2 The Krons

The Krons emerged as a preferred alternative relatively late in the pre-application process.

The meeting record shows that NCC raised concerns about the proposed A140/Fairstead Lane access and suggested an alternative route through the B1527, The Krons and Fairstead Lane. By January 2026 the Applicant had accepted use of The Krons in preference to the earlier A140/Fairstead Lane approach and stated that the change would be cascaded through the application documents.

Chapter 11 consequently routes Sites 7A–7F along the B1527, The Krons and Fairstead Lane.

The Krons is not, however, established as an unconstrained route. The Applicant's baseline describes it as single carriageway and single track at points, with varying widths, overhanging trees and two bridges over minor water passages.

The consultation record raises additional issues:

- the accepted structural capacity of the bridge or bridges needed confirmation;
- vehicle clearance of approximately 5.2 metres was discussed;
- overhanging trees and vegetation may require works;
- passing opportunities may need to be improved;
- highway-boundary information was important;
- and works outside the highway boundary might require additional land and consultation.

These matters are not cosmetic. If the route requires pruning, vegetation removal, verge works, widening or passing places, the Applicant must show that those works are:

- physically possible;
- within the highway boundary or Order Limits;
- supported by the necessary rights;
- included within the assessed scheme;
- and acceptable in arboricultural, ecological, landscape and drainage terms.

NCC's June 2026 position demonstrates that the The Krons solution did not resolve the wider issue. Rather than endorsing The Krons as the final access route, NCC now requires all of Sites 7–9 to be accessed through CRC8 and internal connections.

The Krons must therefore be treated as another proposed route that formed part of the evolving Applicant strategy but has not obtained final highway-authority support. It cannot be relied upon as evidence that Sites 7A–7F have a settled access solution.

The Krons has also now become an express Examination issue. ISH1 resulted in a specific action concerning this route. That development reinforces BEPS's existing point: The Krons cannot be treated merely as a settled replacement for the earlier Fairstead Lane approach. Its physical constraints, necessary vegetation and highway works, bridge or water-passage constraints, land

requirements and relationship to NCC's preferred internal-haul strategy require resolution before it can be relied upon as an essential construction route.

11.6.3 Internal access through CRC8

NCC's final preferred strategy is for Sites 7A–7K, Sites 8A–8B and Site 9 to be accessed through CRC8 west of Hempnall, with internal haul roads or Cable Route Corridor connections serving each site.

This has the attraction of reducing construction use of the most constrained public roads. But it has not been demonstrated as a complete and deliverable engineering solution.

The Applicant must first identify the precise location at which construction traffic would enter CRC8 and show the complete internal route to every site. A general reference to CRC8 is insufficient because the affected sites extend across a large area and are presently served through several different road corridors.

The Applicant must then establish whether CRC8 has been designed for dual use as:

1. a cable construction corridor; and
2. a sustained HGV haul route serving multiple solar development areas.

Those uses may impose different requirements. A construction haul road may require:

- greater width;
- load-bearing construction;
- drainage;
- turning areas;
- passing places;
- temporary compounds;
- road crossings;
- and maintenance throughout the construction programme.

The fact that the DCO seeks powers for cable works within a corridor does not automatically demonstrate that all necessary haul-road works are assessed or authorised.

The route is also likely to intersect or approach public roads, PRoWs, field boundaries, drainage ditches and watercourses. NCC requires HDD beneath all affected A and B roads. The Applicant must explain whether the construction haul route would itself cross those roads at grade, use separate haul-route crossing facilities, or depend on the sequence of the cable works.

Water and drainage effects are particularly important. NCC's LLFA says the application is incomplete and does not yet demonstrate that changes in surface-water runoff from the development can be managed without increased flood risk. A long compacted haul road through rural land cannot be assumed to be hydrologically neutral.

Ecological constraints must also be reconciled. The consultation record shows that possible internal routeing and B1527 approaches interacted with Hempnall Beck and ecological interests and that trenchless works were contemplated. If the route required by NCC crosses a County Wildlife Site, watercourse, important hedgerow or bat corridor, the associated effects must be assessed as part of the access solution.

There are also substantial PRoW implications. The wider Sites 7–9 area contains numerous footpaths and promoted recreational routes. Any route connecting the sites internally must identify every PRoW crossing and show how users would be protected without creating excessive closure, severance or diversion.

Finally, the Applicant must demonstrate that all necessary land and rights are within the current DCO application. If the complete CRC8 haul-route system requires land outside the Order Limits, wider passing places, new crossing land or works on third-party property, it may require a change to the application and further consultation.

Until those matters are answered, NCC's preferred route cannot simply be assumed to cure the defects in the submitted strategy. It remains an alternative whose technical, environmental and legal feasibility has not been demonstrated.

11.6.4 Sites 10A–10E

NCC's final position for Site 10 is similarly more consolidated than the Applicant's submitted strategy.

NCC requires Sites 10A–10D to use a single Harvey Lane access with internal haul routes between the parcels. Site 10E should be accessed through CRC14.

Chapter 11 instead identifies three accesses—A61, A62 and A65. Access A65 requires vehicles to continue east on Harvey Lane, turn north on Seething Road and then west into the site.

The NCC solution would remove or reduce some public-road access but would also concentrate traffic at one Harvey Lane junction and require a more extensive internal network. The Applicant must demonstrate:

- the capacity and geometry of the single Harvey Lane access;
- the combined daily and peak traffic assigned to it;
- the alignment of internal routes between Sites 10A–10D;
- whether those routes conflict with panels, mitigation areas, hedgerows or PRoWs;
- whether they require road crossings or additional land;
- how traffic would be managed while different parcels are constructed;
- and whether the route remains available throughout the proposed programme.

For Site 10E, the Applicant must show how CRC14 would function as a construction haul route and how that differs from the submitted A65 route through Seething Road. It must also identify the land, works and environmental effects associated with the substitute arrangement.

The Outline CTMP's use of Site 10C as a waiting or call-forward compound adds a further dependency. If Sites 10A–10D are served internally from a single access, the Applicant must show how the holding compound, internal routes and parcel construction sequence interact. A route cannot be described as deliverable without demonstrating that the compound and internal links will remain operational when required.

11.6.5 Conclusion on Sites 7–10

Sites 7–10 expose the underlying weakness of the transport case.

The Applicant assessed a dispersed public-road strategy using The Krons, Fairstead Lane, Shotesham Road, Woodton Road, Fylands Road, Bussey's Loke, Heath Road, Baxter's Lane, Market Lane, Littlebeck Lane, Harvey Lane and Seething Road. NCC does not support that strategy. It requires a different system based on CRC8, CRC14 and consolidated internal haul routes.

The Applicant has not yet demonstrated that NCC's alternative:

- is fully designed;
- is within the Order Limits;
- is supported by the necessary land powers;
- can be engineered across the affected landscape;
- avoids unacceptable ecological, hydrological, heritage and PRoW effects;
- and can support the construction programme.

The largest unresolved transport issue is therefore not the precise number of HGVs travelling on a particular day. It is the absence of an agreed and demonstrated physical access solution for an entire group of Scheme parcels. Until that solution is established, Sites 7–10—and therefore the Scheme as a whole—are not shown to be deliverable.

11.7 The local highway network is physically unsuited to the Applicant's proposed traffic

The Applicant's own baseline evidence demonstrates that much of the local highway network is physically ill-suited to the volume, size and operational demands of the proposed construction traffic. The difficulty is not confined to one or two isolated pinch points. It arises from the character of the network as a whole: narrow rural lanes, single-track sections, limited passing opportunities, weight restrictions, overhanging vegetation, bridges, water crossings, on-street parking, schools, residential frontage and flood-prone sections.

Chapter 11 acknowledges that the principal strategic routes are the A140, B1332 and B1527, but states that the remainder of the study area comprises rural roads with intermittent road markings and varying carriageway widths. The Applicant's own Table 11.7 then records a network whose physical characteristics are inconsistent with routine HGV use on the scale proposed.

Fairstead Lane is described as single-track, with overhanging trees and potentially challenging two-way vehicle movements. Lodge Road and Frith Way

are described as single-track with varying widths. Bussey's Loke and The Green are single-track, subject to a 7.5 tonne restriction except for loading, affected by overhanging trees and varying widths, and potentially challenging for two-way movements. Fylands Road is also single-track, with overhanging trees and limited passing provision.

The Applicant describes Shotesham Road, Woodton Road and Baxter's Lane as a combination of single carriageway and single-track road, with one-way access at some junctions, varying widths and potentially challenging two-way movements. Shotesham Road is subject to a 7.5 tonne restriction except for loading. Mill Lane and Norwich Road are likewise single-track, with Mill Lane subject to a 7.5 tonne restriction and affected by Shotesham Ford, where flooding may make the road inaccessible to vehicles.

The Krons is single-track at points, has varying widths and overhanging vegetation, and crosses two bridges over minor water passages. The Applicant notes that no weight-restriction signage was visible, but the absence of signage is not evidence that the structures are suitable for the proposed construction vehicles. It instead reinforces the need for structural verification before the route is relied upon.

The route through Hempnall and Saxlingham Nethergate also contains sensitive constraints. Chapter 11 records on-street parking in Hempnall, an overhanging building, narrow footways in places, and the presence of both Hempnall Primary School and Saxlingham Primary School along the route. These are precisely the conditions in which HGV traffic has a greater effect on pedestrian safety, delay, fear and intimidation, access to schools and residential amenity.

Hall Lane is described by the Applicant as suitable for two-way traffic, but the same baseline records that the road narrows at points, has overhanging trees and depends on some existing passing places. That description must be read together with NCC's express refusal to accept construction traffic on Hall Lane. The Applicant's own qualitative description cannot override the highway authority's position.

The baseline evidence also records exceptionally low traffic flows on many of the affected links. The 24-hour AADT figures include:

- Fairstead Lane west: 82 vehicles;
- Littlebeck Lane: 103 vehicles;
- Shotesham Road: 134 vehicles;
- The Green: 67 vehicles;
- Wash Lane: 67 vehicles;
- Bussey's Loke: 53 vehicles;
- Market Lane: 31 vehicles;
- Edge's Lane: 41 vehicles.

Those figures demonstrate that these are not ordinary distributor roads. They are quiet rural lanes with a limited existing transport function. The low baseline flows are evidence of rural sensitivity, local character and constrained capacity. They do not make a large increase environmentally insignificant.

The Applicant nevertheless repeatedly uses the low baseline as part of the reasoning for concluding that effects are not significant. Chapter 11 acknowledges a 116% increase on Fairstead Lane, a 58% increase on Shotesham Road, a 45% increase on Bussey's Loke and a 48% increase on Market Lane. It classifies the severance impact on Fairstead Lane as high, yet later concludes that non-motorised-user amenity effects are negligible because existing pedestrian and cyclist activity is said to be low and construction will be staggered.

That approach understates the real effect of construction traffic on a rural network. A road carrying 30, 50 or 80 vehicles a day may have low numerical traffic volumes because it is a minor lane serving dispersed homes, farms, walkers, cyclists and equestrians. Introducing repeated HGV movements into such a road changes its character and function to a much greater degree than the same increase on an established strategic route.

The Applicant's methodology itself recognises that local rural roads with restricted carriageway width, limited structural capacity, susceptibility to HGV wear and limited pavement provision are sensitive receptors. It also classifies conservation areas, listed buildings, residential areas, school routes and bus stops as sensitive. The network descriptions show that these sensitivities frequently occur together.

This is important because the transport case is not simply about theoretical traffic capacity. The physical form of these roads determines whether HGVs can pass safely, whether pedestrians have refuge, whether equestrians can avoid approaching vehicles, whether vehicles can turn without overrunning verges, whether visibility splays can be achieved without vegetation removal, and whether the route remains available in flood conditions.

The Shotesham Ford illustrates this point clearly. The Applicant records that flooding may make the route inaccessible. A route whose availability is weather-dependent cannot safely be treated as a reliable element of a tightly programmed construction strategy unless there is a fully assessed alternative route and contingency plan.

The same applies to bridges and weight-restricted roads. A route may be shown on a traffic plan, but that does not prove that every bridge, culvert, verge, carriageway edge and junction can accommodate the dimensions and axle loads of the proposed vehicles. Nor does a 'loading exemption' to a weight restriction establish that routine scheme traffic is acceptable in planning or highway-safety terms.

The Applicant's baseline therefore supports the opposite conclusion from the one ultimately reached in Chapter 11. The local highway network is not a neutral receptor capable of absorbing scheme traffic with limited management. It is a principal physical constraint on the delivery of the Scheme.

The low baseline flows are evidence of rural sensitivity and limited traffic function. They do not make a large increase environmentally insignificant. When those low flows are combined with single-track geometry, limited passing opportunities, weight restrictions, schools, residential frontage, bridges, flooding

and overhanging vegetation, the result is a network whose suitability for the Applicant's proposed traffic has not been demonstrated.

11.8 The proposed mitigation is evidence of constraint, not proof of suitability

The Applicant relies heavily on traffic-management measures to conclude that the effects of construction traffic will be acceptable. Those measures include call-forward systems, holding areas, one-HGV-at-a-time release, traffic marshals, banksmen, stop boards, temporary signals, vehicle-length restrictions, passing places, temporary speed limits, restricted delivery hours and left-in/left-out arrangements.

Properly understood, those measures do not demonstrate that the routes are suitable. They demonstrate that the Applicant itself recognises that ordinary construction traffic movements cannot safely or reliably operate on parts of the network without intensive intervention.

11.8.1 Call-forward systems and holding areas

The proposed strategy uses construction compounds and holding areas to prevent vehicles arriving uncontrolled at constrained routes. Vehicles would wait at compounds and be released only when the route ahead is considered clear.

For Sites 7A–7F, the Applicant proposes use of Site 4A as a holding area before vehicles travel towards The Krons and Fairstead Lane. The consultation record and technical work describe a call-forward system in which vehicles would be released individually under marshal control.

This arrangement creates a series of dependencies:

- the holding area must be available before deliveries begin;
- it must have sufficient physical capacity;
- it must remain accessible throughout the construction programme;
- communications must operate reliably;
- suppliers must comply with booking and release procedures;
- and the route must remain clear once a vehicle is dispatched.

The Applicant has not demonstrated the operational resilience of that system. If the holding compound is itself under construction, occupied by plant, unavailable because of phasing, or unable to accommodate delayed vehicles, the routeing strategy may fail.

11.8.2 One-HGV-at-a-time release

The Applicant's proposal to release HGVs one at a time is particularly revealing. That measure is only necessary because the route cannot reliably accommodate two-way HGV movements.

The technical work for Fairstead Lane identifies materially increased probabilities of vehicle conflict and proposes single-vehicle release as mitigation. The same

general approach appears in the discussions of constrained routes serving Sites 7–9.

A one-at-a-time system is not equivalent to a route with sufficient physical capacity. It reduces risk by suppressing the number of vehicles permitted to use the route simultaneously. It therefore also limits route throughput.

That creates a direct deliverability question. The Applicant proposes a 24-month construction programme with multiple active sites, restricted HGV delivery hours and substantial daily traffic. If one-at-a-time release is necessary across several routes, the Applicant must show that the available route capacity is sufficient to deliver the forecast material volumes within the programme.

No programme-linked logistics model has been produced demonstrating:

- the maximum number of vehicles that can be released per hour;
- travel and turnaround times;
- queuing and delay assumptions;
- the effect of agricultural or public traffic;
- the consequences of a vehicle breakdown;
- the effect of roadworks or weather;
- and the interaction between simultaneous work fronts.

Without that evidence, one-at-a-time release may reduce risk only by rendering the assumed construction rate unachievable.

11.8.3 Marshals, banksmen and stop boards

The Applicant also relies on traffic marshals, banksmen and stop boards to control movements at narrow sections, crossings and accesses.

Those measures may be appropriate at a defined worksite or a short, controlled crossing. They are less persuasive where they are needed to compensate for the basic geometry of a public road over an extended construction period.

The dependence on manual control creates questions that remain unanswered:

- how many marshals will be required;
- where they will stand;
- whether those locations are safe;
- whether they lie within land controlled by the Applicant;
- whether communication is continuous;
- what happens outside normal hours;
- how emergency vehicles are prioritised;
- and how public traffic is managed where there is no alternative route.

The use of stop boards and marshals also does not create physical passing space. It can only hold one vehicle while another passes through a constrained section. The approach therefore depends on adequate waiting positions at both ends and on public-road users complying with the control.

11.8.4 Temporary traffic signals

Temporary signals may be used at crossings, narrow sections or works areas. Again, that may reduce conflict, but it introduces additional delay, queuing and operational dependency.

On quiet rural lanes, temporary signals may require vehicles to queue where there is limited carriageway width or residential frontage. At more heavily trafficked junctions, they may affect wider network operation. The Applicant has not provided a consolidated schedule identifying where temporary signals will be required, for how long, or how simultaneous controls across the network would interact.

11.8.5 Vehicle-length restrictions

The consultation record refers to the possible restriction of some construction vehicles to 10-metre rigid HGVs or 12-metre drawbar combinations ‘where practicable’.

The words ‘where practicable’ are significant. The Scheme includes loads and equipment whose dimensions may not be capable of being reduced to suit the road. The Applicant must identify:

- which routes require vehicle-length restrictions;
- which materials can be delivered in compliant vehicles;
- which cannot;
- whether smaller vehicles would increase the total number of trips;
- and how abnormal or indivisible loads would be dealt with.

A vehicle-length restriction may make one route safer while materially increasing traffic numbers or making delivery of particular components impossible.

11.8.6 Passing places

Passing places are repeatedly contemplated as mitigation on constrained rural roads. NCC’s discussions indicate that passing places might need to be approximately 20 metres long, 5.5 metres wide and spaced around 250 metres apart, subject to visibility.

But the Applicant has not fixed their locations or demonstrated that the necessary land is available. A passing place is not merely a traffic-management measure. It is a physical highway intervention that may require:

- additional land;
- verge removal;
- tree or hedge works;
- drainage;
- excavation and surfacing;
- utility diversions;
- reinstatement;
- and highway approval.

The Applicant cannot rely on passing places as mitigation without identifying and securing them.

11.8.7 Temporary speed limits

Temporary speed reductions are also proposed or discussed. They may reduce stopping distances or visibility-splay requirements, but they do not widen the carriageway or eliminate blind bends, bridges or weight restrictions.

A temporary speed limit also requires legal and physical implementation, including consultation, traffic regulation, signage, enforcement and maintenance. Its availability cannot be assumed without agreement from the relevant authority.

11.8.8 Restricted delivery hours

HGV deliveries are proposed principally between 09:30 and 16:30. This is intended to avoid network peak hours and school-sensitive periods.

The restriction may reduce some impacts, but it compresses the daily delivery programme into a limited window. That makes the Scheme even more dependent on route capacity, holding areas, call-forward systems and uninterrupted operation.

If vehicles are released one at a time and must complete long rural routes within that period, the Applicant must demonstrate that the required daily delivery volumes can still be achieved. Otherwise, the mitigation used to make traffic effects acceptable may undermine the construction programme.

11.8.9 Left-in/left-out arrangements

Left-in/left-out controls may reduce difficult turning movements at certain accesses. They may also require vehicles to travel additional distance to turn at roundabouts or other junctions, redistributing traffic to parts of the network not otherwise affected.

The Applicant must therefore assess the complete route consequences of such controls rather than treating the access movement in isolation.

11.8.10 Mitigation cannot convert an unacceptable route into an acceptable one

The strategic distinction is clear.

These measures may reduce risk on an otherwise usable route. They do not prove that a route rejected by the highway authority becomes acceptable. Nor do they establish that the physical works required for the mitigation are available, environmentally assessed and secured.

That distinction is particularly important in relation to Hall Lane and the Sites 7–10 routeing. NCC has not said merely that additional marshals or signs are needed. It has said that the submitted strategy cannot be supported and that a different access architecture based on appropriate-standard roads and internal haul routes is required.

The Applicant cannot answer that objection by adding further operational controls to the same rejected roads.

The proposed mitigation also lacks demonstrated resilience. The Examination should require the Applicant to explain what happens if:

- a passing place cannot be acquired;
- vegetation clearance is not agreed;
- a bridge cannot carry the required load;
- a holding compound is unavailable;
- communications fail;
- a marshal-controlled route is obstructed;
- a temporary speed limit is not approved;
- an emergency requires immediate access;
- agricultural traffic cannot be delayed;
- or construction programme pressures require simultaneous deliveries.

If the transport strategy depends upon every control functioning perfectly, with no alternative route or operational margin, it is not a robust deliverability case.

The mitigation package therefore proves constraint, not suitability. It may form part of a final solution once an acceptable route is identified, designed and secured. It cannot substitute for proof that such a route exists.

11.9 The Applicant has not demonstrated the necessary highway land and works

The transport assessment repeatedly treats route feasibility as though it were established by indicative access drawings, visibility splays and swept-path analysis. That is insufficient. A drawing may show that a modelled vehicle could negotiate a junction or bend under assumed conditions. It does not prove that the Applicant owns or controls the affected land, possesses the necessary DCO powers, can carry out the required highway and vegetation works, or has assessed and secured the environmental consequences of making the route physically usable.

For a project whose construction depends upon 65 access and crossing points, this is not a secondary detail. The land, works and legal powers required at each access form part of the practical means by which the authorised development could be implemented. Unless they are identified, assessed and secured, the Applicant has not demonstrated a deliverable route network.

11.9.1 Highway boundaries remain a fundamental uncertainty

Norfolk County Council repeatedly requested highway-boundary information during the pre-application discussions. Its November 2025 targeted-consultation response stated that proposed highway works and route changes required detailed schemes including highway-boundary information, and that the information then provided was inadequate or inappropriate in several locations.

The highway boundary is critical because the physical space between roadside hedges, ditches, banks or fences is not necessarily all public highway. Verges, trees and visibility areas may belong to adjacent landowners. Without an accurate boundary plan, it is not possible to establish whether:

- an access can be widened within highway land;
- a passing place can be provided;
- a visibility splay can be kept clear;
- an AIL can oversail or overrun without entering private land;
- trees or hedges can lawfully be removed;
- temporary signs or traffic-control infrastructure can be installed;
- or additional permanent or temporary rights are required.

The Applicant should therefore provide a route-by-route highway-boundary reconciliation. It should identify every place where the proposed swept path, visibility splay, passing place, overrun area, highway widening or vegetation-clearance zone extends beyond the confirmed highway boundary.

The absence of such evidence is particularly serious where the Applicant relies on later detailed design. A later CTMP cannot enlarge the Order Limits, create new compulsory-acquisition powers or confer rights over land not controlled by the Applicant.

11.9.2 Passing places have not been fixed or secured

Passing places form a material part of the mitigation contemplated for the most constrained rural lanes. During consultation, NCC indicated that suitable passing places might need to be approximately 20 metres long, 5.5 metres wide and spaced at intervals of around 250 metres, subject to visibility and site-specific conditions. The selection and site inspection of potential locations remained outstanding.

A passing place is not merely an operational traffic-management measure. It is a physical highway intervention. It may require:

- land beyond the existing carriageway or highway boundary;
- removal of hedgerows, trees, banks or verge habitat;
- excavation, surfacing and structural construction;
- drainage and attenuation;
- relocation of utilities or street furniture;
- road-safety audit and technical approval;
- temporary or permanent land rights;
- and later reinstatement.

The Applicant has not provided a final schedule identifying the location, dimensions, ownership, DCO plot, environmental effects and approval status of each passing place relied upon. Nor has it demonstrated that the necessary land is within the Order Limits or subject to sufficient acquisition or temporary-possession powers.

That omission matters because the Applicant's route strategy, including one-at-a-time HGV release, assumes that vehicles can be held or passed at safe locations. If a required passing place cannot be constructed because the land is unavailable or the environmental effects are unacceptable, the assumed route capacity and safety controls may fail.

11.9.3 Visibility splays are not merely lines on a plan

The targeted consultation added small areas of land for updated highway visibility splays. It also added land to accommodate AIL-related highway works, temporary removal of street furniture and vegetation removal.

That does not establish that every necessary visibility splay is achievable. The Applicant must identify for each access:

- the design speed used;
- the required visibility distance;
- the full extent of the splay;
- whether it lies within highway land or the Order Limits;
- the ownership of affected land;
- the trees, hedges, banks or structures requiring removal;
- the duration for which the splay must be maintained;
- and the environmental effects of keeping it clear.

Where a reduced visibility requirement depends on a temporary speed limit, the Applicant must also demonstrate that the speed restriction is capable of being lawfully implemented and maintained. A reduced design speed cannot simply be assumed in order to make an otherwise inadequate access appear feasible.

The application also needs to distinguish between temporary construction visibility and any visibility required throughout operation, replacement and decommissioning. If accesses are to be retained and reused over the 60-year life of the Scheme, vegetation management and land-control requirements may likewise persist.

11.9.4 Vegetation and tree works have not been quantified

NCC's June 2026 Relevant Representation identifies a material omission in the Applicant's arboricultural evidence. NCC states that the Preliminary Arboricultural Impact Assessment does not appear to consider visibility splays, AILs or highway works required to accommodate increased vehicle movements. It also records that there is no schedule quantifying the tree works required for visibility or highway improvement and warns that the impacts of tree works and removal on narrow rural roads could be significant and unacceptable.

NCC further states that where works are proposed to trees or hedges not controlled by the project, the Applicant must demonstrate that the owners are able to accommodate the works and that adequate mitigation is provided.

This evidence directly undermines any suggestion that roadside clearance is a minor detail already encompassed within general vegetation-management powers. The routes affected include narrow rural lanes where trees, hedges, banks and verges are integral to:

- landscape character;
- conservation-area appearance;
- ecological connectivity;
- bat commuting routes;
- nesting-bird habitat;
- Roadside Nature Reserves;
- drainage function;
- and the physical enclosure of historic lanes.

The targeted consultation itself acknowledged that AIL and highway works could require vegetation removal. Yet the application does not provide a comprehensive schedule identifying what is to be removed, pruned or managed at each access and along each route.

Without that schedule, the environmental assessment cannot reliably establish the extent of arboricultural, ecological, heritage and landscape harm arising from the transport strategy.

11.9.5 Oversailing and overrun require land rights and physical capacity

Swept-path assessments commonly distinguish between the wheel path and the vehicle body envelope. A vehicle may technically negotiate a turn only because its body oversails a verge, bank or adjoining land, or because its wheels overrun an area outside the normal carriageway.

Those assumptions must be examined as matters of law and engineering, not merely geometry.

For every oversail or overrun point, the Applicant should identify:

- the affected land;
- whether it is public highway or privately owned;
- whether it lies within the Order Limits;
- the land right or DCO power relied upon;
- the strength and construction of the surface;
- whether walls, banks, ditches, trees, signs or utilities are affected;
- any temporary protection or strengthening works;
- and the reinstatement required.

An articulated vehicle shown turning across an indicative plan does not establish that the Applicant has a lawful right to use the entire vehicle envelope or that the affected land can carry the load.

This is especially important for AILs, whose axle weights, turning radii and body envelopes may be substantially greater than those of an ordinary HGV.

11.9.6 Temporary speed limits and traffic-control infrastructure are not secured by assumption

The consultation record refers to possible temporary speed restrictions, including a 40 mph limit, as a means of reducing visibility-splay requirements and improving safety on constrained routes.

A temporary speed limit requires a lawful traffic-regulation process, appropriate consultation, signs, terminal points, repeaters where necessary, maintenance and enforcement. The Applicant should identify:

- each route on which the assessment depends on a reduced speed;
- the proposed legal mechanism;
- the approving authority;
- the sign locations;
- the land required;
- the period of operation;
- and the consequence if the restriction is not approved.

The same applies to temporary traffic signals, stop boards and marshal positions. These controls require physical space and safe operating locations. They cannot be treated as abstract mitigation without identifying where and how they would operate.

11.9.7 Highway widening, verge works and drainage have not been fully reconciled

The Applicant contemplates access widening, passing places, local highway improvements and temporary works to accommodate construction and abnormal-load traffic. Those works can increase impermeable or compacted surface area and alter roadside drainage.

NCC’s November 2025 LLFA comments expressly identified the need for additional surface-water management where road widening or internal access tracks increase impermeable area. It requested further information in relation to several of the targeted-consultation highway areas.

NCC’s June 2026 Relevant Representation similarly records that the LLFA regards the application as incomplete and does not consider that the Applicant has yet demonstrated that changes in surface-water runoff can be managed without increasing flood risk on or off site.

The Applicant must therefore demonstrate for every widened access, passing place, temporary hardstanding and verge intervention:

- the resulting impermeable or compacted area;
- the drainage design;
- the outfall;

- the attenuation required;
- the affected ditch or watercourse;
- and the land needed for drainage infrastructure.

A highway intervention cannot be regarded as deliverable if there is no space or lawful discharge point for the drainage it creates.

11.9.8 Bridges, culverts and water crossings require route-specific structural evidence

The Applicant's baseline identifies bridge and water-crossing constraints on the local network. The Krons crosses two bridges over minor water passages and has varying widths and overhanging trees. Mill Lane includes Shotesham Ford, which may become inaccessible during flooding.

The absence of a signed weight restriction does not establish that a bridge or culvert can safely carry the Applicant's HGVs or AILs. The Applicant must provide route-specific structural evidence for every bridge, culvert and crossing on the proposed construction and abnormal-load routes.

Where strengthening, protection or temporary works are required, the Applicant should identify:

- the structure affected;
- the assessed vehicle and axle load;
- the proposed works;
- the land and access required;
- the relevant Work No. and DCO power;
- the environmental permits or watercourse consents required;
- the highway-authority approval;
- and the programme implications.

If a bridge is found incapable of carrying the relevant load, an alternative route may be necessary. That alternative must itself be identified and assessed before consent.

11.9.9 Works outside the Order Limits cannot be deferred into existence

The consultation record recognised that works beyond the highway boundary or outside the Order Limits might require additional land and targeted consultation.

That risk remains material. The Applicant should reconcile every proposed highway intervention against:

- the Order Limits;
- Works Plans;
- Land Plans;
- Streets Plan;
- Access and PRoW Plans;

- Book of Reference;
- and the powers in the draft DCO.

The broad description of highway and access works in the draft DCO does not cure the absence of land or plan coverage. If a passing place, visibility splay, oversail area, bridge intervention, vegetation-clearance zone or temporary sign installation falls outside the Order Limits, the DCO cannot authorise it merely through a later CTMP.

Nor should the Examination assume that private agreement will be reached after consent. Where a route depends on third-party land, the Applicant must demonstrate either that the necessary agreement exists or that the land and rights are lawfully included within the compulsory-acquisition or temporary-possession case.

11.9.10 Third-party ownership of trees and hedges creates a direct deliverability risk

NCC expressly notes that roadside trees and hedges may belong to adjacent landowners rather than the highway authority.

That is particularly important where the swept path, visibility splay or AIL envelope depends on pruning or removal. Unless the Applicant controls the land or possesses a sufficient DCO power, the owner may refuse consent.

The Applicant should therefore identify for every affected tree and hedge:

- ownership;
- the proposed work;
- whether the work is temporary or permanent;
- the power or agreement relied upon;
- ecological and heritage constraints;
- and the maintenance obligation.

A route whose clearance depends on later voluntary cooperation from an unidentified or unwilling third party is not a secured route.

11.9.11 Highway agreements and approvals remain to be identified

The Applicant must provide a complete schedule of highway agreements and approvals likely to be required. That should include, where applicable:

- section 278 agreements for highway works;
- section 184 approvals for accesses;
- section 171 licences for works in the highway;
- temporary traffic-regulation orders;
- road-space and permit approvals;
- bridge and structure approvals;
- road-safety audits;
- ordinary-watercourse consent;

- and any agreement required for reinstatement or maintenance.

The application should state for each approval:

- the relevant work;
- the responsible authority;
- whether the approval is required before commencement;
- the current status of discussions;
- and whether there is any unresolved objection or impediment.

The DCO may provide powers to carry out authorised works, but that does not eliminate the need to demonstrate that the detailed engineering can satisfy the relevant highway authority's technical requirements.

11.9.12 The DCO plans and land documents must be reconciled with the transport strategy

The Examining Authority should require a single consolidated schedule reconciling every access, crossing and highway intervention with the legal and plan documents.

For each item, the schedule should identify:

- the access or route reference;
- the relevant site or work;
- the precise highway work;
- the Work No.;
- the Works Plan sheet;
- the Land Plan plot;
- the Streets Plan provision;
- the Access and PRoW Plan reference;
- the Book of Reference entry;
- the landowner;
- the DCO article or Requirement relied upon;
- the separate highway approval required;
- and the environmental assessment reference.

This is necessary because the Scheme's transport strategy has evolved materially, including through targeted consultation and late route changes. The Examining Authority cannot assume that every final route and associated work has been consistently carried through all DCO documents.

The core conclusion is straightforward:

A route is not deliverable merely because a swept-path drawing shows that a vehicle can theoretically pass. The Applicant must possess the land, powers, clearances and environmental permissions needed to make the route physically usable.

On the present evidence, the Applicant has not demonstrated that position across the network on which the Scheme depends.

11.10 Abnormal indivisible loads remain a material unresolved deliverability issue

The transport of abnormal indivisible loads is a separate gateway issue. It should not be treated as a minor subcategory of ordinary construction traffic.

The Scheme requires delivery of major electrical equipment, including transformers and other components whose dimensions or weight may prevent them from being divided into smaller loads. If those components cannot be delivered to their intended locations, the relevant substations, BESS or grid infrastructure cannot be constructed, irrespective of whether ordinary construction traffic can otherwise reach the sites.

The Applicant must therefore demonstrate an end-to-end AIL route that is:

- agreed in principle by the relevant highway authorities;
- physically capable of carrying the identified loads;
- within the Applicant's land and DCO powers;
- environmentally assessed;
- and supported by all necessary temporary works and approvals.

It has not yet done so.

The Examination has since confirmed that AIL deliverability remains a live issue. ISH1 generated a specific action concerning abnormal-load routeing. This is significant because the Scoping Opinion had already required the safety impacts of AIL delivery to be assessed where significant effects were likely and required appropriate safe-transport measures to be included in the AIL report. The Examination is therefore not dealing with a new concern raised only by BEPS; it is testing whether a matter identified at scoping has actually been resolved in the submitted Scheme.

11.10.1 No final port of entry

The Applicant has not fixed the port through which the AILs would enter the road network. The Transport Assessment has considered potential routes from different ports, including Felixstowe and King's Lynn, but the final port and final route remain unresolved.

That uncertainty is material because the choice of port determines:

- the SRN route;
- the junctions and structures affected;
- the route length;
- the local-road approach;
- the cumulative interaction with other projects;
- and the physical works required.

A route from Felixstowe may engage a different combination of A roads, bridges and junctions from a route from King's Lynn. It may also create different environmental and community effects. The Applicant cannot demonstrate route

feasibility merely by identifying more than one possible port and deferring selection until after consent.

National Highways has also stated that it applies the Government's water-preferred policy and would expect abnormal loads to arrive through the nearest suitable port of entry. The Applicant must therefore establish not simply which port it prefers commercially, but which suitable port and road route National Highways considers acceptable.

The Examination should require:

- the dimensions and weights of each AIL;
- the intended destination;
- the preferred port;
- a reserve port only where justified;
- and a full route assessment from port to site.

11.10.2 No final Strategic Road Network route

National Highways' June 2026 Relevant Representation records expressly that the Applicant has not yet determined the AIL routes. It warns that there are existing constraints on parts of the SRN and states that National Highways will need to agree any AIL route using the SRN.

National Highways recognises that final routeing may be completed before construction, but it nevertheless recommends that the Applicant discuss the route before the DCO decision so that a workable and acceptable strategy can be established in principle.

That is a significant qualification. National Highways is not confirming that an acceptable SRN route exists. It is identifying unresolved constraints and asking for an acceptable strategy to be demonstrated.

The Applicant should therefore provide, before the close of Examination:

- a preferred SRN route from the selected port;
- structure and bridge checks;
- vertical and horizontal clearance assessment;
- junction swept paths;
- pavement and axle-load assessment;
- any required temporary road closures;
- interaction with planned National Highways works;
- and written confirmation from National Highways that the route is acceptable in principle.

Without that evidence, the AIL strategy remains contingent on later discovery of whether the relevant loads can traverse the SRN.

11.10.3 No final local route

The uncertainty continues after the AIL leaves the Strategic Road Network.

NCC’s November 2025 targeted-consultation response stated that AILs should use roads of an appropriate standard, namely A and B roads, to reach site access points and should then use internal haul routes. It also required consultation with NCC and Norfolk Constabulary.

Despite that position, the submitted Transport Assessment continues to identify local-road AIL routeing, including Hall Lane. It identifies ‘Compound 2: Hall Lane’ and includes Hall Lane in the anticipated AIL route to access A14.

That is a direct unresolved conflict. NCC said it would not accept construction traffic using Hall Lane, yet the final submitted material still relies on Hall Lane for ordinary compound access and abnormal-load routeing.

The Applicant must therefore answer a binary question.

If Hall Lane is required for the AIL, the relevant part of the Scheme relies on a route rejected by the local highway authority.

If Hall Lane is not required, the Applicant must identify and assess the substitute route, including:

- the public-road approach;
- the internal haul route;
- all structures and clearances;
- land and DCO powers;
- physical works;
- and environmental effects.

The same analysis is required for every AIL destination. It is not sufficient to provide a broad corridor or say that final routeing will be agreed before movement. The availability of the route is integral to whether the associated infrastructure can be constructed.

11.10.4 The necessary physical interventions are not fully defined

The targeted consultation acknowledged that accommodating AILs might require highway works, removal of street furniture and vegetation removal. The Applicant’s route material also refers to temporary interventions and land required to facilitate abnormal-load movements.

The full scope remains unclear. Potential interventions may include:

- removal or relocation of signs, bollards and lighting columns;
- vegetation and tree clearance;
- hedge or bank lowering;
- temporary road widening;
- strengthening of verges or structures;
- protection of utilities;
- junction alteration;
- temporary suspension of parking;
- road closure;

- oversailing;
- wheel overrun;
- and use of third-party land.

Each intervention must be identified by location and reconciled with the DCO powers and environmental assessment.

This is especially important where a route passes through narrow village streets or historic lanes. The removal of a sign may be temporary and straightforward. The lowering of a historic bank, removal of mature vegetation, oversailing of private land or widening of a conservation-area junction is not.

The Applicant must also distinguish between:

- works wholly within the highway;
- works within the Order Limits but outside the highway;
- and works outside both.

Where the route depends on third-party land outside the Order Limits, the DCO cannot secure it. A private agreement may be possible, but the Applicant must demonstrate that it exists or is realistically obtainable.

The AIL assessment should therefore include a works schedule identifying:

- every intervention;
- its duration;
- land ownership;
- DCO plot and power;
- separate consent required;
- environmental effect;
- and reinstatement obligation.

11.10.5 Conservation-area and heritage effects have not been adequately resolved

The Applicant’s own Chapter 11 methodology recognises conservation areas, listed buildings and residential areas as sensitive transport receptors. It identifies conservation areas as locations where specific environmental problems may occur and categorises them as medium-sensitivity receptors.

That recognition must be carried through into the AIL assessment. The AIL routes continue to pass through or affect historically sensitive villages and lanes. The potential works—vegetation removal, bank lowering, street-furniture removal, widening, oversailing and road closure—may alter the character and appearance of conservation areas and the settings of listed buildings.

The submitted evidence does not provide a route-by-route schedule identifying:

- each conservation area traversed;
- each listed building or listed-building setting affected;
- each historic lane, wall, bank, verge or street feature at risk;
- the size and frequency of the AILs;

- the physical works required;
- and the heritage significance of those interventions.

The broad recognition that conservation areas are sensitive receptors is not a substitute for assessment of the actual route.

The Applicant should therefore provide a heritage constraints plan for every candidate AIL route. That plan should identify:

- conservation-area boundaries;
- listed buildings and curtilages;
- historic road alignments;
- walls, banks, trees and verges contributing to character;
- pinch points;
- oversailing or overrun areas;
- temporary works;
- and reinstatement measures.

Where two possible ports or routes remain under consideration, both must be assessed unless the Applicant selects one and removes the other from the case.

The same issue applies to the rural landscape outside formal conservation areas. Historic lanes bordered by mature hedges, banks and listed farmsteads may be highly sensitive even where there is no designation. An AIL route cannot be treated as environmentally acceptable solely because the physical movement would be temporary.

The independent Heritage Impact Assessment submitted by David Edelston materially reinforces this concern. It identifies adverse effects on a wider group of designated heritage assets when highway, access and abnormal-load effects are included, increasing the overall number of affected designated assets beyond those harmed by the principal built development alone. Highway and AIL effects therefore cannot properly be treated as incidental or wholly temporary transport matters: they form part of the heritage impact of the authorised Scheme and must be assessed against the actual route and physical works ultimately relied upon.

11.10.6 AIL deliverability is a binary construction issue

Ordinary traffic effects can sometimes be moderated by reducing daily deliveries, changing hours or using smaller vehicles. That flexibility may not exist for an abnormal indivisible component.

If a transformer or other essential component cannot be divided, the route must accommodate its actual dimensions and weight. If no route can do so without unapproved land, unacceptable highway risk or unassessed environmental harm, the relevant infrastructure cannot be built.

The Applicant should therefore be required to identify:

- every essential AIL;
- its maximum dimensions, gross weight and axle configuration;
- its destination;

- the selected port;
- the SRN route;
- the local route;
- all temporary works;
- the responsible highway authority;
- and the agreement status.

The final point is decisive:

If the principal transformers and other indivisible components cannot be delivered by a route that is agreed, physically available, environmentally acceptable and within the DCO powers, the relevant infrastructure cannot be constructed.

The AIL issue is therefore capable of being independently fatal to the deliverability of material parts of the Scheme.

11.11 National Highways' objection shows that strategic-network deliverability is also unresolved

The Applicant cannot characterise the transport dispute as a local problem confined to narrow South Norfolk lanes. National Highways, the statutory authority responsible for the Strategic Road Network, has lodged a formal objection to the DCO.

Its Relevant Representation identifies unresolved matters at the strategic end of the route hierarchy and states that it is unable to remove its objection unless all outstanding issues are resolved before the Examining Authority makes its recommendation.

11.11.1 The A47/A140 junction has not been adequately assessed

National Highways identifies the A47/A140 junction as a particular concern because construction traffic would use it to transfer between the SRN and the local road network.

The Applicant's Transport Assessment considers changes in traffic flow on SRN links by reference to IEMA thresholds. National Highways says that this is insufficient because junction operation, rather than link flow alone, is the more critical issue for its network.

This is a material methodological deficiency. A relatively modest percentage change on a busy strategic link may nevertheless have a significant effect at a junction operating close to capacity or during a narrow peak period. Link-level screening does not answer:

- whether turning movements create queueing;
- whether slip-road or arm capacity is affected;
- whether peak shoulders are materially worsened;
- whether construction traffic interferes with existing freight;

- or whether safety performance changes.

The Applicant has therefore not demonstrated that the principal gateway between the SRN and A140 can accommodate the Scheme's traffic.

11.11.2 Personal Injury Collision assessment is required

National Highways also requests assessment of Personal Injury Collisions at the relevant SRN junctions.

The Applicant's Chapter 11 includes collision data for the wider local and major-road study area, but National Highways' request demonstrates that the strategic-junction safety case is not yet accepted. A broad statement that the overall collision record does not reveal an existing highway-safety concern is not a substitute for junction-specific analysis where large numbers of construction vehicles will turn or merge.

The Applicant should provide:

- a defined PIC study area;
- collision severity and causation;
- turning-movement relevance;
- temporal patterns;
- existing junction geometry;
- and an assessment of whether construction traffic changes the risk profile.

11.11.3 Junction modelling may be required at the 30-vehicle threshold

National Highways' scoping position was that where a development produces an increase of 30 two-way vehicle movements or more at an SRN junction during a peak period, a capacity assessment is expected.

Its Relevant Representation repeats that modelling should be undertaken where a junction is forecast to experience an increase of more than 30 vehicles in the peak hour and notes that further assessment may also be needed where peak shoulders are affected.

The Applicant has not provided evidence demonstrating that all relevant SRN junction flows remain below that threshold, nor has it supplied the requested junction modelling.

That is especially significant because worker traffic may occur during the morning and evening periods even where HGV deliveries are restricted to the middle of the day. The transport case cannot rely only on the off-peak timing of HGVs while ignoring the peak-hour effect of hundreds of workers.

11.11.4 The cumulative assessment is not sufficiently granular

National Highways requires a more detailed assessment of the cumulative effect of East Pye construction traffic together with other developments under construction using the same SRN junctions.

The issue is not simply whether cumulative traffic increases remain below a broad IEMA percentage threshold on the A47 or A140. It is whether several major infrastructure projects can simultaneously use the same strategic junctions without unacceptable queueing, safety effects or disruption.

Relevant cumulative pressures include major electricity and solar infrastructure schemes with overlapping or potentially overlapping construction periods. National Highways' request confirms that the Applicant's existing cumulative analysis does not yet provide sufficient assurance at the junction level.

A proper assessment should show:

- the construction periods of each relevant project;
- the daily and peak-hour traffic assigned to the A47/A140 and other SRN junctions;
- the vehicle composition;
- the route-assignment assumptions;
- the interaction of HGV and worker traffic;
- and the resulting junction performance.

The August 2026 NPPF strengthens this point. Policy TR6 expressly requires reasonable future transport scenarios to take account of potential cumulative impacts at relevant times of day. The appropriate test is therefore not confined to the Applicant's preferred forecast or a single assumed construction programme. Where other major projects may overlap in time or use common strategic junctions and rural corridors, the assessment should test realistic alternative timing and traffic scenarios.

11.11.5 Binding traffic caps and monitoring are required

National Highways considers the Outline CTMP generally robust but requires it to be strengthened. It asks for evidence that traffic will remain below 30 vehicles per hour at key junctions and for clearer information about how trips are distributed and assigned to routes.

It also requires defined traffic limits, capped to the numbers in the CTMP, together with effective monitoring and predetermined actions if those limits are exceeded. It says that National Highways' role in that monitoring process should be clear.

This is significant because the Applicant's assessment depends on forecast traffic numbers and route assignment. Unless those assumptions are converted into binding limits, the later contractor could generate or assign traffic differently while remaining within a general management framework.

The final CTMP should therefore include:

- numerical HGV and worker-vehicle caps;
- hourly and daily limits;
- route-specific limits;
- automated or auditable monitoring;
- reporting to NCC and National Highways;
- escalation thresholds;
- corrective measures;
- and stop or restriction powers for persistent exceedance.

Until such controls are secured, the assessed traffic case is not necessarily the traffic case that would be delivered.

11.11.6 The Construction Worker Travel Plan is not sufficiently secured

National Highways requires the Construction Worker Travel Plan to be strengthened, including a limit on the number of single-occupancy car journeys sufficient to achieve an agreed car-sharing or modal-split assumption.

This concern is material given the Applicant's forecast peak workforce of up to 720 workers. The assessment assumes a substantial proportion of workers will travel by shuttle bus or shared transport, but the detailed worker-travel arrangements are to be developed later after appointment of the principal contractor.

If the assumed shuttle or car-sharing proportion is not achieved, the number of cars using the A47/A140 junction and local roads could materially exceed the assessed case.

The Applicant should therefore provide binding minimum requirements for:

- single-occupancy vehicle limits;
- shuttle provision;
- parking capacity;
- pick-up locations;
- worker origin monitoring;
- and corrective action where modal-share targets are missed.

11.11.7 Requirement 15 does not adequately protect the SRN

National Highways asks for Requirement 15, relating to the CTMP, to be strengthened. It notes that the draft wording refers to consultation with 'the relevant highway authority' and requests express recognition of National Highways' responsibility for affected SRN junctions, either by naming it or referring to 'relevant highway authorities' in the plural.

The point is not merely grammatical. The CTMP affects both:

- NCC's local highway network; and
- National Highways' strategic junctions.

The Requirement must ensure that National Highways is formally involved in approving or agreeing the provisions that affect its network.

BEPS further submits that consultation alone may be insufficient where National Highways maintains a formal objection. The Requirement should not allow the Applicant to submit a CTMP after merely seeking views. The relevant parts should require approval or written agreement from the authority whose network is affected.

11.11.8 AIL routeing remains unresolved on the SRN

National Highways also records that the AIL routes have not been determined and that some SRN routes contain existing constraints. It requires agreement to any AIL route using the SRN and recommends that a workable strategy be established in principle before the DCO decision.

This links the strategic and local deliverability problems. An AIL route must work continuously from the port, through the SRN, onto the A140 or other major roads, across the local network and into the final site. Agreement at only one stage is insufficient.

The Applicant currently lacks acceptance at both ends of that chain:

- National Highways has not accepted the SRN route; and
- NCC has rejected parts of the proposed local access strategy.

11.11.9 The combined highway-authority position is a project-level objection

The Applicant has therefore not obtained acceptance at either end of the route hierarchy.

NCC does not support the submitted local access strategy for Sites 7–10 and requires a materially different system based on appropriate-standard roads and internal haul routes.

National Highways does not accept that the SRN junction, cumulative, monitoring, worker-travel and AIL cases are sufficiently demonstrated. It maintains a formal objection unless the outstanding matters are resolved.

The significance of this combined position should not be understated. The transport strategy is not accepted:

- at the strategic junctions through which construction traffic must pass;
- on the local roads by which the individual sites would be reached;
- or for the abnormal loads required to construct the principal electrical infrastructure.

The strategic conclusion is therefore:

The Applicant has not obtained acceptance at either end of the route hierarchy. NCC does not support the local access strategy, and National Highways does not accept that the SRN junction and AIL case is sufficiently demonstrated.

Until both positions are resolved through a complete, agreed and environmentally assessed routeing strategy, the Applicant has not demonstrated that the Scheme can be constructed as applied for.

11.12 The construction programme is not reconciled with the physical capacity of the access system

The Applicant's traffic forecasts do not demonstrate that the Scheme can actually be constructed within the proposed programme. Chapter 11 models traffic volumes and then assesses percentage changes on selected links, but it does not reconcile the total construction workload with the practical carrying capacity of the access system on which that workload depends.

The distinction is important. A forecast may show an estimated number of vehicles over a day. It does not establish that those vehicles can pass through constrained roads, holding compounds, controlled sections, shared junctions and construction crossings at the times required to maintain the Applicant's programme.

The Applicant assumes that the principal construction phase would last approximately 24 months. Chapter 11 says the assessment assumes construction in one phase and, for the purpose of providing a reasonable worst case, treats activities at the different Sites as occurring simultaneously. At the same time, it states that simultaneous activity is 'highly unlikely' because construction would be staggered to reduce highway impacts.

Those propositions require closer examination. The Applicant cannot simultaneously rely on:

- simultaneous activity as proof that the environmental assessment is conservative; and
- staggering as mitigation sufficient to make the physical transport system workable,

without producing a construction programme showing how the staggering would actually operate.

The issue is not merely whether the forecast totals represent a numerical worst case. It is whether the construction sequence, route capacity and delivery controls are mutually compatible.

11.12.1 The forecast traffic demand is substantial

The Outline CTMP estimates that construction of the solar Sites could generate, at peak:

- 69 HGV arrivals and 69 HGV departures per day; and

- 205 car, LGV or shuttle arrivals and 205 corresponding departures per day.

The Cable Route Corridor compounds are separately forecast to generate:

- 33 HGV arrivals and 33 departures;
- 15 LGV arrivals and 15 departures; and
- 30 car or shuttle arrivals and 30 departures.

On that basis, the combined peak assumption may involve approximately 102 HGV arrivals and 102 HGV departures per day, alongside approximately 250 non-HGV arrivals and 250 departures, before allowing for the particular effects of abnormal loads or movements that may not be captured in routine daily flows.

The Applicant also forecasts an average construction workforce of approximately 278 people, a peak-month average of approximately 505, and a peak daily workforce of up to 720. These workers would be distributed across a geographically dispersed project rather than arriving at one central urban construction site.

These numbers are industrial in character when applied to a network containing single-track lanes, limited passing opportunities, schools, village frontage, weight-restricted roads, bridge constraints and roads with daily baseline flows measured in tens rather than thousands of vehicles.

11.12.2 The available HGV delivery period is compressed

The Applicant proposes that routine HGV deliveries and collections should generally take place between 09:30 and 16:30, avoiding the conventional morning and evening network peak periods. Worker arrivals are expected principally between 06:30 and 08:00, with departures between 16:30 and 19:00.

The HGV delivery window is therefore approximately seven hours. Within that period the Applicant must accommodate:

- deliveries to multiple solar construction areas;
- cable-route compounds;
- substations;
- the BESS;
- the National Grid substation;
- internal haul-road works;
- civil engineering and drainage works;
- concrete and aggregate deliveries;
- plant and equipment movements;
- waste collections;
- and other project logistics.

That seven-hour period may be reduced further in practice by:

- school avoidance;
- road closures or temporary signals;
- one-at-a-time release restrictions;

- traffic marshal controls;
- public and agricultural traffic;
- vehicle queuing;
- driver-hours restrictions;
- breakdowns;
- bad weather;
- and delays at the A47, A140 and local junctions.

The Applicant has not produced a route-capacity calculation demonstrating that the required number of HGVs can pass through the proposed control system within the available hours.

A simple average illustrates the issue but does not resolve it. If 102 HGV arrivals were distributed evenly across seven hours, that would represent around 14 to 15 arrivals per hour across the Scheme, with the same number of departures. In reality, movements would not be evenly distributed. Concrete pours, substation deliveries, cable works and particular construction activities may create concentrated demand at individual sites and shared corridors.

The relevant question is therefore not the Scheme-wide hourly average. It is the maximum practical throughput of each constrained route and access when the construction programme requires it.

11.12.3 One-at-a-time release materially constrains route throughput

The Applicant proposes holding compounds at Sites 4A and 10C, call-forward systems and one-HGV-at-a-time release towards certain sites. Traffic marshals may use stop boards to control movements where necessary.

These controls confirm that parts of the network cannot accommodate ordinary two-way HGV flow. They therefore impose a finite limit on route capacity.

For each such route, the Applicant should calculate:

- the distance from the holding area to the destination;
- the journey time;
- the unloading or turnaround time where relevant;
- the time required for the vehicle to clear the controlled section;
- whether another HGV can be released before the first has returned;
- the effect of public vehicles entering the route;
- and the number of deliveries that can be completed within the 09:30–16:30 window.

That analysis has not been provided.

If, for example, a controlled route takes 15 or 20 minutes to clear, one-at-a-time working may allow only a small number of movements per hour. If the same route serves multiple parcels, cable works and compounds, the available capacity must be allocated between them.

The issue becomes more serious where construction traffic uses both directions of travel. A restriction framed as one HGV ‘at a time’ must clarify whether it means:

- one HGV in each direction;
- one HGV anywhere within the controlled section;
- or one released convoy.

Each produces a different practical capacity and safety outcome.

11.12.4 Holding compounds are themselves programme-critical infrastructure

The proposed call-forward system depends on temporary compounds at Sites 4A and 10C functioning as waiting areas.

The Applicant has not demonstrated:

- the number of HGVs each holding area can accommodate;
- whether vehicles can enter and leave without blocking the public highway;
- whether separate space is available for cars, LGVs, plant and emergency access;
- whether the holding area is operational before dependent sites require deliveries;
- and whether it remains available while the compound’s own construction work takes place.

A holding area cannot be assumed to perform two incompatible functions simultaneously. If it is occupied by construction plant, materials, welfare facilities or site works, its vehicle-storage capacity may be materially reduced.

The construction programme must therefore show when each holding compound is established, when it becomes operational, which sites depend upon it and whether its capacity is sufficient during the peak month.

11.12.5 School avoidance further restricts the usable programme

The Applicant proposes avoiding sensitive school periods where practicable. That is appropriate in principle, given the presence of Hempnall and Saxlingham primary schools and other school and nursery traffic on affected routes.

However, school avoidance further compresses the time available for delivery. It may affect not only the conventional 08:00–09:00 period but also:

- nursery drop-off over a wider morning period;
- afternoon school collection;
- school buses;
- after-school activity;
- and routes used by pupils walking or cycling.

Evidence submitted in relation to Site 5 notes that nursery drop-off and collection may take place over extended periods because parents and carers have differing working hours.

The Applicant should therefore identify the actual restricted periods on each school-sensitive route rather than relying on generic network peaks. It should then demonstrate that the resulting reduced delivery window is compatible with the programme.

11.12.6 Multiple sites depend on common corridors

The dispersed nature of the Scheme does not mean that traffic is evenly dispersed. Several sites depend upon common strategic and local corridors.

The A47/A140 junction, the A140 itself, the B1527 and a limited number of B-road gateways would carry traffic serving multiple work fronts. NCC's preferred strategy would further consolidate traffic by requiring sites to be served from appropriate B roads and then by internal haul routes. For example:

- Sites 1A–2C would depend on a single Station Road access and CRC2/CRC3;
- Sites 5A–5B would share one B1527 access;
- Sites 7–9 would depend on CRC8 west of Hempnall;
- and Sites 10A–10D would share one Harvey Lane access.

Consolidation may reduce the number of public-road interfaces, but it also concentrates traffic on fewer gateways. The Applicant must show that those gateways and internal corridors can carry the combined programme for all dependent parcels.

The issue cannot be answered by assessing each site's traffic separately and then assuming that the common route has sufficient capacity.

11.12.7 Specialist construction activities create concentrated traffic demand

The Scheme includes more than routine panel deliveries. Its construction programme must accommodate activities with particular logistical requirements.

These include:

- National Grid substation construction;
- project substation construction;
- BESS construction;
- transformer and switchgear installation;
- pylon and overhead-line works;
- cable trench excavation and reinstatement;
- HDD or other trenchless crossings;
- construction compounds and internal haul roads;
- drainage and SuDS works;
- and concrete pours.

Concrete works may require a continuous sequence of mixer deliveries. Cable installation may require drums, winches, excavation plant, stone, backfill and spoil movements. HDD works require drilling rigs, drilling fluids, water, spoil handling and support plant. Substation foundations and hardstanding may create concentrated aggregate and concrete demand. AIL deliveries may require temporary closure or suspension of ordinary construction traffic.

The Applicant has not provided a programme showing how these activities interact with the route-control system.

In particular, a concrete pour cannot necessarily be interrupted simply because a one-at-a-time rural route has reached its nominal hourly capacity. Nor can an AIL movement necessarily share a narrow road with routine HGV deliveries, school traffic or a temporary road closure.

11.12.8 AIL movements may temporarily remove route capacity

AIL movements may require:

- temporary road closures;
- police or escort control;
- removal of street furniture;
- use of the full carriageway;
- slow travel;
- junction occupation;
- and suspension of other construction deliveries.

The AIL routes remain unresolved, so the Applicant has not shown when or where routine route capacity would be lost.

A programme-linked assessment should identify:

- the anticipated date or construction stage of each AIL;
- the route;
- the closure duration;
- affected sites;
- displaced ordinary deliveries;
- and how lost programme time would be recovered.

Without that analysis, the traffic assessment treats AILs as isolated specialist events when they may materially interrupt the logistics programme.

11.12.9 Cable and HDD works may obstruct the same routes relied upon for access

NCC requires HDD beneath affected A and B roads and expects extensive use of CRCs as internal haul routes.

The Applicant must demonstrate how cable installation and traffic access would be sequenced where the same corridor or crossing is needed for both purposes.

Questions include:

- Can the haul route remain open while the cable trench is excavated?
- Does an HDD compound occupy land required for vehicle passage?
- Can heavy vehicles cross a completed but not fully reinstated cable section?
- Are temporary road crossings available before cable installation?
- Does one work front block access to another?

The current material does not provide a programme-level reconciliation of those dependencies.

11.12.10 Cumulative use of the A140 and A47 is unresolved

National Highways objects because the Applicant has not adequately assessed junction operation, particularly at the A47/A140 junction, and has not provided a sufficiently granular cumulative assessment of overlapping construction projects.

This bears directly on programme deliverability. The Applicant's construction programme depends on vehicles reaching the local network from the SRN. Delay or restriction at the A47/A140 junction could disrupt:

- delivery booking;
- call-forward timing;
- concrete supply;
- worker arrival;
- and one-at-a-time route control.

The problem may be compounded by Norwich to Tilbury and other major infrastructure projects using the same network. National Highways' request for more detailed assessment confirms that this shared strategic capacity has not been demonstrated.

11.12.11 No programme-linked logistics model has been provided

The Applicant should provide a consolidated logistics model tied to the construction programme.

For each Site, CRC compound and major infrastructure work, it should identify:

- commencement and completion dates;
- duration of each principal activity;
- average and peak daily HGV demand;
- average and peak hourly demand;
- vehicle type;
- public-road route;
- internal route;
- shared-route dependency;
- holding-compound dependency;
- route capacity;

- travel and turnaround time;
- school and delivery restrictions;
- road or PRoW closure periods;
- AIL conflicts;
- concrete-pour requirements;
- worker movements;
- weather assumptions;
- and programme-recovery arrangements.

The model should then demonstrate that the highest combined demand can be accommodated without:

- exceeding assessed traffic limits;
- using routes rejected by NCC;
- breaching delivery-hour restrictions;
- creating uncontrolled queues;
- or extending the construction programme beyond the assessed period.

The Applicant’s assessment assumption that all activity occurs simultaneously may provide a conservative link-flow calculation, but it does not perform this logistical function. Nor does the general statement that work will in practice be staggered show which activities will move, for how long and with what environmental consequences.

The central point is:

A traffic forecast based on theoretical daily totals does not establish that the Scheme can be delivered within the proposed construction period where movements are constrained by short delivery windows, single-vehicle releases and shared rural access routes.

Unless the Applicant demonstrates the compatibility of its programme and its access controls, either the transport assumptions are unrealistic or the 24-month programme is not deliverable. If the programme extends, the duration of traffic, noise, PRoW, ecological and community effects would also extend beyond the assessed case.

11.13 Worker transport is not secured and could materially alter the assessment

Worker transport is not a peripheral element of the Scheme’s traffic case. At a peak workforce of up to 720 people, the difference between the assumed and actual mode of travel could materially alter traffic flows on both the local and strategic highway networks.

The Applicant’s construction estimates identify an average daily workforce of approximately 278 people and a peak workforce of up to 720. The transport assessment relies on assumptions concerning private cars, car sharing, LGVs, minibuses and shuttle buses to convert that workforce into vehicle movements.

Those assumptions are not yet secured by a final Construction Worker Travel Plan.

11.13.1 The assumed workforce travel pattern is not fixed

The Applicant proposes a mix of measures including:

- car sharing;
- shuttle buses;
- public transport;
- cycling;
- travel-plan coordination;
- and management of worker parking.

However, the detailed worker-travel arrangements will be developed later, after appointment of the principal contractor and when more is known about workforce origins and construction phasing.

That means several matters central to the traffic forecast remain unresolved:

- where workers will live;
- where they will begin their journeys;
- which sites they will attend;
- how many will travel between sites;
- which shuttle routes will operate;
- where shuttle pick-up points will be;
- how frequently shuttles will run;
- how much parking will be available;
- and what vehicle occupancy will actually be achieved.

The Applicant’s estimates therefore represent assumptions about a future travel plan, not a secured operational arrangement.

11.13.2 Workforce origins are unknown

Worker origins determine the direction and distribution of traffic.

A workforce drawn mainly from Norwich may place substantial pressure on the A47/A140 corridor. Workers from Diss, Ipswich, Great Yarmouth, Lowestoft or temporary accommodation elsewhere would produce different route assignments. Specialist grid, BESS and substation contractors may travel greater distances than general construction labour.

Without a workforce-origin survey or defined accommodation strategy, the Applicant cannot reliably demonstrate:

- which strategic junctions will be used;
- which local roads will carry worker traffic;
- or whether the assessed distribution reflects the likely workforce.

This matters because National Highways’ concern is focused on junction operation, not merely broad link percentages.

11.13.3 Shuttle provision is not defined

The Applicant relies in part on shuttle buses to reduce private-car traffic. But the application does not provide a final schedule of:

- shuttle capacity;
- number of vehicles;
- frequency;
- operating hours;
- pick-up locations;
- routes;
- or contractual commitment.

A general intention to provide shuttles is not equivalent to an enforceable modal-share assumption.

Shuttle buses also require:

- suitable pick-up and waiting locations;
- worker parking at those locations;
- reliable departure times;
- access to dispersed compounds;
- and sufficient capacity at shift change.

If workers are assigned to multiple remote sites, one central shuttle route may not be practical. Multiple shuttle services may themselves create additional vehicle movements.

11.13.4 Public transport provides limited support for the assumed modal shift

Chapter 11 identifies a small number of rural bus services, but their relationship to construction shifts and dispersed site compounds is limited. Some services operate hourly or every two hours, and not all serve the sites at the required early-morning start time.

The local public-transport network therefore cannot be assumed to absorb a material proportion of the workforce without additional dedicated provision.

The Applicant should distinguish clearly between:

- existing public transport;
- dedicated contractor shuttles;
- minibuses between compounds;
- and private car sharing.

These are different modes requiring different levels of control and certainty.

11.13.5 Parking locations and capacities are not final

A car-based workforce requires substantial parking. If even half of the 720 peak workforce travelled in single-occupancy vehicles, that would require around 360 cars and parking spaces. A less successful modal shift could require substantially more.

The Applicant must identify:

- parking capacity at each construction compound;
- whether parking is shared with plant, materials or holding areas;
- how unauthorised roadside parking will be prevented;
- and how workers are transferred from parking locations to work fronts.

This is especially important where Site 4A and Site 10C are also relied upon as HGV holding and call-forward areas. Worker parking cannot be allowed to undermine the capacity of the logistics system.

11.13.6 Worker peaks may affect the network even where HGV peaks are avoided

The Applicant proposes worker arrivals between 06:30 and 08:00 and departures between 16:30 and 19:00.

This does not eliminate network effects. It creates project-specific peaks immediately before the construction shift and across the late afternoon and evening.

The departure window overlaps:

- the conventional evening peak;
- school and nursery collection periods at its earlier end;
- HGV movements continuing until 16:30;
- and local commuter traffic.

The Applicant should therefore assess actual construction shift peaks rather than relying only on conventional one-hour highway peaks.

11.13.7 Failure to achieve the assumed modal split would alter the assessment

National Highways specifically requires the Construction Worker Travel Plan to be strengthened by limiting single-occupancy car trips so that an agreed car-sharing ratio can be achieved.

That request is important because it confirms that the current assumptions are not sufficiently secured.

If the assumed vehicle occupancy is not achieved:

- total car movements will increase;
- parking demand will increase;
- the A47/A140 and local junction flows may exceed the assessed case;
- call-forward and holding areas may be compromised;
- and worker traffic may overlap more significantly with local traffic and HGVs.

The final Worker Travel Plan should therefore secure, at minimum:

- a maximum number of single-occupancy vehicle trips;
- minimum vehicle occupancy;
- minimum shuttle capacity and frequency;
- maximum parking provision;
- monitoring of worker origins and modes;
- route-specific traffic limits;
- and corrective measures if targets are missed.

The monitoring regime must be capable of changing operations, not merely reporting failure after it has occurred.

Worker transport is not peripheral. At peak workforce levels, failure to achieve the assumed modal split could materially increase traffic at local and SRN junctions. Until the Applicant converts its assumptions into binding and deliverable arrangements, the worker-traffic component of the assessment remains uncertain.

This is now expressly reinforced by NPPF Policy TR6. Travel plans should identify fallback options where the initial measures do not achieve their expected outcomes. For East Pye, it is therefore insufficient merely to assume successful car sharing or shuttle uptake. The Applicant should identify what enforceable response follows if single-occupancy trips exceed the assessed level, shuttle use is lower than assumed or worker origins produce materially different route distributions.

11.14 The baseline and assessment methodology do not prove route-specific safety

BEPS does not submit that the traffic surveys are automatically invalid merely because the survey programme is limited or contains inconsistencies. The narrower and more important point is that the evidence presented does not prove that every route required by the final construction strategy is safe and operationally feasible.

That distinction matters because the access strategy changed during the pre-application process and remains disputed by NCC. A baseline that may be adequate for broad environmental link assessment does not necessarily establish the safety of a final route, access, junction or closure arrangement.

11.14.1 The survey coverage is primarily link-based

The Applicant undertook 20 initial ATC surveys and one MCC survey in November 2024. Ten additional ATCs were subsequently undertaken in April and May 2025

after the study area was revised, producing a total of 30 ATC locations but only one manual classified junction count.

The sole MCC was at Hempnall Roundabout.

The ATCs provide useful information on:

- traffic volumes;
- vehicle classification;
- and speed characteristics at selected road links.

They do not provide the same level of information as a manual junction survey about:

- turning movements;
- queueing;
- conflicting flows;
- pedestrian interaction;
- access use;
- or operational behaviour at a specific junction.

This is significant because the Scheme depends on numerous junctions and access points, while National Highways has specifically criticised the Applicant's focus on link flows rather than junction operation at the A47/A140 junction.

The methodology therefore provides broad network coverage but limited junction-specific evidence.

11.14.2 The survey network does not cover every access, closure or diversion route

The Applicant states that the surveyed links collectively encompass the study area and provide a robust basis for assessment.

That assertion must be tested against the final routeing strategy.

The Scheme contains 65 access and crossing points and may require temporary closures or restrictions on a large number of roads. The survey programme does not provide a count at every:

- site access;
- CRC access;
- road crossing;
- closure point;
- diversion route;
- school-sensitive section;
- or marshal-controlled pinch point.

This does not mean that a survey was legally required at every access. It does mean that the Applicant cannot infer route-specific safety and capacity from broad study-area coverage without explaining how each unsurveyed route or junction has been assessed.

The problem is more acute where routes changed after the original surveys or where NCC now requires a different route architecture based on CRC8, CRC14 and internal haul routes.

11.14.3 The surveys were undertaken in two different periods

Chapter 11 states that the first surveys were undertaken between 1 and 7 November 2024 and that the additional ten ATCs were undertaken between 26 April and 2 May 2025.

However, the assessment-limitations section states that ‘all surveys took place in September,’ describing September as a traffic-neutral month.

Those statements are plainly inconsistent.

The inconsistency should be corrected, and the Applicant should explain:

- which dates apply to each dataset;
- whether school holidays affected any survey days;
- whether seasonal agricultural traffic affected the counts;
- whether roadworks or construction of the Long Stratton Bypass affected route choice;
- and how the two survey periods were normalised.

Evidence submitted in relation to Site 5 notes that the November 2024 survey period overlapped with the end of the Norfolk school half-term and with construction of the Long Stratton Bypass, while the wider period may also have been affected by seasonal agricultural traffic.

That evidence does not by itself prove that the counts are unusable. It does require the Applicant to explain why the data remain representative of the baseline relevant to the Scheme’s construction.

11.14.4 Raw survey data have not been identified in the submitted appendix package

The Transport Assessment lists appendices covering accident data, technical notes, access and swept-path drawings, AIL material and correspondence. A separate appendix containing the complete raw ATC and MCC outputs has not been identified in the submitted TA package.

The main documents provide summary tables, but summary data do not permit Interested Parties or the Examining Authority to examine:

- day-by-day variation;
- hourly profiles;
- classification categories;
- anomalous periods;
- directional imbalance;
- survey interruptions;
- or the relationship between raw counts and the reported AADT/AAWT figures.

The Applicant should therefore disclose the raw survey outputs and processing methodology.

That request is not an assertion that the summaries are necessarily wrong. It is a request for the evidence needed to test the conclusions, particularly where low baseline flows and percentage changes are central to the significance assessment.

11.14.5 AADT and AAWT figures incorporate extrapolation assumptions

Chapter 11 acknowledges that AAWT and AADT estimates were extrapolated from morning and evening peak-hour counts using growth factors. It accepts that this introduces assumptions about off-peak and night-time volumes and assumes a level of consistency through the year which may not reflect seasonal or event-driven variation.

That limitation is material in a rural area where traffic may vary because of:

- harvesting;
- school terms;
- tourism;
- roadworks;
- flooding;
- agricultural operations;
- and local events.

It is also relevant because the Applicant’s construction controls are highly time-specific. An annual or 24-hour average does not necessarily show the traffic conditions during the proposed 09:30–16:30 HGV delivery period or during the 06:30–08:00 worker arrival period.

The Applicant should provide hourly baseline profiles for the affected routes, not merely AADT totals.

11.14.6 Speed limits were used as a proxy where actual speeds were not measured

Chapter 11 states that average speeds were not measured across all links and that speed limits were used as a proxy, effectively assuming vehicles travel at the legal maximum. It acknowledges that this overlooks real-world variation.

The Applicant describes this as a conservative approach for environmental assessment. It may be conservative for some noise or fear-and-intimidation calculations. It does not necessarily provide a sound basis for access or route safety.

Visibility-splay requirements depend on actual or design speeds, while safety on rural lanes may be affected by:

- speeds below the limit at bends;

- speeds above an expected operational level on straight sections;
- acceleration and braking;
- poor forward visibility;
- and the speed differential between HGVs and other users.

Where an access or mitigation measure depends on a particular speed assumption, route-specific measured speeds should be provided.

11.14.7 Percentage thresholds do not establish physical feasibility

The Applicant applies IEMA screening rules based principally on:

- traffic increases above 30%; and
- increases above 10% in sensitive areas.

Those thresholds are appropriate as an environmental-assessment screening tool. They do not answer whether a road or junction is physically capable of carrying the vehicles assigned to it.

A narrow lane may receive a numerical increase below 30% but still be unsuitable because of:

- width;
- bridge capacity;
- blind bends;
- weak verges;
- lack of pedestrian refuge;
- or absence of passing opportunities.

Conversely, a very large percentage increase on a road with a low baseline may reflect a profound change in rural character even where the absolute number remains modest.

The Applicant’s own Table 11.16 shows increases of:

- 116% in total traffic and 147% in HGV traffic on western Fairstead Lane;
- 58% and 74% on Shotesham Road;
- and substantial increases on other minor roads.

Those figures trigger environmental assessment, but the resulting professional judgement cannot substitute for engineering proof that the route works.

11.14.8 Junction operation has not been comprehensively assessed

National Highways’ formal objection is the clearest evidence of this deficiency. It says the Transport Assessment addresses SRN link flows but does not provide the more critical junction analysis, particularly for A47/A140. It requests PIC analysis and modelling where peak-hour increases exceed 30 vehicles.

The same methodological issue applies more widely at local level.

The Scheme depends on:

- HGV turning at B-road junctions;
- left-in/left-out access arrangements;
- roundabout U-turns or circulation;
- marshal-controlled accesses;
- and junctions affected by on-street parking or village frontage.

A complete route-safety case should identify each critical junction and provide proportionate evidence on:

- geometry;
- turning demand;
- visibility;
- queueing;
- collision history;
- vulnerable users;
- and interaction with existing traffic.

11.14.9 Vulnerable-user assessment is not fully route-specific

Chapter 11 identifies pedestrians, cyclists, equestrians, PRoW users, children, older people and disabled people as sensitive receptors. It also identifies schools, conservation areas, residential areas and roads without footways as sensitive locations.

However, the assessment often proceeds at highway-link level and relies on general statements that existing pedestrian or cyclist activity is low.

That does not provide a complete route-specific assessment of:

- where children cross;
- where school buses stop;
- where walkers join or leave a PRoW;
- where equestrians have no refuge;
- where residential drives enter a narrow lane;
- where a diversion transfers users onto a busier road;
- or where a promoted route coincides with a construction corridor.

Low observed numbers at a particular time do not eliminate the importance of the route to those who use it.

A route-by-route vulnerable-user assessment should therefore show:

- footways and their widths;
- crossing points;
- bus stops;
- schools and nurseries;
- PRoW intersections;
- promoted trails;

- equestrian use;
- residential frontage;
- speed and visibility conditions;
- and the proposed protection at each conflict point.

11.14.10 Later route changes weaken reliance on the original survey framework

The survey programme was designed around an evolving study area. The Applicant later changed important routeing assumptions, including the movement from an A140/Fairstead approach towards The Krons and Fairstead Lane. NCC's June 2026 position now requires a different architecture based on CRC8 and internal haul routes for Sites 7–9.

The Applicant must therefore demonstrate that the data and methodology remain appropriate for the route strategy ultimately relied upon.

Where a new route:

- was not part of the original survey design;
- has no manual junction count;
- affects different vulnerable users;
- or requires different closures and crossings,

the assessment may need to be updated rather than merely reinterpreted.

ExQ1 has subsequently required further explanation of transport arrangements which remain dependent upon future approvals and detailed design. That questioning is consistent with the central distinction made in this chapter: detailed approval may properly regulate the implementation of a demonstrated route, but should not be required to determine for the first time whether an essential route or highway intervention is available and acceptable.

11.14.11 The proper conclusion

The survey evidence provides useful baseline information. It does not, on its own, demonstrate that all required routes are safe or deliverable.

The outstanding issues include:

- inconsistent survey-date descriptions;
- data collected in different periods;
- limited manual junction assessment;
- reliance on selected links;
- extrapolated annual and daily flows;
- incomplete measured-speed coverage;
- no identified raw-data appendix;
- late route changes;
- and continuing highway-authority objections.

The correct conclusion is therefore not that the surveys are necessarily invalid. It is narrower and more material: the evidence is not sufficient to prove that every route needed by the final construction strategy is safe and operationally feasible.

The Applicant should be required to identify the final route network first and then demonstrate, with route-specific traffic, speed, junction, collision and vulnerable-user evidence, that each essential route can safely perform the function assigned to it.

11.15 The significance methodology masks the real deliverability problem

Chapter 11's significance methodology gives a misleading impression of certainty because it converts acknowledged high-sensitivity receptors and high-impact pathways into a series of 'not significant' conclusions without first demonstrating that the mitigation on which those conclusions depend is fixed, agreed and deliverable.

The Applicant's own final summary is striking. Table 11.27 identifies high sensitivity or high impacts in relation to severance, non-motorised-user delay, non-motorised-user amenity, fear and intimidation, road safety and hazardous or large loads. Yet each effect is ultimately characterised as minor, low or negligible and 'not significant'. The same table concludes that decommissioning effects are likewise not significant. Chapter 11 then states that no residual transport effects have been identified and that no additional mitigation is required.

That approach masks the central transport issue. The question is not only whether a predicted percentage increase on a selected highway link produces a significant environmental effect under the Applicant's EIA matrix. The more basic question is whether the route itself is accepted, physically available and capable of carrying the vehicles assigned to it.

11.15.1 The 'not significant' conclusions depend on mitigation that is not fully agreed or fixed

Chapter 11's conclusions are reached only after taking account of embedded and secondary mitigation. The mitigation package includes, among other things:

- internal haul routes;
- call-forward systems;
- HGV holding areas;
- one-HGV-at-a-time release;
- marshals and banksmen;
- passing places;
- temporary signals;
- speed restrictions;
- delivery-hour restrictions;
- vehicle-length controls;
- PRoW management;
- AIL coordination;
- and later detailed CTMP and OTMP provisions.

Those measures are not all fixed in the submitted application. Some remain indicative. Others depend upon later site selection, highway-boundary confirmation, land rights, detailed design, highway-authority agreement or contractor proposals. Some concern routes that NCC does not support in the form assessed.

The problem is clearest for Sites 7–10. NCC's formal Relevant Representation states that the current transport strategy for those sites does not adequately address the significant highway constraints, does not provide sufficient mitigation and 'cannot be supported'. NCC instead requires access through appropriate-standard roads and internal haul routes or Cable Route Corridors.

National Highways also maintains a formal objection. It requires further junction analysis, cumulative assessment, traffic caps, monitoring, a strengthened Construction Worker Travel Plan, amended DCO controls and an agreed AIL strategy.

Those positions are incompatible with the presentation in Chapter 11 of the mitigation package as sufficiently established to support a complete 'not significant' conclusion.

A measure cannot properly reduce the assessed effect unless there is adequate confidence that it will be implemented and will work. Where the route itself is disputed, a future management plan cannot be treated as though it has already secured an acceptable solution.

The same concern arises from Chapter 11's statement that, because no significant effects remain after embedded and secondary mitigation, no additional mitigation is required. That conclusion is circular. The Applicant first assumes that unresolved controls and later plans will be effective, then uses the resulting 'not significant' finding to say that nothing further is necessary.

The proper sequence should be the reverse:

1. identify the final route and access strategy;
2. demonstrate that it is accepted and physically deliverable;
3. identify and secure the mitigation required;
4. assess the resulting effects;
5. and only then conclude whether any residual effect is significant.

The Applicant has instead assessed a partly unresolved route strategy and treated future controls as though they already form a settled mitigation package.

11.15.2 High receptor sensitivity is repeatedly diluted by professional judgement

The methodology identifies vulnerable and non-motorised users as high-sensitivity receptors. It recognises that children, older people, disabled people, equestrians and other vulnerable users may be especially affected by changes in traffic flows. It also recognises schools, routes without footways, accident-sensitive locations, conservation areas, listed buildings and residential areas as sensitive environments.

Those sensitivities are plainly present across the Scheme area. The affected network includes:

- primary schools;
- narrow lanes without footways;
- PRoWs and promoted trails;
- residential frontage;
- conservation areas;
- listed buildings;
- equestrian routes;
- and rural roads with very low baseline traffic.

Despite that, the final assessment concludes that:

- severance effects on high-sensitivity NMUs are only minor adverse;
- NMU delay is negligible;
- fear and intimidation is negligible;
- road-safety effects are low;
- and hazardous and large-load effects are low.

Those conclusions depend heavily on professional judgement after screening by percentage thresholds. The methodology does not, however, explain why high-sensitivity receptors exposed to very large relative traffic increases, constrained road geometry and prolonged traffic management should consistently produce only low or negligible residual effects.

For example, the Applicant records very large increases on minor rural roads, including a 116% increase on western Fairstead Lane, yet still concludes that overall effects are not significant. The conclusion is reached in part by relying on low existing user numbers and proposed management. That reasoning understates the importance of these roads to the users who do rely upon them and overlooks the physical constraints that make the roads sensitive in the first place.

The methodology therefore risks producing a formal EIA answer that is disconnected from the practical transport question.

11.15.3 Link-based significance does not establish route deliverability

Chapter 11 is structured principally around environmental effects on selected highway links. It considers percentage changes in total and HGV traffic and then applies professional judgement to severance, delay, amenity, fear and intimidation, safety and large loads.

That may be relevant to environmental significance, but it does not establish that a route is physically deliverable.

A road may fall below an IEMA screening threshold and still be unusable because:

- two HGVs cannot pass;

- a bridge has not been shown to carry the relevant axle load;
- a visibility splay lies on third-party land;
- a passing place cannot be acquired;
- vegetation cannot lawfully be removed;
- a route floods;
- an AIL cannot negotiate a bend;
- or the highway authority will not accept construction use.

Conversely, a road may experience a very large percentage increase but still be labelled ‘not significant’ after mitigation. That label does not establish that the mitigation works can be built, that the route is accepted or that the programme can operate through it.

The physical feasibility question is therefore separate from the EIA significance conclusion.

This distinction is especially important for:

- Hall Lane, which remains in the submitted routeing despite NCC’s stated refusal to accept construction traffic there;
- Sites 7–10, for which NCC requires a materially different access system;
- the A47/A140 junction, where National Highways says the junction-level assessment is inadequate;
- and the unresolved AIL routes.

None of those problems is answered by saying that the effect on a selected link is ‘low’ or ‘not significant’.

11.15.4 A route may be environmentally ‘not significant’ yet unacceptable to the highway authority

The local and strategic highway authorities apply duties and technical judgments that are not identical to the EIA significance matrix.

NCC is concerned with, among other things:

- highway safety;
- route geometry;
- suitability of roads;
- access consolidation;
- passing and visibility;
- bridge and verge constraints;
- the relationship between public roads and internal haul routes;
- and the practical operation of the local network.

National Highways is concerned with:

- SRN junction capacity;
- safety;
- cumulative operation;
- traffic caps;
- monitoring;

- worker traffic;
- and AIL routeing.

A route can therefore be ‘not significant’ under the Applicant’s environmental matrix while still being unacceptable to the authority responsible for operating and protecting that network.

That is precisely the position here. Chapter 11 concludes that road-safety and hazardous-load effects are not significant. Yet NCC does not support the submitted Sites 7–10 strategy, and National Highways maintains a formal objection to the strategic-junction and AIL case.

The Applicant cannot use its own significance conclusion to displace those statutory positions.

11.15.5 A route may also be impossible to implement despite a ‘not significant’ conclusion

The methodology also does not capture land and powers constraints.

A route may be assessed as environmentally acceptable on an indicative basis, but still be impossible to implement if:

- the passing place lies outside the Order Limits;
- the Applicant does not control the hedge needed for clearance;
- the visibility splay is unavailable;
- the proposed oversail crosses private land;
- drainage cannot be accommodated;
- or the relevant bridge requires works not authorised by the DCO.

These are binary deliverability constraints. They are not matters of environmental magnitude.

The same applies to internal haul-route alternatives required by NCC. If the alternative route would require new watercourse crossings, additional land, different drainage, new PRoW conflicts or unassessed ecological effects, the issue is not whether the original public-road route was ‘not significant’. It is whether the substitute route exists within the submitted Scheme.

11.15.6 The treatment of decommissioning compounds the methodological weakness

Chapter 11 states that decommissioning effects will be no worse than construction and therefore not significant. It does not assess the future network, future sensitive receptors, future baseline traffic or future cumulative projects in detail. The cumulative decommissioning assessment is not undertaken because the position more than 60 years ahead is said to be too uncertain.

That creates an inconsistency. The Applicant says the future is too uncertain for a cumulative decommissioning assessment, but sufficiently certain to conclude

that decommissioning effects will be no worse than construction and not significant.

The future condition of:

- retained accesses;
- rural roads;
- bridges;
- PRoWs;
- settlements;
- traffic levels;
- and environmental receptors

cannot presently be known. The ‘not significant’ conclusion therefore rests on assumption rather than a demonstrated future access strategy.

11.15.7 The correct interpretation of Chapter 11’s significance findings

BEPS does not submit that every identified transport effect must automatically be categorised as significant under the EIA Regulations. The point is more precise.

The Chapter 11 significance conclusions do not determine whether the Scheme is deliverable. They are conditional conclusions based on:

- selected links;
- forecast traffic;
- professional judgement;
- assumed mitigation;
- and a route strategy that remains disputed.

The Examination must therefore keep three questions separate:

1. What are the likely environmental effects on the assessed links?
2. Is the mitigation relied upon fixed, secured and effective?
3. Is the route and access system physically, legally and operationally deliverable?

The Applicant has concentrated on the first question, assumed the answer to the second and not demonstrated the third. The critical strategic distinction is therefore:

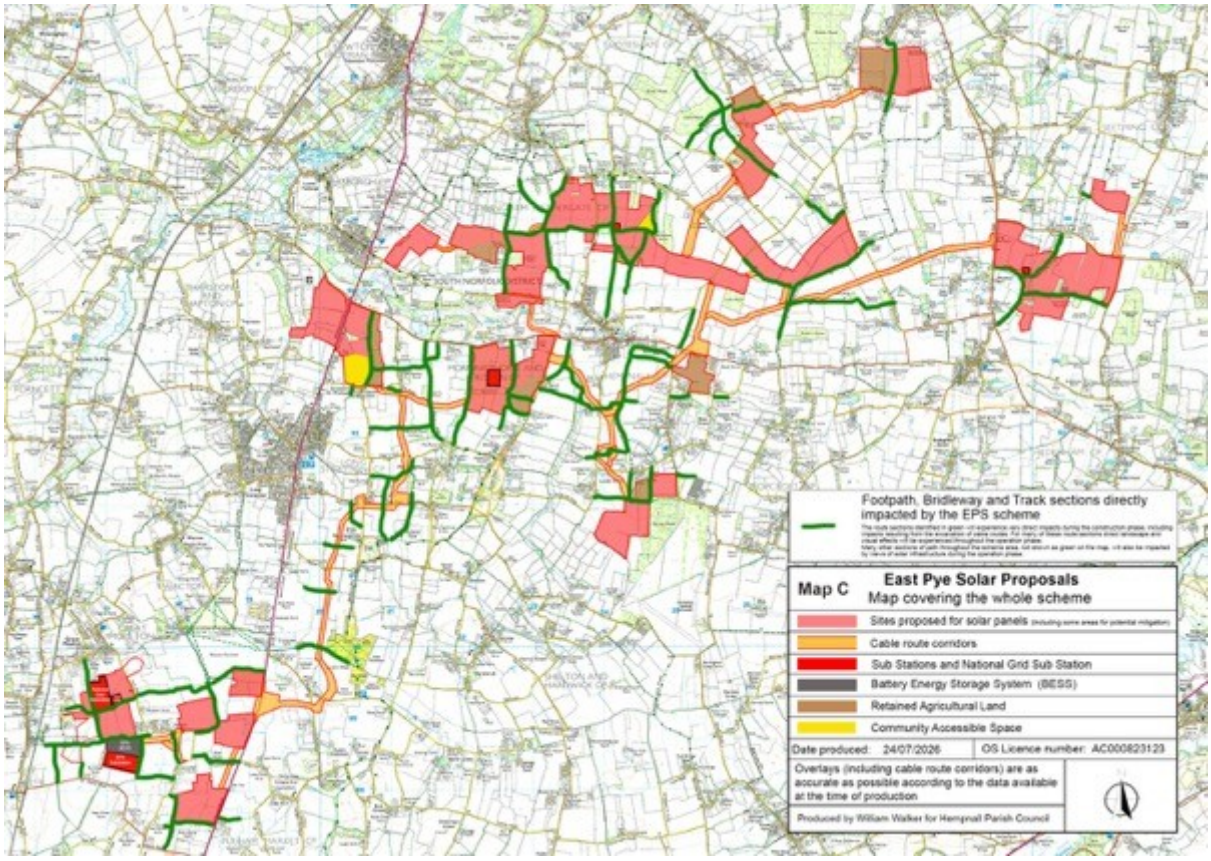
A route may be ‘not significant’ in EIA terms yet still be unacceptable to the highway authority, dependent on unsecured land or impossible to implement.

The Examining Authority should not allow the language of ‘not significant’ to obscure the unresolved physical, legal and operational constraints on construction.

11.16 Public Rights of Way and promoted routes are part of the deliverability constraint

The PRoW issue should not be treated as a separate recreational-amenity topic. The public-rights-of-way network is physically interwoven with the proposed access, Cable Route Corridor and internal haul-route system. Closures, diversions and managed crossings are therefore part of the construction logistics problem and part of the test of whether the Scheme can be delivered safely.

11.16.1 The application contains an unresolved discrepancy in the number of affected PRoWs



The Outline PRoW material refers to 84 PRoWs, while the Applicant's consultation record with NCC identifies 88 routes: 75 footpaths, 11 restricted byways and two bridleways.

That discrepancy requires explanation. It is not a trivial numerical issue because the affected network determines:

- which routes must be closed;
- which remain open under management;
- which require diversion;
- where haul-road and cable crossings occur;
- and which users are exposed to construction traffic.

The Applicant should provide one definitive schedule reconciling the 84 and 88 figures and identifying every definitive route, promoted route and permissive path affected by construction, replacement and decommissioning.

PRoW detailed design has also become a specific Examination issue. ExQ1 questions the extent to which detailed PRoW arrangements remain deferred until after consent. That matters because the Applicant's route, crossing and diversion strategy is not simply a matter of final signage: in some locations it determines whether users remain connected, whether diversions use roads carrying construction traffic and whether internal haul routes can operate safely.

The August 2026 NPPF gives this issue additional weight. Policy TR8 requires development proposals to protect and enhance the PRoW network, including through suitable diversions agreed with the highway authority, and expressly supports new direct and circular connections between local and long-distance footpaths, bridleways and cycle routes. A technically available diversion should therefore not automatically be treated as equivalent where it severs a circular route, removes a useful connection or transfers users onto a materially less safe or less accessible route.

11.16.2 The Scheme depends on closures and managed crossings across a wide network

The Applicant proposes a mixture of:

- temporary closures;
- temporary diversions;
- open-but-managed routes;
- controlled crossing points;
- signage;
- marshals;
- reduced vehicle speeds;
- and temporary traffic management.

Some routes may remain legally open while construction vehicles cross them. Others may be closed for periods ranging from days to months. The consultation record acknowledges that closures may extend for substantial periods and that detailed phasing would be determined later.

That creates a deliverability issue in two respects.

First, construction cannot proceed safely unless the required closure, diversion or crossing arrangement is available at the time each work front reaches it.

Second, the routes cannot all be managed independently. The closure of one path may transfer users to another path or public road already affected by construction traffic. A diversion may itself cross another work area or depend upon a road that NCC considers unsuitable for increased use.

The final PRoW plan must therefore be linked directly to the construction programme and route strategy.

11.16.3 Open-but-managed routes remain exposed to construction conflict

The Applicant’s approach includes keeping some PRoWs open while requiring construction vehicles to yield, travel at low speed, use marshals or stop while users pass.

That may be workable at a limited, low-frequency crossing. It is more problematic where:

- the crossing serves a major internal haul route;
- HGV movements are frequent;
- users include children, older people or disabled people;
- the route is used by equestrians;
- visibility is limited;
- or several crossings occur along the same path.

An open route is not unaffected merely because it remains legally available. Repeated stopping, noise, mud, fencing, barriers, vehicle presence and marshal intervention may materially alter the safety and experience of the route.

For equestrians, the issue is particularly acute. Horses may react unpredictably to:

- large vehicles;
- air brakes;
- reversing alarms;
- temporary fencing;
- machinery;
- dust;
- and sudden movements.

A generic instruction that vehicles should stop or yield does not provide a route-specific assessment of whether there is sufficient refuge, sight distance and separation.

11.16.4 Road-based diversions may transfer users onto more hazardous routes

The Applicant proposes that some diversions may use existing roads.

That approach requires careful scrutiny because the affected roads include:

- narrow lanes without footways;
- roads carrying construction HGVs;
- roads with limited visibility;
- village streets;
- and routes already subject to temporary traffic management.

A road-based diversion may maintain formal connectivity while materially reducing safety and amenity.

For each proposed road diversion, the Applicant should identify:

- the road length;
- footway provision;
- speed limit and measured speed;
- construction traffic forecast;
- lighting;
- crossing points;
- suitability for wheelchairs and mobility scooters;
- suitability for children;
- and whether equestrians can safely use it.

A diversion cannot be treated as equivalent merely because it connects the same endpoints.

11.16.5 Boudicca Way is a promoted route of particular importance

Boudicca Way is a long-distance promoted route of approximately 58 km between Norwich and Diss. Chapter 11 records that it runs adjacent to Site 7A on Fairstead Lane and interacts with the Cable Route Corridor.

NCC's consultation response raises specific concern about the effect on Boudicca Way. It records that the route may be closed for a considerable period, that the likely diversion could remove a loop through Tasburgh and that a clear assessment and mitigation plan are required.

The issue is not limited to temporary inconvenience. Boudicca Way is part of the recreational identity and connectivity of the area. Its interaction with Fairstead Lane also links the PRoW issue directly to the unresolved Sites 7–9 access strategy.

If Fairstead Lane carries construction traffic, the trail is exposed to increased HGV conflict and managed closure. If NCC's preferred internal CRC8 solution is adopted, the internal route may create different crossings or diversions elsewhere. Either way, the final access solution must be assessed together with the promoted-route network.

This is especially relevant under current NPPF Policy TR8 because the policy expressly recognises the value of direct and circular connections between local and long-distance routes. The potential loss of the Tasburgh loop or degradation of a promoted route should therefore be assessed as a loss of network function and recreational connectivity, not merely as additional walking distance during a temporary diversion.

11.16.6 Via Beata must also be treated as a promoted route receptor

The application material identifies Via Beata as another promoted route affected by the Scheme area.

As with Boudicca Way, the relevant effect is not adequately captured by assessing isolated crossing points. The experience of a long-distance route is cumulative. Users move through the landscape and encounter:

- fencing;
- solar arrays;
- compounds;
- traffic;
- closures;
- diversions;
- temporary surfacing;
- and changing landscape character.

The Applicant should provide route-level plans for Via Beata and Boudicca Way showing:

- every construction interface;
- closure duration;
- diversion;
- managed crossing;
- construction traffic route;
- and replacement-phase impact.

11.16.7 Medium-term closures close to settlements are particularly serious

The Applicant categorises many construction effects as temporary and medium term. For affected communities, however, a closure lasting weeks or months may sever habitual walking routes to:

- neighbouring villages;
- schools;
- shops;
- recreation;
- churches;
- bus stops;
- and local countryside.

The effect is more serious where the route provides one of few traffic-free alternatives to narrow roads.

NCC’s Relevant Representation states that the experience of recreational users of PRoWs and promoted routes may be understated, particularly because of the large scale and medium-to-long-term effect of closures and the major change in the surrounding landscape.

NCC also recommends that closures should occur only where strictly necessary, that suitable alternative routes should be provided and that users should receive clear communication.

Those are not matters that can be satisfied through a generic post-consent statement. The Applicant must identify the necessity, duration and alternative for each material closure.

11.16.8 PRoW management must be coordinated with construction phasing

The dispersed construction programme may create several simultaneous PRoW effects. A path may be affected by:

- panel construction;
- cable trenching;
- internal haul-road use;
- highway widening;
- and later reinstatement.

The Applicant should therefore provide a phasing plan showing:

- when each PRoW is affected;
- which work causes the effect;
- whether another nearby route is simultaneously closed;
- whether the diversion is available;
- and whether construction traffic uses the diversion road.

Without that coordination, a theoretically available diversion may itself be blocked or unsafe when needed.

11.16.9 The NCC-required internal haul strategy may increase PRoW conflicts

NCC’s preferred route architecture relies more heavily on CRCs and internal haul roads. That may reduce HGV movements on some public lanes, but it may increase direct crossings of:

- footpaths;
- restricted byways;
- bridleways;
- promoted routes;
- and open-access countryside.

That trade-off has not been fully assessed.

The Applicant cannot assume that moving vehicles off the public road network is environmentally neutral. The internal route may create:

- new path closures;
- repeated managed crossings;
- greater equestrian risk;
- habitat fragmentation;
- watercourse crossings;
- and drainage effects.

The PRoW consequences of NCC’s preferred solution must therefore be assessed as part of determining whether that solution is feasible.

11.16.10 Replacement and decommissioning repeat the PRoW interference

The Outline OTMP and PRoW material contemplate reusing construction-style management during panel and equipment replacement. The measures include signage, marshals, yielding, reduced speeds and keeping routes clear only so far as practicable. The replacement phase would therefore recreate many of the same conflicts with PRoWs and permissive paths as the initial construction period.

The PRoW burden is consequently not confined to one initial build-out. It is embedded within the operational life of the Scheme.

11.16.11 Conclusion on PRoW deliverability

The PRoW network forms part of the physical construction environment. It cannot be treated as a separate amenity receptor whose effects will simply be managed later.

The Applicant must demonstrate:

- the definitive number and location of affected routes;
- final closure and diversion arrangements;
- safe managed crossings;
- coordination with the construction programme;
- protection of equestrians and vulnerable users;
- and the implications of the final internal haul-route strategy.

The central point is:

If the internal haul-route solution required by NCC intensifies conflicts with PRoWs, ecology or watercourses, those effects must be assessed as part of the feasibility of that solution, not deferred to the final PRoW plan.

11.17 Highway works create unresolved ecological, landscape, drainage and heritage consequences

The Applicant’s transport case cannot be assessed in isolation. The works required to make routes usable may themselves cause effects falling within ecology, landscape, water, flood risk and cultural heritage. A revised highway strategy cannot therefore be assumed to be environmentally neutral.

11.17.1 Arboriculture and hedgerows

Visibility splays, passing places, carriageway widening, AIL clearances, oversailing and access improvements may require pruning or removal of roadside trees and hedges.

NCC’s June 2026 Relevant Representation states that the Preliminary Arboricultural Impact Assessment does not appear to assess visibility splays, AILs or highway works required to accommodate increased traffic. It also records that there is no schedule quantifying the tree works required for visibility or highway improvement and warns that the impacts on narrow rural roads could be significant and unacceptable.

NCC further states that where trees or hedges are outside the Applicant’s control, assurance is needed that their owners can accommodate the proposed work and that adequate mitigation exists.

This omission is important because roadside vegetation is not merely visual screening. It may perform several functions simultaneously:

- historic enclosure of lanes;
- bat commuting habitat;
- nesting habitat;
- ecological connectivity;
- drainage-bank stabilisation;
- landscape character;
- and screening of listed buildings or conservation areas.

The Applicant should provide one transport-related arboricultural schedule identifying:

- every tree and hedge affected;
- the work required;
- the route or access necessitating it;
- ownership;
- ecological value;
- heritage contribution;
- and replacement or management measures.

Without that schedule, the environmental cost of making the routes usable remains unknown.

11.17.2 Ecology

Highway and haul-route works may affect ecological receptors that are not adequately captured by a general transport assessment.

NCC identifies the following relevant constraints:

- Roadside Nature Reserves;
- species-rich green lanes;
- County Wildlife Sites;
- roadside trees and hedges;
- and protected species, including nationally important barbastelle activity.

NCC also notes that older mapping may omit newer Roadside Nature Reserves and warns that trees and hedges alongside them may be affected by ancillary works. It further identifies unvegetated but species-rich PRoWs, informally

described as green lanes, as ecologically important even where they are not formally designated.

These constraints are directly relevant to:

- visibility-splay clearance;
- temporary passing places;
- verge reinforcement;
- widening;
- internal haul roads;
- temporary compounds;
- AIL route works;
- and PRoW diversions.

The ecological implications may include:

- loss of hedgerow connectivity;
- disturbance or lighting of bat corridors;
- loss of species-rich verge;
- fragmentation of green lanes;
- sediment or pollution effects on adjacent ditches;
- and disturbance to protected species.

The issue is especially acute where the alternative route required by NCC uses CRCs and internal haul routes. Those routes may reduce public-road traffic but transfer construction into habitats and field boundaries previously subject only to cable works.

The Applicant must therefore show, route by route, whether the required highway and internal works have been included in:

- the habitat-loss calculations;
- protected-species assessment;
- arboricultural assessment;
- BNG metric;
- OLEMP;
- and DCO plans.

A route cannot be treated as mitigation if its ecological effects have not been assessed.

11.17.3 Drainage and flood risk

New and widened access tracks, haul roads, compounds, passing places and highway works create compacted or impermeable surfaces.

The LLFA has repeatedly rejected any assumption that compacted stone tracks are functionally permeable. It explains that Type 1 material may behave almost like concrete when compacted and that even more open-graded material is not fully permeable. It therefore requires adequate space for sustainable drainage and a viable discharge location for each access road. It also states that widening or improving existing tracks should be treated as new impermeable access-road area.

The LLFA's later comments repeat that new and upgraded access tracks are likely to generate surface-water runoff and that the Applicant has not identified the amount, scale or extent of the internal tracks, access tracks and haul roads.

This is directly relevant to the transport strategy because the NCC-required internal route architecture may involve extensive new haul-road construction.

The Applicant must demonstrate for every significant transport surface:

- area and construction type;
- existing flood pathway;
- drainage direction;
- attenuation volume;
- outfall;
- maintenance;
- and effect on neighbouring land.

The LLFA also warns that site-access routes may need to be revised because of existing surface-water flood risk on the highway network. That means flood risk may affect not only the environmental acceptability of the works but also whether the route remains available during construction.

Passing places and verge widening create the same issue. They may interrupt roadside ditches, displace overland flow or require culverts. A passing place cannot be treated as secured mitigation unless its drainage feasibility has been demonstrated.

11.17.4 Cultural heritage

Construction and AIL routes pass through a rural historic landscape containing conservation areas, listed buildings, historic village streets, hedged lanes, banks and other character-defining features.

The Applicant's own transport methodology recognises conservation areas and listed buildings as sensitive receptors. Yet the highway works needed to facilitate construction have not been comprehensively assessed in heritage terms.

Potential works include:

- hedge and tree removal;
- bank lowering;
- verge widening;
- relocation of signs;
- temporary signal installations;
- oversailing of walls or private land;
- removal of street furniture;
- road closures;
- and junction alterations.

Those interventions may affect:

- the character and appearance of conservation areas;

- the setting of listed buildings;
- historic road alignments;
- traditional banks and boundaries;
- and the visual enclosure of village lanes.

The temporary character of an intervention does not make it harmless. Removal of a mature hedge, historic bank or tree may have long-term or irreversible effects even if the AIL movement itself occurs once.

The Applicant should therefore provide a heritage route assessment identifying:

- each conservation area traversed;
- each listed asset or setting affected;
- each historic lane or boundary feature;
- the physical work required;
- duration;
- reinstatement;
- and residual effect.

This is particularly important where revised routeing or NCC-required internal connections would move traffic or works onto corridors not assessed in the existing heritage chapter.

The final independent heritage evidence confirms that highway and abnormal-load effects materially widen the heritage impact beyond the solar fields themselves. The transport solution should therefore be reconciled directly with the final heritage assessment before any route is treated as environmentally acceptable. Where the transport strategy changes during Examination, the Applicant should demonstrate whether the revised route affects any additional designated asset, conservation area, historic lane or setting and whether the heritage conclusions remain valid.

11.17.5 Watercourses and HDD

NCC’s formal transport position requires HDD beneath all affected A and B roads. At the same time, its ecology comments raise concern about whether HDD is appropriate in locations containing numerous flowing and still waterbodies, including the Fritton Grange Meadows and Lower Spring Wood areas.

HDD is therefore not a risk-free answer to highway and ecological conflict.

The method may require:

- launch and reception pits;
- drilling compounds;
- fluid storage;
- water supply;
- spoil handling;
- access for rigs and support vehicles;
- and contingency measures for frac-out or inadvertent drilling-fluid release.

These works may themselves require internal roads and compounds near sensitive watercourses or habitats.

The NCC-required use of CRCs as haul routes adds a further interaction. A corridor may need simultaneously to accommodate:

- cable installation;
- HDD compounds;
- construction traffic;
- drainage;
- and ecological buffers.

The Applicant must demonstrate that these uses are physically compatible and that one does not displace another into an environmentally sensitive area.

The same applies to internal haul-road watercourse crossings. A route may require:

- temporary bridges;
- culverts;
- open crossings;
- or trenchless techniques.

Each crossing must be identified and assessed for:

- flow capacity;
- sediment;
- pollution;
- ecology;
- fish and invertebrate passage;
- flood risk;
- and restoration.

The application cannot assume that moving traffic onto internal routes solves the highway problem without creating a water-environment problem.

11.17.6 Revised routeing may alter the environmental assessment

The transport strategy evolved materially before submission and remains disputed. If the Applicant now adopts:

- CRC8 for Sites 7–9;
- CRC14 for Site 10E;
- consolidated Site 1–2 haul routes;
- or different AIL routes,

the effects may differ from those assessed in the submitted ES.

A revised route may change:

- the trees and hedges affected;
- the PRoWs crossed;
- the watercourses encountered;
- the drainage area;

- the conservation areas traversed;
- the residential receptors exposed;
- and the habitats lost.

The Applicant should therefore provide a cross-topic environmental reconciliation for every material route revision. It should identify whether supplementary environmental information is required and whether further consultation is necessary.

The central conclusion is:

A revised highway strategy cannot be assumed to be environmentally neutral. The highway solution must be assessed together with the arboricultural, ecological, drainage, water and heritage consequences required to make it physically usable.

11.18 Replacement, repowering and decommissioning repeat the unresolved transport problem

The transport and access case must be assessed across the whole life of the Scheme. The Applicant’s own documents show that the operational period includes major replacement activity resembling a second construction phase, followed eventually by decommissioning. The unresolved access problem is therefore not confined to the initial 24-month build-out.

11.18.1 Full solar-panel replacement creates a second major traffic phase

The Outline OTMP assumes that the solar panels will be replaced once during the operational life, likely after approximately 40 years, over a period of up to 24 months.

That is not routine maintenance. It requires:

- delivery of replacement panels;
- removal of existing panels;
- packaging and waste movements;
- cranes or lifting plant;
- workforce transport;
- laydown areas;
- compounds;
- and repeated access across the Scheme.

The Outline OTMP’s reasonable worst case is described as an average of 50 HGV arrivals per day, meaning 100 daily HGV movements when arrivals and departures are combined. It also includes replacement-worker traffic averaging approximately 43 cars and six shuttles per day, rising in the peak month to approximately 80 cars and ten shuttles.

That level of activity is construction-like in scale. It cannot properly be treated as an incidental operational effect.

11.18.2 The BESS may be replaced repeatedly

The Applicant states that the BESS could be replaced up to five times during the 60-year operational period.

Each replacement cycle may require:

- removal of battery containers;
- delivery of replacement units;
- heavy lifting;
- abnormal or heavy loads;
- electrical plant;
- waste and hazardous-material transport;
- temporary compounds;
- and emergency and safety arrangements.

The application does not identify:

- the duration of each replacement cycle;
- the maximum vehicle numbers;
- the dimensions and weight of replacement units;
- the route;
- the compound;
- or the interaction with other simultaneous maintenance.

Repeated BESS replacement therefore creates a series of future traffic events whose access strategy is not presently fixed.

11.18.3 Transformers may require replacement

The Scheme assumes that transformers may have a design life of around 30 years and may require replacement during operation.

Transformer replacement is particularly important because transformers may be AILs. The unresolved port, SRN and local AIL routeing therefore affects not only initial construction but also future operation.

A route that is marginally available during the initial build may no longer be available decades later because of:

- changed road geometry;
- bridge restrictions;
- development;
- vegetation;
- traffic levels;
- or loss of temporary land.

The Applicant has not demonstrated how transformer access will be preserved over the Scheme life.

11.18.4 Replacement relies on reuse of the construction access network

The Outline OTMP indicates that replacement traffic will reuse the construction-phase access network and identifies retained access across the Scheme, including roads such as Frith Way, Fairstead Lane, Broaden Lane, Bussey's Loke, Fylands Road, Woodton Road, Littlebeck Lane and Harvey Lane.

This is highly material.

Several of those roads are already disputed or constrained during initial construction. The Applicant is effectively proposing that the same access problem will persist for decades and recur during replacement.

If NCC's preferred internal-haul strategy is required, the Applicant must explain:

- which internal haul roads will remain;
- who will maintain them;
- how drainage will be maintained;
- whether they remain available across agricultural land;
- and whether they can carry replacement traffic after decades of operation.

If the internal roads are removed after construction, replacement may fall back onto public roads that NCC presently considers unsuitable.

The operational access strategy therefore needs to be fixed now at a sufficient level to show that replacement is possible.

11.18.5 The retention of access and mitigation may create long-term land and environmental effects

The Applicant often characterises highway mitigation and internal access as temporary construction measures. The replacement strategy suggests otherwise.

If access points, haul roads, visibility splays, passing places or vegetation clearances must remain available for:

- full panel replacement;
- repeated BESS replacement;
- transformer replacement;
- emergency response;
- and decommissioning,

they may need to be retained or repeatedly reinstated throughout the 60-year life of the Scheme.

That may result in long-term effects on:

- agricultural use;
- soils;
- hedgerows;

- drainage;
- landscape character;
- and PRoWs.

The Applicant should identify which access measures are:

- temporary for initial construction;
- retained throughout operation;
- reinstated only before replacement;
- or permanent.

Without that schedule, the duration of the transport infrastructure and its environmental effects remains unclear.

11.18.6 Replacement routeing and mitigation are deferred

The Outline OTMP is a live outline document. It states that detailed arrangements will be updated before scheduled replacement to reflect the then-current road network, vehicle routes and operational requirements. It also states that the vehicle estimates are indicative and may be refined. If construction routes are no longer suitable, alternatives will be agreed later with the highway authority.

That is a significant deferral.

The Applicant is not presently demonstrating a replacement route. It is preserving the ability to select a future route after the road network, environmental conditions and land-control position have changed.

A future alternative may require:

- different public roads;
- new land;
- renewed vegetation removal;
- new passing places;
- different PRoW closures;
- or additional environmental assessment.

The DCO should not assume that such a route will exist simply because a future OTMP will be prepared.

11.18.7 Replacement worker travel is also deferred

The Outline OTMP envisages a later Replacement Activities Worker Travel Plan. Car sharing, shuttle buses and sustainable travel are identified at outline level, but the final arrangements will be produced much later.

The same uncertainty identified for initial construction therefore recurs:

- workforce origins;
- modal split;
- shuttle routes;

- parking;
- and junction effects

are not fixed.

Given that replacement may involve substantial daily worker traffic, this is not a minor operational detail.

11.18.8 PRoW impacts recur during replacement

The Outline OTMP imports construction-style PRoW controls into the replacement phase. These include:

- signage;
- yielding;
- marshals;
- reduced speeds;
- and keeping routes clear so far as practicable.

The PRoW plan similarly contemplates managing replacement effects in the same way as construction.

The initial PRoW interference is therefore not a one-off event. It may recur during:

- panel replacement;
- BESS replacement;
- transformer works;
- and final decommissioning.

Promoted routes and local paths may consequently experience repeated periods of construction-style management over many decades.

11.18.9 Decommissioning is assumed rather than demonstrated

Chapter 11 states that decommissioning traffic will be no worse than construction and therefore concludes that decommissioning effects are not significant.

The cumulative decommissioning assessment is not undertaken because the position more than 60 years in the future is considered too speculative.

That reasoning does not demonstrate deliverability.

Decommissioning may require:

- removal of panels;
- removal of BESS units;
- removal of substations and ancillary equipment;
- cranes;

- excavation;
- waste and recycling traffic;
- removal of piles and foundations;
- cable works;
- and reinstatement.

The Applicant has not provided a future baseline showing:

- which roads will remain;
- their structural condition;
- whether retained accesses will still be available;
- whether bridges remain suitable;
- what settlements or receptors exist;
- or which other infrastructure projects may be decommissioned at the same time.

It is therefore not possible to conclude confidently that the same routes and controls will remain suitable.

BEPS does not suggest that the precise highway network six decades from now can or should be predicted. The reasonable requirement is that the DCO and decommissioning strategy identify a robust worst-case transport envelope and establish how future route suitability will be demonstrated before major removal works commence, without assuming that the construction routes will automatically remain available.

11.18.10 Decommissioning may not simply reverse construction

The statement that decommissioning broadly mirrors construction overlooks important differences.

At construction, components arrive in controlled packaging from suppliers. At decommissioning:

- equipment may be damaged or degraded;
- waste streams may be more complex;
- loads may be less predictable;
- environmental controls may differ;
- recycling destinations may be dispersed;
- and additional excavation may be required.

Some infrastructure is also proposed to remain, including National Grid infrastructure and certain below-ground elements. The resulting access and restoration strategy may therefore not be a simple reverse sequence.

The Applicant should provide a decommissioning traffic scenario based on the actual maximum development envelope, not merely an assertion that effects will be no worse.

11.18.11 Whole-life transport deliverability must be demonstrated

The full transport burden comprises:

1. initial construction;
2. routine operation and maintenance;
3. full panel replacement;
4. repeated BESS replacement;
5. transformer and other major equipment replacement;
6. emergency works;
7. and final decommissioning.

Each phase depends on access through the same constrained rural landscape.

The Applicant should therefore provide a whole-life access schedule identifying:

- retained accesses;
- retained internal roads;
- future AIL routes;
- maintenance responsibilities;
- replacement traffic assumptions;
- PRoW controls;
- vegetation-management requirements;
- drainage maintenance;
- and decommissioning routes.

The conclusion should be clear:

Transport deliverability must be demonstrated across the full project life, not only for the initial 24-month construction period. The current application does not do so. It assumes that future routes will be available, that construction mitigation can be reused and that later management plans will resolve whatever changes arise. That is not a demonstrated whole-life transport solution.

11.19 Cumulative traffic assessment is incomplete at both local and strategic levels

The cumulative transport assessment must address not merely additional percentage traffic on individual links, but whether several major developments can operate simultaneously through the same strategic junctions, rural corridors and constrained local routes.

National Highways has already required a more granular assessment of cumulative construction traffic at the affected Strategic Road Network junctions. That concern is particularly important at the A47/A140 interface, through which substantial East Pye construction and worker traffic would pass.

The wider development context includes Norwich to Tilbury and other major energy, housing and infrastructure projects capable of overlapping with East Pye or relying upon common sections of the A47, A140, B1527 and associated local network. The relevant assessment should therefore identify

realistic construction periods, common junctions and routes, HGV and worker traffic, and the consequences of overlapping peak activity.

The August 2026 NPPF now expressly requires assessment of reasonable future transport scenarios, including impacts at relevant times of day and potential cumulative impacts. A single preferred programme or broad link-level percentage comparison is therefore insufficient where credible alternative scenarios would produce materially different junction or local-road conditions.

Cumulative effects also extend beyond vehicle numbers. Simultaneous projects may compete for road space, require overlapping temporary traffic management, affect the same PRoWs, compound community severance and constrain the ability to divert traffic when one route becomes unavailable.

The cumulative question is therefore whether East Pye remains deliverable under reasonable future network conditions, not merely whether its own forecast traffic can be accommodated in isolation.

11.20 The draft DCO and Requirement 15 do not secure a deliverable solution

Requirement 15 can legitimately control the detailed implementation of an access and traffic strategy whose essential routes and environmental consequences have already been demonstrated. It should not be used to select materially different routes or discover after consent whether the Scheme can be accessed safely.

National Highways has requested strengthening of Requirement 15, including express recognition of its role where the Strategic Road Network is affected. BEPS agrees that the Requirement should distinguish clearly between NCC and National Highways and should secure the traffic assumptions on which the ES relies.

At minimum, the final control should secure:

- agreed construction routes;
- route-specific traffic limits where material;
- worker-traffic controls;
- monitoring and corrective action;
- required holding and call-forward arrangements;
- highway and PRoW protection;
- National Highways involvement where the SRN is affected;
- and a mechanism preventing a materially different route from being introduced through ordinary post-consent approval without consideration of its environmental effects.

The crucial distinction is between management and design. A later CTMP may regulate timing, signage, marshal arrangements and operational detail on an established route. It should not provide the mechanism by which a fundamentally different access solution is selected after development consent has already been granted.

11.21 Deliverability matrix: the evidence the Applicant must provide

The transport evidence is presently fragmented across the Transport Assessment, Outline CTMP, Access and PRoW Plans, highway correspondence, AIL material, land documents, environmental chapters and consultation responses. That makes it difficult to determine, for any individual site or major component, whether the complete access solution is physically available, legally secured, environmentally assessed and acceptable to the relevant highway authority.

This is particularly problematic because the transport strategy has evolved repeatedly. Some routes assessed by the Applicant remain unacceptable to Norfolk County Council; some alternative routes required by NCC depend upon greater use of Cable Route Corridors and internal haul routes; National Highways continues to require further work on strategic-junction effects, traffic controls and abnormal-load routeing; and several important elements remain dependent upon later detailed design or agreement.

The Examination therefore requires a single consolidated Transport and Access Deliverability Matrix covering every principal Site, sub-site, major electrical component, construction compound and material Cable Route Corridor work.

For each site or work, the matrix should identify:

- the Site, sub-site or Work No.;
- the construction activity to be undertaken;
- the access point relied upon;
- the complete public-road route;
- any internal haul route or Cable Route Corridor relied upon;
- forecast daily and peak-hour HGV demand;
- maximum relevant vehicle dimensions and weight;
- whether abnormal indivisible loads are required;
- the current position of NCC and, where relevant, National Highways;
- the highway works necessary to make the route usable;
- the land ownership and DCO powers relied upon;
- required visibility splays;
- required passing places;
- bridge, culvert, structural and weight constraints;
- interactions with PRoWs and promoted routes;
- schools, nurseries and residential receptors;
- conservation areas, listed buildings and other heritage receptors;
- trees, hedgerows, Roadside Nature Reserves and other ecological constraints;
- watercourses, drainage features and surface-water flood constraints;
- any road closure or temporary traffic-control requirement;
- emergency-access arrangements;
- other cumulative developments using the same route;
- the present status of agreement;
- outstanding technical or environmental evidence;
- and the consequence if the route cannot be used.

The matrix should not be treated as a further traffic-management document. Its purpose is different. It should demonstrate, in one place, that the route needed to construct each material component of the Scheme actually exists within the authorised envelope and can perform the function assigned to it.

That is necessary because route feasibility currently depends upon a chain of assumptions which are often considered separately. A swept-path drawing may demonstrate theoretical vehicle geometry but not land control. A road may be within the Order Limits but remain unacceptable to NCC. An internal haul route may reduce use of a constrained lane but require additional watercourse, PRoW or ecological crossings. A passing place may improve vehicle conflict but require third-party land or vegetation removal. A route may be available to ordinary HGVs but incapable of carrying the AIL necessary for the substation or transformer works.

Those matters must therefore be considered cumulatively for each route rather than answered in isolation.

The need for this approach is reinforced by the Examination evidence. The Krons, abnormal-load routeing, the Site 7 interaction with the high-pressure gas transmission pipeline and detailed PRoW arrangements have all become live examination issues. These are precisely the types of constraint which cannot be understood properly from link-flow percentages alone.

The August 2026 NPPF also reinforces the need for a robust and integrated transport assessment. Policy TR6 requires significant movement-generating development to be assessed against reasonable future scenarios, relevant times of day and cumulative effects, while associated travel plans should identify fallback measures where the assumed measures do not perform as expected. A route-specific matrix would allow the ExA to test whether those requirements are satisfied in practice rather than merely asserted in outline documents.

The matrix should distinguish expressly between four categories:

1. routes and works accepted and demonstrated;
2. routes accepted in principle but dependent upon detailed design;
3. routes still subject to unresolved objection or technical uncertainty;
4. routes or alternatives which have not yet been shown to be available within the existing DCO envelope.

That distinction is essential. The Applicant should not be permitted to present all outstanding transport matters as though they were equivalent forms of detailed design. Some are ordinary implementation issues. Others determine whether the Scheme can physically be constructed at all.

For example, the precise position of a marshal on an already accepted route may properly be left to the final CTMP. Whether Sites 7–9 can be reached through CRC8 without new land, unassessed watercourse crossings or unacceptable ecological effects is a different question. Likewise, final signage for an AIL movement is implementation detail; the existence of an end-to-end route capable of carrying the indivisible load is a prerequisite to construction.

The same applies to the Site 7 gas-pipeline crossing. If an internal haul route depends upon crossing or interacting with the high-pressure transmission pipeline, the matrix should identify the crossing location, vehicle loading, protection works, pipeline-operator requirements, land powers and consequence if that crossing cannot be approved. That matter cannot safely disappear into a generic later CTMP.

The Applicant should therefore provide the completed matrix before the close of Examination and maintain it as a controlled document. Any subsequent change to a route should require the matrix to be updated so that the ExA can see immediately whether the change affects land powers, environmental receptors, highway-authority agreement or the assessed traffic case.

The purpose of this exercise is not bureaucratic. It is to answer the central question raised throughout this chapter:

For each material part of East Pye Solar, has the Applicant demonstrated an actual route by which the development can be constructed, rather than merely identified a series of possible routes and future management measures?

Until that question can be answered affirmatively across the Scheme, transport deliverability has not been demonstrated.

11.22 The decisive alternatives test

The unresolved transport dispute ultimately requires the Applicant to choose between the routeing strategy it submitted and the materially different routeing strategy required by Norfolk County Council. It should not be permitted to preserve both possibilities through an open-ended CTMP. For every disputed site cluster, the Applicant should identify clearly:

- the route assessed in the submitted application;
- the alternative route now required or preferred by NCC;
- whether that alternative lies wholly within the Order Limits;
- whether the necessary works are authorised by the draft DCO;
- whether the Applicant controls, or seeks sufficient powers over, all necessary land;
- whether the route has been assessed environmentally;
- whether it can accommodate the forecast traffic and vehicle dimensions;
- whether all highway, watercourse, PRoW, utility and ecological crossings are technically feasible;
- whether NCC accepts the route in principle;
- and what the Applicant proposes if neither the submitted route nor the alternative proves acceptable.

That test should be applied separately to each materially disputed part of the Scheme.

For Sites 1 and 2, the question is whether the NCC-preferred single Station Road access and internal distribution through CRC2 and CRC3 can carry the required construction traffic and can be reconciled with the A140 crossing, cable installation, drainage, land powers and environmental effects.

For Sites 3–6, the Applicant must demonstrate whether the consolidated use of CRC5, CRC6 and the B1527 can accommodate the combined construction demand without introducing new highway, PRoW, water, ecological or programme conflicts.

For Sites 7–9, the issue is more fundamental. The submitted strategy relied substantially upon public-road routes including The Krons, Fairstead Lane, Shotesham Road, Woodton Road, Fylands Road, Bussey's Loke, Heath Road, Baxter's Lane, Market Lane and Littlebeck Lane. NCC does not support that overall strategy and instead requires access through CRC8 and internal haul routes or Cable Route Corridors.

The Applicant must therefore demonstrate the complete CRC8 solution rather than relying upon the fact that a corridor exists on a plan. That demonstration should include the full internal alignment, haul-road construction, route capacity, road crossings, watercourse crossings, PRoW interactions, drainage, ecological effects, compatibility with cable installation, land rights, the interaction with the high-pressure gas pipeline at Site 7 and the programme by which the route would be available before dependent works commence. If those matters cannot be demonstrated, CRC8 cannot simply be assumed to cure the highway objection.

For Sites 10A–10E, the same test applies to NCC's preferred use of a single Harvey Lane access for Sites 10A–10D and CRC14 for Site 10E. The Applicant must show that the consolidated route carries the combined traffic, that the internal links exist within the authorised envelope and that reliance upon those links does not create new or materially different environmental effects.

Hall Lane provides a particularly clear example of why the alternatives test is necessary. NCC stated that it would not accept construction traffic using Hall Lane, yet Hall Lane remained within the submitted transport and anticipated AIL strategy. The Applicant must therefore take a clear position. Either Hall Lane remains necessary, in which case NCC's objection must be resolved, or it is removed, in which case the substitute route must be identified and assessed. It is not sufficient to leave both options available for later contractor selection.

The same principle applies to abnormal indivisible loads. The Applicant cannot rely simultaneously upon several possible ports, several possible Strategic Road Network routes and several possible local approaches without demonstrating that at least one complete port-to-site route is physically available and acceptable in principle. The existence of theoretical alternatives is not itself evidence of deliverability.

The correct test is therefore straightforward:

If the submitted route is unacceptable and the alternative route is unavailable, unassessed, outside the necessary land powers or environmentally constrained, the affected part of the Scheme has not been shown to be deliverable.

That does not mean that every engineering detail must be fixed before consent. It means that the Examination must distinguish between later refinement of a demonstrated solution and later discovery of whether a solution exists at all.

A final CTMP may properly determine matters such as precise delivery booking procedures, sign positions, marshal arrangements and other operational details on an established route. It should not

determine for the first time which route an entire development parcel will use, whether that route requires new land, whether it crosses a sensitive watercourse, whether it conflicts with a gas pipeline or whether NCC considers the public-road alternative unacceptable.

The alternatives test must also consider environmental effects. Moving traffic from a rejected rural road onto an internal haul route may improve highway safety while worsening effects upon soils, drainage, protected habitats, PRoWs or heritage. The alternative cannot therefore be characterised automatically as mitigation simply because it removes traffic from a public road.

That is particularly important under the current NPPF. Policy TR6 requires reasonable future transport scenarios and cumulative effects to be considered. The Applicant should therefore demonstrate not merely that an alternative route could theoretically operate in isolation, but that it remains workable under the construction programme, worker-traffic assumptions and cumulative network conditions relied upon in the assessment.

The ExA should require this test to be completed before the close of Examination for every material route still in dispute.

Where the Applicant can demonstrate an alternative which is wholly within the authorised envelope, technically feasible, environmentally assessed, supported by necessary land powers and accepted in principle by the relevant highway authority, detailed implementation can properly be controlled after consent.

Where it cannot, that uncertainty concerns the design and deliverability of the Scheme itself.

The controlling distinction is:

An examined route may be refined after consent. The existence of an acceptable route should not have to be discovered after consent.

That is the issue which the transport Examination now needs to resolve.

11.23 Overall conclusion: transport deliverability has not yet been demonstrated

East Pye Solar cannot be constructed without an extensive and integrated system of public-road routes, site accesses, internal haul roads, Cable Route Corridor connections, holding areas, road and PRoW crossings, traffic controls and abnormal-load routes. That system is not ancillary to the development. It is the physical means by which the solar arrays, BESS, substations, cable infrastructure and National Grid works would be delivered and built.

The submitted system is not accepted by the relevant highway authorities. Norfolk County Council states that the current transport strategy for Sites 7–10 does not adequately address the significant highway constraints, does not provide sufficient mitigation and ‘cannot be supported’. It requires construction traffic to enter and leave on roads of an appropriate standard and then use internal haul routes or Cable Route Corridors to reach individual development parcels. National Highways separately maintains a formal objection because the Applicant has not adequately assessed the affected Strategic Road Network

junctions, particularly the A47/A140 junction; has not provided a sufficiently granular cumulative assessment; has not secured traffic caps, monitoring and worker-travel controls; and has not established an acceptable abnormal-load strategy.

The alternative access architecture required by NCC has not itself been shown to be deliverable. The Applicant has not demonstrated, route by route, that the required internal haul roads lie wholly within the Order Limits, are supported by the necessary land and rights, have been designed for sustained HGV use, are compatible with cable installation and construction phasing, and can cross roads, PRoWs, watercourses and sensitive habitats without creating effects outside the submitted environmental assessment. This is particularly acute for Sites 7–9, where NCC requires access through CRC8 and internal connections while the submitted assessment relies on a dispersed public-road strategy using The Krons, Fairstead Lane, Shotesham Road, Woodton Road, Fylands Road, Bussey's Loke, Heath Road, Baxter's Lane, Market Lane and Littlebeck Lane.

Other essential matters remain unresolved. Hall Lane is retained in the final Transport Assessment for CRC Compound 2 and abnormal-load routeing despite NCC having stated that it would not accept construction traffic using that road. The port of entry and complete SRN and local routes for abnormal indivisible loads are not fixed. National Highways has expressly said that the AIL routes have not been determined and that an acceptable strategy should be established in principle before the DCO decision. Passing places, visibility splays, vegetation works, bridge and structural constraints, worker transport, route-specific traffic caps and the physical capacity of the proposed call-forward and one-HGV-at-a-time systems also remain dependent on later design or agreement.

These are not matters of minor implementation detail. They concern whether the principal components of the authorised development can reach their destinations, whether construction traffic can lawfully and safely use the necessary roads, whether the Applicant possesses the land and powers required to create the routes, and whether the proposed 24-month programme can operate through a constrained rural network under the restrictions relied upon in the assessment.

The distinction is fundamental. Management of an agreed and demonstrably available route is mitigation. Selection, invention or material redesign of a viable route after consent is unresolved scheme design.

The Applicant has not yet demonstrated, on the examination evidence presently available, a complete transport and access system by which East Pye Solar can be constructed as applied for. The transport strategy is contingent on future route selection, future engineering, future land availability, future environmental assessment and future agreement with highway authorities. That is not a deliverable scheme. Unless the Applicant can provide a complete, agreed and environmentally assessed access solution within the submitted DCO envelope, development consent should be refused.

11.24 Remedies sought

A. Primary remedy: refusal

BEPS's primary submission is that development consent should be refused unless, before the close of Examination, the Applicant demonstrates a complete, safe, environmentally acceptable and legally secured transport and access solution for every material part of the Scheme.

Refusal should follow where any material site or infrastructure component lacks an agreed and physically available access route; where the route required by NCC lies outside the Order Limits or depends on works not assessed in the ES; where abnormal-load delivery cannot be demonstrated from the selected port to the final site; where necessary highway land, visibility splays, passing places, vegetation clearances or third-party rights are unavailable; where effects on the A47/A140 or other strategic junctions remain unresolved; where the construction programme cannot be reconciled with the throughput of the proposed access system; or where the only apparent solution would require material post-application redesign.

That conclusion would not amount to refusing the Scheme because every construction detail has not been fixed. It would reflect the more basic failure to demonstrate the existence of a workable access system within the Scheme presented for consent.

B. Minimum further evidence required before consent could be considered

If the Examining Authority is not presently satisfied that refusal should follow, BEPS submits that no positive recommendation should be made until the Applicant supplies a consolidated and auditable transport deliverability case.

The starting point should be a single site-by-site and work-by-work Transport and Access Deliverability Matrix. It should identify for every principal site, substation, BESS area, National Grid work and Cable Route Corridor compound the assessed route, NCC's required route, public-road and internal links, daily and peak-hour HGV demand, maximum vehicle dimensions, abnormal-load requirements, highway-authority position, physical highway works, land ownership, DCO powers, visibility splays, passing places, bridge and weight constraints, PRoW interactions, environmental constraints, emergency-access arrangements, cumulative projects using the same route, agreement status and the consequence if the route cannot be used.

The Applicant should also provide a final routeing plan agreed in principle with NCC and National Highways, together with a written reconciliation of every remaining difference between the Applicant and those authorities. That reconciliation should distinguish clearly between matters agreed, matters agreed subject to detailed design, matters still under discussion and matters rejected.

Detailed feasibility evidence is required for the CRC8 and internal-haul-route solution demanded by NCC for Sites 7–9. That evidence should show the entire route to every affected parcel, the land and powers relied upon, route

construction, traffic capacity, drainage, watercourse crossings, PRoW crossings, ecological constraints, compatibility with cable installation and construction phasing, and the environmental documents in which the effects have been assessed.

Hall Lane should be removed from both ordinary construction and abnormal-load routeing unless NCC expressly confirms in writing that a defined use is acceptable. If Hall Lane is removed, the Applicant must identify and assess the substitute route rather than defer it to the final CTMP.

The abnormal-load case should be completed before consent is considered. It should identify each essential AIL, its dimensions, weight and axle configuration, the selected port of entry, the preferred SRN route, the local-road route, the final site access, all required physical interventions, structural checks, oversailing and overrun, temporary works, land rights and written highway-authority agreement in principle.

National Highways' concerns require proportionate junction modelling, particularly for the A47/A140 junction and any other SRN junction meeting or approaching its stated threshold. The assessment should include Personal Injury Collision analysis, peak and shoulder-period operation, worker traffic, route assignment and a granular cumulative model of overlapping major projects.

A programme-linked logistics and route-capacity model should reconcile the 24-month construction programme with route throughput. It should identify each site's duration, daily and peak-hour HGV demand, common-route dependencies, holding-compound capacity, one-at-a-time release times, vehicle turnaround, school restrictions, road closures, concrete pours, HDD works, AIL movements, worker traffic, weather disruption and programme-recovery assumptions.

The Applicant should provide final and enforceable daily, hourly and route-specific traffic caps, including separate controls for HGVs, worker vehicles and single-occupancy car trips. The monitoring system should include trigger levels, reporting, corrective action and authority involvement.

All passing places, visibility splays, highway-widening works, temporary signals, speed restrictions, bridge interventions, verge works, oversail and overrun areas should be fixed on plans and shown to lie within the Order Limits or existing highway land. The Applicant should identify ownership, the DCO power relied upon and any separate highway or landowner agreement required.

A complete transport-related arboricultural schedule is required, identifying every tree, hedge and bank affected by accesses, visibility splays, AIL clearances, passing places and highway improvements. That schedule should respond directly to NCC's concern that the ES does not quantify those works and that their effects on narrow rural roads may be significant and unacceptable.

Route-specific assessments should also be provided for conservation areas, listed-building settings, historic lanes, Roadside Nature Reserves, County Wildlife Sites, species-rich verges, bats, watercourses, drainage, flood risk, Boudicca Way, Via Beata and other affected PRoWs. Any revised route should be subject to a cross-topic environmental reconciliation to determine whether supplementary environmental information or further consultation is required.

The Construction Worker Travel Plan should be finalised to the extent necessary to support the traffic assessment, or at minimum should contain binding requirements for shuttle provision, parking, maximum single-occupancy trips, vehicle occupancy, monitoring and corrective action. This is necessary given the forecast peak workforce of up to 720 and National Highways' express request for single-occupancy controls.

The replacement and decommissioning case should be assessed as a whole-life access issue. The Applicant should identify which routes, accesses, internal haul roads, visibility splays and mitigation measures must remain available for full panel replacement, repeated BESS replacement, transformer replacement and eventual decommissioning.

All mapping should be updated and reconciled, including consistent depiction of the Long Stratton Bypass and the transport consequences of the approximately 1,800-home strategic growth programme and additional smaller developments in and around Long Stratton.

The raw ATC and MCC datasets should be disclosed, together with survey dates, processing methodology, hourly profiles and any normalisation or extrapolation applied. A final emergency-access and road-closure strategy should also demonstrate continued access for residents, emergency services, schools, the BESS, substations and other critical infrastructure during closures, flooding, breakdown or AIL movements.

C. Minimum DCO safeguards if consent is nevertheless contemplated

If development consent is nevertheless contemplated, the draft DCO must be materially strengthened. These safeguards would not cure the absence of a demonstrated route system, but they would be the minimum necessary to prevent unresolved transport design being transferred wholesale to the post-consent stage.

No material construction should commence until the final CTMP has been approved in relation to the affected network by NCC and, where the SRN is engaged, by National Highways. The drafting should require approval or written agreement, not merely consultation. National Highways has already requested express recognition in Requirement 15 of its responsibility for affected SRN junctions.

The approved CTMP should contain binding route, daily and peak-hour traffic caps. It should secure worker-vehicle limits, route assignment, delivery windows, holding arrangements, monitoring and predetermined intervention where limits are exceeded.

The DCO should prohibit material substitution of an examined route through an ordinary CTMP approval. Any revised route should first be shown to lie within the Order Limits and existing land powers, to have equivalent or lesser environmental effects, and to have written highway-authority approval. Where a route change would affect new land, receptors, watercourses, PRoWs, ecological

interests or heritage assets, it should require supplementary assessment and, where material, a formal change process.

Hall Lane and any other route expressly rejected by NCC should be prohibited unless NCC later agrees a clearly defined use in writing. No abnormal-load movement should occur until the complete port-to-site route, temporary works, structures assessment, police arrangements and highway-authority approvals are in place.

No passing place, visibility splay, widening, vegetation clearance, oversail, overrun, drainage work or temporary traffic installation should take place outside the Order Limits or without approved detailed plans demonstrating land control and environmental compliance.

Independent or independently auditable traffic monitoring should be required. The controls should include powers to suspend or reduce deliveries where traffic caps, route restrictions or safety measures are breached, rather than relying solely on retrospective reporting.

Pre-construction and post-use road-condition surveys should be required for every affected route, together with enforceable obligations to repair damage attributable to the Scheme. Structural monitoring should be included for any bridge, culvert or verge whose condition is material to route safety.

The CTMP and PRoW controls should protect emergency access, school and nursery periods, residential access, Boudicca Way, Via Beata and other affected routes. Closures should occur only where strictly necessary, alternative routes should be secured in advance and simultaneous closure of interconnected routes should be prohibited unless specifically approved.

Finally, the DCO should include a mechanism preventing later route revision from silently changing the assessed scheme. Where a proposed revision would materially alter traffic distribution, land take, environmental effects or the identity of affected communities, the undertaker should be required to demonstrate that an appropriate statutory change and consultation process has been followed.

These safeguards should not be mistaken for proof of present deliverability. Their purpose is to ensure that, if consent is granted despite the unresolved evidence, management remains confined to an access solution that has actually been examined.

The controlling distinction remains:

Management of an agreed route is mitigation. Selection and invention of a viable route after consent is unresolved scheme design.

Chapter 12: Noise and Vibration

12.1 Executive summary

The Applicant has not demonstrated that East Pye Solar can be constructed and operated without unacceptable noise and vibration effects. Chapter 12 identifies numerous exceedances of the Lowest Observed Adverse Effect Level (‘LOAEL’) and Significant Observed Adverse Effect Level (‘SOAEL’), including major adverse night-time effects from horizontal directional drilling (‘HDD’) and moderate adverse early-morning operational effects. It nevertheless repeatedly concludes that those effects are ‘not significant’ by relying on short duration, generic management measures and mitigation to be selected at detailed design stage. That is not a sufficiently transparent, fixed or precautionary evidential basis for consent.

The construction assessment is not reproducible. Appendix 12.2 provides source sound-power data and headline receptor results, but not the detailed calculation methodology, plant numbers, source locations, operating assumptions, attenuation factors or worked examples required to validate the predictions. South Norfolk Council’s independent acoustic reviewer therefore concluded that significant gaps remain in the transparency and justification of the construction noise and vibration calculations.

The operational model is similarly incomplete and may underpredict effects. It is based on example plant data and an example layout rather than fixed equipment. The Council’s reviewer identified unresolved questions about source geometry, frequency-dependent modelling, the treatment of large plant as point sources, the limited number of reflections used around the 4 m BESS barriers, and whether the full range of National Grid substation equipment has been included. The Applicant has therefore not shown that the submitted model represents the true operational worst case.

Mitigation is illustrative rather than demonstrably secured. The ES relies on reduced BESS fan duty, plant orientation, 4 m acoustic fencing, attenuators, enclosures, quieter inverter models and possible relocation or reorientation of plant. Yet the final equipment, precise locations and detailed attenuation measures remain unresolved. The assessment shows only that one assumed arrangement might achieve compliance if future mitigation performs as predicted.

The assessment also underweights the receiving environment. The Applicant’s own survey records typical night-time and early-morning background sound levels in the high teens and low 20s dB LA90 at numerous locations. In those conditions, relatively modest industrial noise can materially change the acoustic character of the area. Chapter 12 does not give sufficient weight to rural tranquillity, the lower evening sound climate or the particular intrusiveness of tonal and mechanically distinctive sound in a quiet landscape.

Finally, ecological effects are inadequately addressed. Chapter 12 is expressly concerned with human receptors and sends ecological noise and vibration effects to Chapter 8, while operational ecological noise was scoped out on the assumption that it would be unlikely to affect ecological receptors. That is not adequate for a Scheme which the Council records as lying within a nationally important bat landscape, with widespread barbastelle activity and multiple maternity-colony core sustenance zones overlapping the Order Limits. There is no dedicated, species-specific assessment of whether construction and operational noise may alter barbastelle roosting, commuting or foraging behaviour.

The overall conclusion is therefore unsound. Chapter 12 identifies material adverse effects but repeatedly neutralises them through duration criteria, generic mitigation and future design assumptions. Its conclusions should carry little weight unless the Applicant supplies a reproducible assessment, fixes the operational noise envelope and demonstrates that all mitigation is technically deliverable, environmentally compatible and enforceably secured.

12.2 Policy and legal framework

The Energy National Policy Statements remain the primary policy framework for this NSIP. The Noise Policy Statement for England, relevant British Standards, local policy and the August 2026 National Planning Policy Framework provide further relevant context for the assessment of noise and vibration.

The current NPPF is materially relevant. Policy P3 requires development to be appropriate for its location having regard to the likely effects, including cumulative effects, of pollution upon health, living conditions and the natural environment. It expressly requires consideration of the sensitivity of the surrounding population, including groups such as children and older people who may be particularly vulnerable. Development should avoid unacceptable noise effects on health and quality of life, mitigate and reduce potential adverse noise impacts to a minimum, not result in noise exposure producing a significant observed adverse effect, and maintain the character of tranquil areas which remain relatively undisturbed by noise from human sources.

South Norfolk Local Plan Policy DM 3.13 provides an important local expression of the same principles. It requires development to avoid incompatible neighbouring uses in terms of noise and vibration, directs attention to background sound levels at different times of day and night and requires protection of areas of rural tranquillity.

Those policies are particularly material at East Pye because the Applicant’s own monitoring identifies very low night-time and early-morning background sound levels at a number of rural receptors. The relevant assessment is therefore not simply whether an absolute numerical level is exceeded, but whether the Scheme would introduce adverse or distinctive sound into a sensitive receiving environment and whether those effects have been avoided or reduced as far as reasonably practicable.

The Applicant’s methodology does not apply those tests coherently. Chapter 12 permits major and moderate construction effects to be treated as not significant

where they do not exceed 10 days in 15 consecutive days or 40 days in six months. Duration is relevant to the EIA judgment about the overall significance of an effect, but it does not make a SOAEL exceedance acceptable. A short-lived impact may still be ‘present and disruptive’, cause sleep disturbance and diminish quality of life. Indeed, Chapter 12’s own noise exposure hierarchy states that SOAEL effects should be avoided.

The Applicant therefore risks conflating two related but distinct questions. The first is the EIA judgment about the overall significance of an effect, for which duration and frequency are relevant. The second is the policy response to a noise exposure which the Applicant itself places at or above SOAEL. Short duration may reduce the overall EIA significance attributed to an effect, but it does not remove the need to demonstrate that significant observed adverse effects have been avoided so far as reasonably practicable and that other adverse effects have been minimised. The August 2026 NPPF now makes that distinction particularly clear through Policy P3.

That error is most acute in the HDD assessment. Chapter 12 predicts major adverse night-time effects but calls them not significant because the works are expected to last one or two days. The duration may limit the period of harm. It does not remove the predicted sleep disturbance, loss of amenity or duty to avoid the significant adverse effect where practicable.

12.3 Assessment framework contains internal inconsistencies

12.3.1 Confused NOAEL and LOAEL thresholds

Table 12-11 is conceptually defective. It categorises a rating level equal to or below background as negligible and below the NOAEL. It then categorises a level more than 0 dB but no more than 5 dB above background as a low impact ‘between NOAEL and LOAEL’.

That formulation creates an overlap between the threshold below which no adverse effect is observed and the threshold at which the lowest adverse effect begins. The same range cannot rationally be both above the no-adverse-effect threshold and below the lowest-adverse-effect threshold. The terminology therefore obscures rather than clarifies the point at which adverse effects begin.

The Council’s acoustic reviewer identifies the same defect. It explains that the term ‘No Observed Adverse Effect Level’ is not commonly used in this way and that, under the Applicant’s thresholds, sound between 0 and +5 dB above background would be both above and below the point at which adverse effects occur. The reviewer concludes that the practical LOAEL should be a rating level above background, subject to context, with sound at or below background representing the level below which adverse impacts are not expected.

That approach is also consistent with the Applicant’s own proposed mitigation. Section 12.9 states that additional mitigation will be applied to avoid exceeding the Applicant’s NOAEL where practicably possible, while the Outline OEMP

reportedly commits to controlling residential noise to below background. The assessment criteria should therefore be corrected so that the boundary between no adverse effect and adverse effect is explicit and internally consistent.

This matters materially. Before additional mitigation, the Applicant identifies multiple receptors with rating levels above background, including seven receptors experiencing early-morning increases of approximately +6 to +8 dB. A confused threshold framework risks understating the planning significance of those effects.

This matters under the current NPPF because Policy P3 is expressly concerned with avoiding significant observed adverse effects and reducing other adverse noise impacts to a minimum. The distinction between no observed adverse effect, lowest observed adverse effect and significant observed adverse effect must therefore be intelligible and consistently applied. If the Applicant's own assessment framework does not identify clearly where adverse effect begins, the subsequent policy judgment becomes correspondingly uncertain.

12.3.2 Non-residential criteria are unclear

The non-residential criteria in Table 12-12 are also insufficiently clear. For offices, places of worship and nurseries, the numerical presentation does not distinguish cleanly between the level at which adverse effects begin and the level at which significant adverse effects occur. The Council's acoustic reviewer observes that the criteria appear to allow LOAEL and SOAEL to share the same numerical boundary and expressly requests confirmation of the intended values.

That ambiguity is unacceptable because these receptors include schools, nurseries and places of worship, which Chapter 12 itself classifies as high sensitivity. The assessment should state, for each receptor type, a distinct NOAEL, LOAEL and SOAEL; identify whether the criterion applies internally or externally; specify the assumed façade attenuation and ventilation condition; and explain how the criterion relates to actual receptor use.

The problem is particularly important for the Jack in the Box Nursery and other sensitive non-residential uses. Where the assessment depends on indoor limits, the Applicant must establish the external level, the façade performance, whether windows may be open, the relevant hours of occupation and the effect on outdoor play or amenity areas. A generic internal threshold cannot replace a receptor-specific assessment of how the building and its external spaces are used.

Until those matters are clarified, the non-residential significance conclusions are not reliably reproducible and should not be accepted.

12.3.3 Duration is used to erase serious effects

Chapter 12 states that major or moderate construction noise effects may be significant where they continue for at least 10 days in any 15 consecutive days or for more than 40 days in six consecutive months. It then uses the absence of that duration to characterise otherwise serious effects as not significant.

This is most evident in the HDD assessment. The Applicant predicts 15 night-time receptors above SOAEL and effects ranging up to major adverse, but concludes that all are not significant because HDD at each location is expected to last fewer than ten days. Appendix 12.2 identifies major adverse night-time effects at dwellings near Lundy Green, Market Lane Farm, Thetford Farm House, Dawsons Farm and Wash Lane. Those are not marginal exceedances. They are the Applicant's own highest adverse-effect category.

The Council's acoustic reviewer correctly questions whether the duration criteria are intended only for the final EIA significance judgment or are also being used to qualify LOAEL and SOAEL exceedances. The distinction is essential. LOAEL and SOAEL describe the level and nature of the adverse response. Duration may affect the overall significance assigned to that response, but it cannot retrospectively alter the fact that the threshold has been exceeded.

Nor does short duration establish policy compliance. Chapter 12's own hierarchy says SOAEL noise is 'present and disruptive', may cause sleep disturbance and should be avoided. A resident exposed to 66 dB LAeq,T from night-time HDD does not cease to experience a serious effect because it occurs for two nights rather than ten. The shorter period may reduce total exposure, but it does not justify treating the effect as acceptable without demonstrating that night working is unavoidable and that every practicable means of avoidance has been exhausted.

The same error affects piling and access-road construction. The ES predicts a moderate adverse effect at NSR29 from piling, and accepts that access-road works may exceed SOAEL within 30 m, but relies on anticipated progression rates and the asserted unlikelihood of close proximity rather than identifying actual receptor distances and durations. That is assumption, not evidence.

The assessment should therefore be recast. It must first identify all LOAEL and SOAEL exceedances without qualification; then assess duration, frequency and receptor sensitivity when determining EIA significance; and separately demonstrate compliance with the policy obligation to avoid significant adverse effects and minimise all other adverse effects. Until that is done, Chapter 12 systematically understates the seriousness of its own predictions.

12.4 Baseline and rural acoustic context

12.4.1 Exceptionally low background levels and uncertain masking assumptions

The Applicant's baseline establishes that large parts of the Scheme lie within exceptionally quiet rural acoustic environments, with night-time and early-morning background levels commonly in the high teens and low 20s dB LA90. These are not ordinary suburban or roadside conditions. They are environments in which modest industrial sound may be readily perceptible and may materially alter acoustic character.

The position at Great Moulton requires particular caution. The baseline report states that sound at monitoring positions MP41–MP44 was dominated by road traffic when the equipment was installed and collected. However, the monitoring was unattended and the Applicant accepts that it cannot identify accurately the dominant sources throughout the survey period. No octave-band or one-third-octave-band baseline data have been disclosed to demonstrate that road traffic was in fact the dominant residual source during the quietest night-time periods.

That omission is material because the operational assessment relies, at least in part, on broadband BESS sound masking transformer hum and on industrial noise being indistinguishable against the residual environment. Sporadic rural traffic cannot simply be assumed to provide continuous masking. The GMRG acoustic review notes that there may be long night-time periods with very little traffic and that broadband A-weighted measurements cannot demonstrate whether the relevant low-frequency bands are occupied by residual sound.

The Applicant should therefore disclose representative night-time spectral baseline data for Great Moulton and compare it directly with the predicted plant spectrum. Until that is done, the assumed masking environment is unproven and the assessment may understate the perceptibility of transformer, inverter and cooling-plant noise.

12.4.2 Insufficient explanation of statistical method

The baseline report presents distributions of measured LA90,15 minute values and identifies a ‘typical’ background sound level for each monitoring location. Chapter 12 states that a statistical analysis was undertaken in accordance with BS 4142, but it does not clearly explain which statistical method was used to select the representative value from each distribution.

That omission matters because BS 4142 does not prescribe a single mechanical statistic. The selection of a representative background level requires professional judgment informed by the distribution of values, time of day, prevailing conditions and the purpose of the assessment. Different approaches may produce materially different rating-level comparisons, especially where the background is low and variable.

South Norfolk Council’s acoustic reviewer specifically identifies this deficiency. It notes that the report presents modal distributions but does not explain which recognised statistical approach was applied, and asks the Applicant to disclose the specific method used to derive the representative background sound levels.

Without that explanation, the operational assessment is not independently reproducible. The Applicant should identify, for every monitoring location, whether the selected value was based on the mode, median, lower quartile, inspection of the distribution, exclusion of particular periods or some other method. It should also explain why that value is representative of the receptor and time period concerned. Until that is done, the background values underpinning the BS 4142 assessment cannot be treated as fully transparent or robust.

12.4.3 Evening period not properly separated

The temporal structure of the assessment is also inadequate. Chapter 12 presents daytime background levels for the broad period 07:00–23:00, night-time levels for 23:00–07:00 and a separate early-morning period of 04:00–07:00. That approach combines the evening period with the busier daytime period, despite the likelihood that rural sound levels between 19:00 and 23:00 are materially lower than during working hours.

South Norfolk Council expressly requested that the assessment distinguish four periods:

- early morning, 04:00–07:00;
- daytime, 07:00–19:00;
- evening, 19:00–23:00;
- night, 23:00–04:00.

The Council's reason is sound: rural Norfolk commonly experiences a marked reduction in traffic, agricultural and community activity during the evening, so a single 07:00–23:00 value may conceal the most sensitive part of that period.

The omission is particularly serious because solar inverters are modelled to operate until 23:00 and BESS and substation plant may operate continuously. The period from 19:00 to 23:00 is therefore not a theoretical gap. It is a period in which operational plant may continue while the residual environment becomes progressively quieter.

The Applicant should provide separate evening background distributions and rating-level assessments. Without them, the ES has not demonstrated that the Scheme would be acceptable during a predictable and potentially sensitive part of the operational day.

12.5 Construction noise predictions are not transparent or reproducible

12.5.1 Inadequate calculation disclosure

Appendix 12.2 provides overall sound-power levels for construction activities and headline predictions at selected receptors, but it does not contain enough information to enable an independent reviewer to reproduce or validate the results.

The missing information includes the number of items of plant assumed to operate simultaneously, the precise source locations, operating percentages, on-time assumptions, propagation method, meteorological assumptions, attenuation terms, barrier corrections, ground treatment, façade corrections and worked examples for key receptors. The assessment also does not consistently identify the duration for which each receptor would experience the predicted level.

That is a material defect. Construction predictions depend heavily on assumptions about plant combinations, source-to-receptor geometry and time

correction. A single overall sound-power figure for a construction phase does not show how the result was derived or whether the assumed combination genuinely represents the reasonable worst case.

South Norfolk Council's acoustic reviewer reached the same conclusion. It states that Appendix 12.2 does not provide a sufficient description of the construction calculation methodology and requires detailed commentary on source numbers, locations, modelling parameters, attenuation assumptions and specific worked examples.

The Applicant should therefore disclose a complete construction-noise calculation schedule for each principal activity and receptor. Until it does so, the assessment remains a set of unverified outputs rather than a transparent EIA calculation.

12.5.2 Construction noise exceedances are extensive

The Applicant's own results show that construction noise exceedances are widespread. Table 12-18 records one receptor above SOAEL and 44 receptors between LOAEL and SOAEL for the principal construction activities. Solar piling alone produces one receptor above SOAEL and 38 between LOAEL and SOAEL.

The access-road assessment is also adverse. Appendix 12.2 states that SOAEL would be exceeded where access-road works occur within 30 m of a high-sensitivity receptor. It predicts 65 dB LAeq,T at 30 m and 55 dB at 100 m. In many of the baseline environments identified in Table 12-17, 55 dB would be substantially above existing ambient levels and therefore above LOAEL.

HDD produces still more serious effects. During daytime works, the ES identifies one receptor above SOAEL and 15 between LOAEL and SOAEL. At night, it identifies 15 receptors above SOAEL and three between LOAEL and SOAEL.

These are not speculative concerns advanced by objectors. They are the Applicant's own predictions. The dispute is not whether exceedances occur, but whether the Applicant is entitled to dismiss them through assumptions about duration, screening and future management. It is not.

12.6 Horizontal directional drilling is the clearest construction failure

12.6.1 Major adverse night-time effects

HDD is the clearest demonstration that the construction case is not acceptable as presently assessed. Table 12-19 records 15 receptors above SOAEL during night-time HDD. Appendix 12.2 then identifies major adverse effects at several specific locations.

The predicted night-time levels include:

- dwellings north and south of Lundy Green: 57 dB and 50 dB against a 45 dB SOAEL threshold;

- Market Lane Farm: 58 dB against a 45 dB threshold;
- Thetford Farm House: 66 dB against a 50 dB threshold;
- Dawsons Farm: 55 dB against a 45 dB threshold;
- dwellings on Wash Lane: 51 dB against a 45 dB threshold.

Those outcomes are classified by the Applicant as high-magnitude, major adverse effects. They are not borderline or technical exceedances. They represent the highest adverse category used in the ES and arise during the period when residents are entitled to sleep.

12.6.2 'Short duration' does not make the effects acceptable

The Applicant seeks to neutralise these effects because HDD at an individual location is expected to last one or two days and fewer than ten days overall. That reasoning is unsound.

A one- or two-night major adverse effect remains a major adverse effect for the residents exposed. Short duration does not remove sleep disturbance, premature awakening, anxiety, interference with the use of bedrooms or loss of residential amenity. It limits the number of nights affected; it does not alter the severity of the effect while it occurs.

The Applicant's own noise hierarchy states that SOAEL noise is 'present and disruptive', may cause difficulty getting to sleep, premature awakening and difficulty returning to sleep, and should be avoided. The ES cannot identify that effect and then treat it as acceptable solely because the exposure is temporary.

12.6.3 No proper justification for continuous working

The ES states that HDD may require night-time working because trenchless crossings may need to be continuous, but it does not identify which crossings genuinely require uninterrupted operation or why daytime-only working would be technically infeasible.

The Applicant should be required to provide, for each proposed crossing:

- the crossing method;
- expected drilling length and duration;
- whether continuous operation is technically necessary;
- the reason daytime-only working cannot be used;
- the receptors affected;
- evening, night and early-morning predictions;
- plant and barrier options;
- achievable attenuation;
- an alternative method if night-time compliance cannot be secured.

It should also identify which HDD sites remain indicative and whether the final crossing locations could move closer to receptors. The present assessment leaves both the need for night working and the final mitigation unresolved.

12.6.4 Section 61 is not a substitute for EIA

The Applicant relies on a future section 61 consent under the Control of Pollution Act 1974 to regulate out-of-hours works. That is not a substitute for a complete environmental assessment.

A section 61 process may regulate how particular works are carried out. It does not determine whether the principle of night-time HDD with major adverse effects is acceptable for the purposes of the DCO. Nor can it cure the absence of a settled construction method, receptor-specific mitigation or an assessment of reasonable alternatives.

The Examination should therefore determine whether night-time HDD forms part of an environmentally acceptable reasonable worst case, and whether any necessary avoidance or mitigation can be identified and secured before reliance is placed upon a later section 61 process.

12.7 Access roads and construction traffic are underassessed

12.7.1 Access-road proximity is unknown

Chapter 12 accepts that access-road construction would exceed SOAEL within 30 m of a high-sensitivity receptor, but then dismisses the issue on the basis that it is ‘unlikely’ that roads will be located that close. That is not evidence.

The Works Plans and access strategy should permit the Applicant to identify the actual minimum distance between every proposed access road, haul route and sensitive receptor. The Applicant should provide a schedule of all receptors within 30 m and 100 m, the activity to occur, the predicted level and the expected duration.

The Council’s acoustic reviewer expressly requests that information. It also notes that the predicted 55 dB at 100 m would exceed existing ambient sound at almost all locations. Until the distances and durations are disclosed, the conclusion that effects are negligible or minor is unsupported.

12.7.2 Traffic noise results are incomplete

The construction traffic assessment reports relative changes in road traffic noise but does not provide the absolute daytime and night-time levels required for comparison with the LOAEL and SOAEL criteria in Table 12-10.

That omission prevents proper application of the Applicant’s own methodology. A small relative increase may still be material where the absolute level is already above LOAEL or SOAEL. Conversely, a larger change may occur from a low baseline. Both the change and the absolute level are needed.

The Council’s acoustic reviewer therefore requires façade-incident daytime levels and equivalent free-field night-time levels for each assessed road and receptor.

Without those figures, the conclusion that construction traffic noise remains below LOAEL cannot be verified.

12.7.3 Traffic vibration remains unresolved

This issue was expressly identified at scoping. The Applicant proposed to scope traffic vibration out principally on the basis that maintained road surfaces without irregularities should not generate significant vibration effects. The Planning Inspectorate did not accept that proposition on the information then available. It noted that road condition had not been assessed and that vehicle routes and site accesses had not been confirmed, and required the ES either to provide evidence demonstrating that ground-borne vibration from HGV movements would not produce significant effects on sensitive receptors during construction, operation and decommissioning, or to assess the likely significant effects unless otherwise agreed with the relevant consultation bodies.

That is a materially more demanding requirement than a generic statement that traffic vibration is normally low. The final assessment must be capable of relating the actual routes, road condition, vehicle type, speed, axle loading and receptor proximity to the conclusion reached.

That does not fully answer the scoping requirement. The Applicant should identify every receptor within the vibration study area of the final construction routes and assess the effect of actual road condition and HGV operation. Until routeing and road condition are settled, the traffic-vibration conclusion remains provisional.

12.8 Piling and vibration

12.8.1 Percussive piling is not justified

The Applicant assumes that percussive piling may be used for solar arrays, BESS infrastructure, Project Substations and the National Grid Substation. Appendix 12.2 models a sound-power level of 117 dB for solar piling and 120 dB for substation enabling works including piling.

South Norfolk Council’s Environmental Management Officer stated during consultation that percussive piling was not considered appropriate and that alternative forms of piling, including screw piles, should be considered in order to remove the percussive noise impact. That objection goes directly to the mitigation hierarchy. Noise and vibration should first be avoided or reduced at source. The Applicant should not assume a noisier construction method and rely on barriers, limited working hours and complaint management where a quieter practicable technique may exist.

The Applicant must justify, by site and foundation type, why percussive piling is necessary and why screw, jacked or pre-bored alternatives cannot be used. The Applicant should demonstrate why retention of the noisier method within the authorised envelope is necessary and how its reasonable worst-case effects would be controlled.

12.8.2 Vibration methodology lacks transparency

Appendix 12.2 states that vibration predictions use BS 5228 reference data and provides some assumptions for vibratory compaction and percussive piling, including a 2 kJ hammer energy and scaling factors. It does not, however, provide a sufficiently complete account of the calculation method to allow independent verification.

The Applicant should disclose:

- the source datasets used;
- the predictive equations;
- hammer energy and pile dimensions;
- assumed soil and geological conditions;
- source-to-receptor geometry;
- number of simultaneous sources;
- treatment of start-up and run-down;
- receptor-specific durations;
- worked calculations for the worst affected receptors.

The Council’s acoustic reviewer identifies this lack of transparency and requires detailed calculation examples for compaction, piling and HDD.

12.8.3 Sensitive and historic structures

Chapter 12 recognises that fragile or particularly sensitive buildings may require a lower structural-damage threshold and refers to a conservative value of 3 mm/s PPV. It does not provide a schedule identifying which buildings have been treated as fragile or historic, or demonstrate that the lower threshold has been applied to each relevant receptor.

That is a significant omission in a landscape containing listed buildings, historic farmsteads, churches and older rural dwellings close to construction routes and works areas. The Applicant should provide a receptor schedule identifying all sensitive structures, their construction and condition, the relevant vibration source, predicted PPV and the threshold applied.

A generic statement that 3 mm/s is protective is not enough. The assessment must show where and how it has been used.

12.9 Operational noise modelling may materially underpredict effects

12.9.1 Final plant, plant numbers and operating regimes are not fixed

The operational assessment relies on example equipment data and an indicative plant layout. The final number, type, position and operating regime of BESS containers, inverters, transformers and cooling units remain unresolved. The GMRG acoustic review further identifies that the modelling information does not disclose clearly how many BESS units have been included in the calculation.

That uncertainty is not a minor detailed-design matter. The number and arrangement of sources determine the aggregate sound level, source directivity, screening performance and acoustic character. The Applicant has assumed simultaneous maximum operation for much of the plant, but makes an important exception by relying on reduced BESS fan duty as mitigation during quieter periods. The assessment therefore combines a purported worst case with a favourable unverified operating assumption.

The model demonstrates only that one assumed combination of equipment, plant numbers, fan duty, layout and barriers may comply. It does not establish that the full authorised envelope will do so. Maximum plant numbers, spectral sound-power limits and operating regimes must therefore be fixed or controlled through the DCO.

The issue is not that every manufacturer and equipment model must necessarily be fixed before consent. A Rochdale Envelope may legitimately retain equipment flexibility. The Applicant must, however, define an acoustic envelope sufficiently robust to demonstrate that every materially different equipment configuration permitted by the DCO can comply with the assessed noise limits. Detailed design may select compliant plant within that envelope; it should not be required to discover whether a compliant configuration exists.

12.9.2 The National Grid and BESS source spectra are not disclosed

The modelling schedules provide principally broadband A-weighted sound-power levels. The one-third-octave source data used to predict low-frequency noise are not disclosed, nor are the manufacturers, measurements or existing installations from which those spectra were derived.

This prevents independent verification of the low-frequency propagation model. Sound attenuation, barrier insertion loss and atmospheric absorption vary substantially by frequency. Modelling based only on broadband A-weighted levels, or using a representative mid-frequency band, may not represent propagation at 50 Hz, 100 Hz or other low frequencies associated with transformers, reactors, inverters and cooling plant.

A single generic entry for substation plant is particularly inadequate where the development may contain transformers, shunt reactors, fans, switchgear, exposed conductors and other sources with materially different spectra and acoustic characteristics. The Applicant must disclose the complete source inventory and source spectra for each significant plant item.

12.9.3 Barrier performance is not independently verifiable

The model relies on 4 m acoustic barriers around parts of the BESS compound. Their performance depends on final source heights, source locations, barrier geometry, mass, sealing, absorptive treatment and frequency-dependent insertion loss.

The GMRG review notes that the absorption assumed within the model is not transparently stated and that low-frequency barrier performance is particularly

uncertain because of the long wavelengths involved. The assessment therefore cannot be validated merely by specifying a barrier height and surface density.

The Applicant must disclose the frequency-dependent absorption and insertion-loss assumptions, barrier construction, source and receiver geometry, reflection settings and sensitivity testing. It should also demonstrate that the barrier can be delivered consistently with battery ventilation, fire safety, drainage, maintenance access, landscape and heritage requirements.

12.9.4 Modelling uncertainty has not been quantified

The submitted assessment does not quantify the combined uncertainty arising from example equipment, uncertain plant numbers, source spectra, propagation assumptions, barrier performance and acoustic character corrections.

That omission is material. The GMRG review concludes that relatively small changes in spectral content or feature corrections could move the rating level into a range indicative of adverse or significant adverse impact. In an exceptionally quiet rural environment, the assessment conclusion may therefore be highly sensitive to assumptions that have not been substantiated.

The Applicant should provide a formal uncertainty analysis and reasonable worst-case sensitivity testing. The decision-maker should not treat a single deterministic model output as proof of acceptability where the input uncertainty may be sufficient to alter the significance conclusion.

12.10 BS 4142 acoustic character corrections are unjustifiably set to zero

The Applicant applies no BS 4142 correction for tonality, impulsivity, intermittency or other distinctive characteristics. That conclusion is not supported by adequate source-specific or receptor-specific evidence.

The Applicant acknowledges that high-voltage transformers may generate a 100 Hz hum, but asserts that this will be masked by broadband noise from BESS inverters and containers. The GMRG review identifies two fundamental problems with that reasoning. First, the one-third-octave plant data needed to apply the BS 4142 tonal audibility method have not been disclosed. Second, the spectral content of the residual night-time environment has not been published, so the claimed masking effect cannot be demonstrated.

The masking assumption may also fail under the Applicant’s own operating case. If BESS fan duty is reduced at night, broadband masking may diminish while transformer hum remains. Plant loading, weather and operating mode may likewise alter the relative contribution of each source.

The Applicant’s assertion that the development will not be distinctive is equally unsupported. BS 4142 requires consideration of the character and temporal variation of the specific sound against the residual environment. Broadband A-weighted levels cannot establish whether a 100 Hz tone, fan cycle, inverter

component, switchgear event or corona sound would be incongruous in a quiet rural soundscape.

The Applicant should therefore provide:

- one-third-octave source spectra for all material plant;
- representative night-time residual spectra;
- tonal audibility calculations at the worst affected receptors;
- assessment of fan cycling and intermittent plant operation;
- assessment of switchgear impulsivity;
- assessment of corona buzzing or crackling;
- sensitivity testing using appropriate BS 4142 penalties.

Until that evidence is supplied, the blanket application of zero feature corrections has not yet been demonstrated to represent a reasonable worst case and could materially understate the rating level if tonal or other distinctive characteristics are present at the receptor.

12.11 Early-morning operational effects show the Scheme is not inherently acceptable

The early-morning assessment exposes the central weakness in the operational case. Before additional mitigation, Chapter 12 identifies operational sound above the Applicant’s own no-adverse-effect threshold at up to 21 high-sensitivity receptors. Seven receptors experience rating levels approximately 6–8 dB above background, producing moderate adverse, long-term effects at several locations. These include NSR14 at +6 dB, NSR43 and NSR47 at +8 dB, NSR48, NSR59 and NSR60 at +7 dB, and NSR62 at +6 dB.

Those results arise during 04:00–07:00, when the Applicant’s own baseline shows exceptionally low rural background levels, in some places only 20–24 dB LA90. The predicted increases are therefore not abstract numerical differences. They represent the introduction of mechanically generated sound into environments where it is likely to be readily perceptible and capable of changing the acoustic character of the area.

The Applicant does not resolve those effects through the submitted design. It introduces ‘additional mitigation’ and recalculates the results on the basis of reduced inverter noise. Appendix 12.2 states that this additional mitigation is applied only to the solar inverters and that the revised early-morning assessment then reduces the effects to negligible.

That is not evidence that the Scheme as submitted is acceptable. It is evidence that the unmitigated design is not acceptable at a material number of receptors and that compliance depends on future equipment selection, attenuation, relocation, reorientation or operational restriction. The operational case is mitigation-led, not design-led. The Applicant has shown that an assumed future arrangement may comply; it has not shown that the authorised Scheme, within its proposed flexibility, necessarily will.

The August 2026 NPPF reinforces the importance of that distinction. Policy P3 requires adverse noise impacts to be avoided where possible or otherwise mitigated to an acceptable degree, requires

potential adverse noise impacts to be reduced to a minimum and requires significant observed adverse effects to be avoided. Where compliance depends upon future equipment selection or operating restrictions, those parameters must therefore form part of the enforceable acoustic envelope rather than remain optional mitigation.

12.12 Mitigation is generic, unproven and insufficiently secured

12.12.1 No clear mitigation schedule

Chapter 12 relies on a broad menu of possible measures: low-noise inverter models, acoustic enclosures, silencers, attenuators, plant relocation, reorientation, reduced BESS fan duty, 4 m acoustic barriers and selection of equipment without tonal characteristics.

The ES does not, however, provide a site-by-site mitigation schedule identifying:

- which measure applies to each receptor or plant group;
- the required attenuation;
- the equipment to which it applies;
- its physical dimensions and location;
- whether the reduction is guaranteed by manufacturer data;
- whether it is compatible with fire safety, maintenance and ventilation;
- whether it can be accommodated within the approved layout;
- whether it creates other environmental harm.

Table 12-25 identifies the reductions required at particular inverter groups, but the Applicant does not demonstrate how each reduction will be achieved in practice. The Council's acoustic reviewer therefore asks for worked examples showing how the suggested measures can deliver the required attenuation within the Scheme's other constraints.

The distinction is fundamental. A list of possible mitigation measures is not the same as evidence that mitigation is technically feasible, environmentally acceptable and secured. Until that evidence is supplied, the claimed residual effects remain contingent.

12.12.2 Acoustic barriers are evidence of unresolved design dependence

The proposed 4 m acoustic barrier is not merely a routine embedded measure. Its necessity indicates that the BESS and associated infrastructure may otherwise produce adverse operational sound above the Applicant's intended mitigated criterion at nearby receptors.

The barrier is substantial, technically demanding and visually incongruous in an open rural landscape. Its acoustic performance depends on final plant layout, source height, sealing, absorption, reflections and low-frequency behaviour. The GMRG review questions whether the proposed construction can deliver the assumed low-frequency performance and

identifies the absence of sufficient modelling detail to validate that assumption.

The barrier also creates potential conflicts with landscape, heritage, drainage, maintenance and fire-safety requirements. Those conflicts cannot be deferred while the barrier is simultaneously relied upon to demonstrate operational acceptability.

The Applicant must show that the exact barrier arrangement is physically deliverable and environmentally acceptable, and that its frequency-dependent performance is secured. An assumed barrier in an indicative model is not a reliable mitigation commitment.

12.12.3 Noise limits must be secured by Requirement

The Council’s acoustic reviewer welcomes the Outline OEMP commitment to control residential rating levels at or below background, because that would satisfy the policy requirement to minimise adverse effects, subject to context and deliverability. It expressly asks whether that commitment will be secured through a DCO Requirement.

It must be. An outline management-plan aspiration is not an enforceable operational limit. The final DCO should require the rating level from the whole authorised development, assessed in accordance with BS 4142, not to exceed the representative background level at any residential receptor. The Requirement should also control cumulative sound, tonal and other acoustic features, early-morning operation and replacement plant.

The Requirement must specify the assessment method, receptor positions, operating conditions, measurement procedure, correction for uncertainty, reporting obligations and remedial action. Without those elements, the Applicant’s mitigation case remains discretionary and cannot support the conclusion of no significant residual effects.

12.13 Low-frequency noise assessment is incomplete

The low-frequency assessment is not independently reproducible. The Applicant presents predicted one-third-octave façade levels, but does not disclose the corresponding source spectra, their derivation or the detailed propagation assumptions. It is therefore impossible to confirm whether the model represents the low-frequency emissions of the BESS, transformers, inverters and National Grid equipment.

This is not cured by compliance with the NANR45 criterion on the Applicant’s assumed inputs. A broadband A-weighted total can conceal a pronounced low-frequency component, and low-frequency sound may be particularly noticeable indoors at night. Barrier and atmospheric attenuation are also weaker and more uncertain at the lowest frequencies.

The revised assessment should therefore include:

- disclosed manufacturer or measured one-third-octave source spectra;
- the number and operating duty of every modelled source;
- simultaneous BESS and substation operation;
- separate evening, night and early-morning cases;
- receptor-specific façade and room assumptions;
- a 5 dB façade attenuation sensitivity case;
- tonal assessment around 100 Hz and associated harmonics;
- frequency-dependent barrier performance;
- modelling uncertainty and worst-case sensitivity testing.

The Applicant should also compare the predicted plant spectrum with measured night-time residual spectra at Great Moulton. Until that comparison is provided, the conclusions on low-frequency acceptability and tonal masking should carry little weight.

12.14 Non-residential and vulnerable receptors

The assessment does not give sufficient attention to the different ways in which non-residential and vulnerable receptors experience noise.

Jack in the Box Nursery is correctly identified in Chapter 12 as a high-sensitivity receptor, but the wider consultation evidence shows continuing concern about the adequacy of the assessment of nursery use, external play areas and the sensitivity of children. A generic indoor limit does not establish that internal teaching spaces, sleep areas or outdoor play areas would remain acceptable.

Places of worship, including St Catherine’s Church and St Michael’s Church, require assessment reflecting their reliance on speech intelligibility, quiet contemplation and periods of low internal sound. Chapter 12 identifies them as high-sensitivity receptors but assesses them through generic internal criteria without demonstrating actual façade performance, window-opening conditions or the acoustic character of the intrusive source.

Hotels, bed-and-breakfast accommodation, cafés, restaurants and outdoor commercial uses may depend directly on tranquillity and the ability to use external areas. Red House Farm Bed and Breakfast is identified as a high-sensitivity receptor, but the assessment does not provide a separate appraisal of guest amenity, evening use or commercial consequences.

The assessment is weaker still in relation to vulnerable residents. Norfolk County Council identified concern about noise, mental health and wellbeing, including impacts on autistic children and others with sensory sensitivities who may depend on a predictable and quiet home environment. Chapter 12 applies average-response criteria. It does not assess whether particular receptors may experience materially greater effects because of disability, sensory processing conditions, home education or other vulnerability.

The Applicant should therefore provide receptor-specific assessments for nurseries, places of worship, tourism accommodation, external commercial uses and identified vulnerable residents. The absence of such assessment cannot be cured by classifying all effects through generic sensitivity categories.

12.15 Outdoor amenity has not been adequately demonstrated

The Applicant states that daytime modelling at 1.5 m above ground represents outdoor amenity areas and therefore no separate assessment is necessary. That assertion is insufficient.

A modelling height does not establish that receptors have been placed in the relevant part of each garden. It does not identify patios, principal sitting areas, children’s play areas or the side of the dwelling most exposed to the Scheme. It also does not address evening use, seasonal use or the combined contribution of multiple plant sources.

The issue is particularly important where predicted sound is close to or above background. In those circumstances, small differences in receptor position, screening and source directivity may determine whether the plant is audible and intrusive. The acoustic character of the source also matters: a steady transformer hum or fan sound may be more intrusive than an equivalent level of anonymous environmental sound.

The Applicant should provide property-specific garden receptor positions for every dwelling at which the predicted rating level approaches or exceeds background. Those assessments should cover daytime and evening use, include cumulative plant contributions and assess acoustic character, not merely the A-weighted level.

12.16 Public rights of way and equestrian users

The PRoW assessment relies on absolute criteria of 50 dB LAeq,T for LOAEL and 55 dB for SOAEL, derived from general community-noise guidance. Those values do not necessarily protect tranquillity in a quiet rural landscape where a single identifiable industrial source becomes dominant.

The Council’s acoustic reviewer makes that point expressly. It notes that the WHO values were developed for anonymous or general environmental noise and that compliance does not ensure the absence of adverse effects where industrial sound has a distinctive character. It also identifies a direct contradiction in the Outline OEMP: the proposed PRoW limit of 55 dB is itself the Applicant’s SOAEL threshold. A commitment to permit sound up to SOAEL cannot satisfy the policy requirement to minimise adverse effects.

The Applicant should provide existing ambient levels and predicted operational levels for every identified PRoW receptor, including NSR6, NSR12, NSR19, NSR27, NSR36, NSR57, NSR63, NSR70 and NSR79. It should assess change in acoustic character, not only compliance with an absolute ceiling.

Equestrian users also require separate consideration. The British Horse Society has requested that inverter housing be designed to prevent sound transmission and be located away from bridleways and byways, and that construction traffic avoid equestrian routes where possible. The ES does not adequately assess the combined effect of plant noise, sudden construction sound and traffic on horse behaviour, rider safety and enjoyment of the route network.

12.17 Ecological noise and vibration effects

In its Scoping Opinion, the Planning Inspectorate accepted that construction and decommissioning noise effects on sensitive ecological receptors could be assessed in the Ecology and Biodiversity chapter, provided Chapter 12 clearly cross-referenced that assessment. It also agreed that operational ecological noise could be scoped out, but expressly on the basis that the ES would confirm operational equipment types and numbers, with reference to the distances between noise sources and sensitive ecological receptors, sufficient to justify that conclusion. Pins scoping response

BEPS's objection is whether the factual basis upon which PINS agreed to scoping out has actually been satisfied. That question is material because final equipment type, number, location and operating regime remain flexible, while the ecological evidence now establishes a nationally important bat landscape and sensitive functional habitat adjoining and overlapping the Scheme.

12.17.1 Chapter 12 is principally a human-receptor assessment

Chapter 12 expressly states that it assesses noise and vibration effects on human receptors. Ecological effects are directed to Chapter 8, and Table 12-3 records ecological noise and vibration as scoped out of Chapter 12 for all phases. Operational ecological noise was accepted for scoping out on the assumption that operational levels would be unlikely to affect ecological receptors.

That division does not remove the need for a substantive ecological disturbance assessment. Cross-reference is acceptable only if Chapter 8 actually assesses the relevant noise sources, levels, timing, distances and species-specific responses. A bare statement that effects are addressed elsewhere is not evidence.

12.17.2 Nationally important bat landscape

South Norfolk Council records that ten bat species were identified within the Order Limits and that the bat assemblage is of national importance. It further records that barbastelles were highly abundant and widespread and that data from the Norfolk and Norwich Bat Group identify 12 barbastelle maternity-colony core sustenance zones overlapping the Order Limits. Colonies at Saxlingham Wood and Spring Wood lie adjacent to the Scheme.

This is therefore not a scheme affecting occasional bat activity in an otherwise ordinary landscape. It intersects a functionally connected bat network of national importance, including maternity-colony supporting habitat.

12.17.3 No dedicated barbastelle disturbance assessment

There is no dedicated, species-specific assessment of whether noise and vibration may affect barbastelle roosting, commuting or foraging. The assessment should address, in combination:

- HDD and continuous night working;
- percussive piling;
- compounds and generators;
- HGV movements;
- BESS cooling fans;
- inverters and transformers;
- maintenance and replacement activity;
- artificial lighting;
- vehicle and personnel movement;
- fragmentation and alteration of dark corridors.

The relevant question is not confined to physical injury. It is whether the Scheme may displace bats from flight lines, alter foraging behaviour, reduce use of roost-supporting habitat, interfere with maternity-colony function or cause avoidance of established corridors.

Given the national importance of the bat assemblage, the question should therefore be whether the Applicant has provided the information required by the Scoping Opinion to sustain the original scoping-out conclusion in light of the final ecological baseline and the operational equipment envelope now sought. If the number, type, location or acoustic characteristics of operational plant remain materially flexible, the Applicant should demonstrate that the reasonable worst case would not produce a significant disturbance pathway to the identified roosting, commuting and foraging functions. If that demonstration is already contained within Chapter 8, it should be identified expressly and reconciled with the final noise envelope. The evidential gap affects both the EIA conclusion and any later consideration of protected-species licensing.

12.18 Health, wellbeing and rural tranquillity

The August 2026 NPPF gives this issue direct policy relevance. Policy P3 requires consideration of cumulative pollution effects upon health and living conditions, including the particular sensitivity of vulnerable groups such as children and older people. It also specifically requires adverse noise effects to be minimised and the character of tranquil areas to be maintained.

Chapter 12 treats noise principally as an acoustical compliance exercise. That is too narrow. The Applicant’s own hierarchy recognises that intrusive noise may cause changes in behaviour, sleep disturbance, premature awakening and diminished quality of life. Those effects must be considered in the real context of nearby communities facing years of construction, repeated HGV movements, HDD, piling and the permanent introduction of BESS and substation sound into a quiet rural landscape.

Norfolk County Council Public Health called for a dedicated assessment of mental health and wellbeing, including cumulative and in-combination effects and particular consideration of vulnerable groups. It identified concern arising from

the concentration of major infrastructure close to Great Moulton and the absence of adequate evidence on the physical and mental health consequences.

Policy DM 3.13 requires regard to background levels at different times of day and night and protection of rural tranquillity. That policy concern is not answered by showing that a modelled level falls below a selected numerical threshold. The assessment should address the implications for quiet enjoyment, sleep, residential amenity and rural tranquillity, together with any supported cumulative health or wellbeing effects identified through the wider human-health assessment.

The Applicant has not done so with sufficient depth. The result is an assessment that understates the human consequences of changing the acoustic character of a large rural area for up to 60 years.

12.19 Cumulative effects are incomplete

The cumulative assessment considers only a limited number of identified developments and does not demonstrate that the full relevant project list has been assessed. Chapter 12 should identify the complete shortlist, explain the screening criteria and assess overlapping construction and operational effects.

The required cumulative assessment should include:

- combined operational rating levels at each shared receptor;
- compliance with the commitment to remain at or below background;
- overlapping construction traffic and noise;
- National Grid infrastructure;
- other solar and BESS projects;
- road schemes and transmission works;
- temporal overlap between construction programmes;
- combined acoustic character and low-frequency effects.

The Council’s acoustic reviewer identifies a specific unresolved issue at NSR3A. It notes that the combined level with application 2024/3817 would remain above existing background and asks whether the OEMP commitment to remain below background applies cumulatively.

That question goes to the heart of the cumulative case. A project-specific limit is insufficient if the combined authorised sound environment remains adverse. The DCO must control the contribution of East Pye so that cumulative effects remain acceptable, not merely its isolated modelled level.

Policy P3 now expressly requires the likely effects of pollution to be considered cumulatively. The cumulative noise question is therefore not answered solely by demonstrating that East Pye’s isolated contribution remains within a project-specific criterion. Where another authorised or reasonably foreseeable source affects the same receptor, the assessment should identify the combined acoustic environment and determine whether East Pye's contribution remains compatible with the policy objective of minimising adverse effects and avoiding significant observed adverse effects.

12.20 Decommissioning and replacement cycles

The Scheme may operate for up to 60 years. Chapter 12 nevertheless scopes out or simplifies substantial elements of maintenance and replacement on the basis that they would be less intensive than initial construction. It records that all solar panels may be replaced at least once and that the BESS may be replaced up to five times.

Those are not trivial or exceptional activities. Replacing BESS units up to five times may involve repeated HGV deliveries, lifting operations, temporary compounds, generators, electrical works and recommissioning. Panel replacement across a project of this scale may also produce prolonged and geographically dispersed activity.

The Applicant should provide a realistic noise assessment for the replacement cycles inherent in the Scheme's design life. The assessment should identify likely plant, duration, traffic, hours and affected receptors.

Where replacement plant is capable of materially affecting the noise assessment, the DCO should require it either to meet acoustic specifications no worse than the approved plant or to demonstrate, before installation, continued compliance with the secured operational noise limits. Without that control, quieter initial equipment could later be replaced by materially noisier units while remaining within the authorised development.

12.21 Overall conclusion

First, Chapter 12 identifies material construction and operational effects but repeatedly neutralises them through duration thresholds, generic mitigation and future design controls.

Second, the operational model cannot be independently verified. Final plant specifications and numbers remain unresolved; source spectra have not been disclosed; the National Grid source inventory is incomplete; and the low-frequency and barrier calculations are insufficiently transparent.

Third, the assumption that residual road traffic or broadband BESS noise will mask transformer hum and other distinctive sound has not been demonstrated. Neither representative night-time residual spectra nor the plant spectra required to undertake that comparison have been supplied.

Fourth, the zero BS 4142 acoustic feature corrections are unsupported. Reasonable corrections for tonality or distinctiveness could materially alter the rating levels and significance conclusions, particularly at Great Moulton during quiet night-time periods.

Fifth, the submitted design is not inherently acceptable. Compliance depends on reduced fan duty, selected equipment, acoustic barriers, source orientation and other measures whose specification, performance and environmental compatibility remain unresolved.

Taken together, these matters mean that Chapter 12 has not yet demonstrated with sufficient robustness that the full operational and construction envelope authorised by the DCO would comply with the noise assumptions on which the Applicant's residual conclusions depend. The principal issue is not the existence of acoustic mitigation in principle, but whether the reasonable worst-case plant, construction methods and operating regimes have been adequately assessed and whether the controls necessary to achieve the predicted outcomes are fixed and enforceable.

12.22 Remedies sought

Further assessment

The further-assessment requirements should be expanded to require:

- complete octave-band and one-third-octave plant source data;
- identification of the manufacturer or measured source for every spectrum;
- night-time octave-band or one-third-octave baseline data at Great Moulton;
- disclosure of the number and position of all BESS and substation sources;
- frequency-dependent barrier absorption and insertion-loss assumptions;
- BS 4142 tonal audibility calculations;
- assessment of other distinctive and intermittent characteristics;
- quantified modelling uncertainty and sensitivity testing.

The binding controls should also require:

- maximum A-weighted and spectral sound-power limits for every plant category;
- limits applying to the maximum authorised number of plant units;
- no reliance on reduced fan duty unless that regime is enforceably secured;
- a final BS 4142 assessment using the installed plant and final layout;
- pre-commissioning review of manufacturer spectral data;
- post-commissioning broadband, narrow-band and low-frequency measurements;
- correction and mitigation where tonal, low-frequency or other distinctive sound is identified;
- no operation of non-compliant plant until effective remediation has been completed.

Design changes

Night-time HDD should be prohibited unless the Applicant demonstrates an exceptional technical necessity for a specific crossing and proves that no quieter method or daytime programme is feasible. The Applicant should be required to justify retention of percussive piling at locations where quieter practicable foundation methods could achieve the required engineering function, and to

adopt quieter methods where reasonably practicable. Operational plant should be relocated away from sensitive receptors, minimum equipment sound-power standards should be fixed, and access roads should not be located within 30 m of dwellings.

Binding controls

If the Applicant continues to rely upon its commitment to control residential operational noise at or below representative background as the basis for its conclusion of acceptability, that commitment should be translated into an enforceable DCO Requirement applying to the whole operational Scheme. It should fix maximum sound-power and spectral limits for each plant category; control tonality, impulsivity, intermittency and other distinctive characteristics; require approval of a final verified noise model before installation; secure post-commissioning compliance testing and continuous complaint investigation; ensure replacement plant is no noisier than approved equipment; and impose clear construction hours, including an express prohibition on routine night-time HDD.

Decision consequence

Consent should not be granted on the assumption that material acoustic mitigation will later prove technically deliverable. Before the ExA reaches its recommendation, the Applicant should demonstrate that the measures necessary to keep the authorised development within the assessed acoustic envelope are technically feasible, compatible with other environmental and safety requirements and capable of being secured through enforceable Requirements. If that cannot be demonstrated, the Scheme has not been shown to be acceptable in noise and vibration terms and should not be authorised in its present form.

Chapter 13: Air Quality

13.1 BEPS Position

BEPS does not contend that existing statutory air-quality objectives are currently exceeded across the East Pye Order Limits. The objection is that the Applicant has not established a representative measured baseline for the predominantly rural locations in which most of the Scheme would actually be constructed, yet relies heavily on generic traffic-screening thresholds and assumptions to conclude that effects will be negligible.

Chapter 13 is also much narrower than its title suggests. The substantive assessment is principally confined to road-traffic emissions affecting human and ecological receptors during construction and decommissioning. Fugitive dust, emissions from non-road mobile machinery (‘NRMM’), operational traffic, emergency generator emissions and BESS-fire emissions are either scoped out of the chapter, addressed through separate outline management documents, or deferred. Table 13.3 confirms that, of the principal air-quality pathways identified by the Applicant, only construction and decommissioning road-traffic emissions remain substantively scoped into Chapter 13.

BEPS considers that three defects materially weaken the Applicant’s conclusion that air-quality effects will be ‘not significant’.

First, the measured baseline is overwhelmingly derived from Long Stratton. Seven of the eight diffusion-tube monitoring locations selected by the Applicant are in Long Stratton, as is the Zephyr monitor used for measured NO2, PM10 and PM2.5. Most of the Scheme, by contrast, is dispersed through open agricultural countryside, small villages and hamlets served by minor rural roads. Figure 13.1 itself demonstrates the mismatch between the concentration of monitoring around Long Stratton and the extensive rural Order Limits.

Second, Chapter 13 repeatedly uses generic EPUK/IAQM traffic-flow thresholds as the basis for treating pollutant effects as negligible without receptor-specific dispersion modelling. A screening criterion is a trigger for deciding whether further assessment is required; it is not itself a measurement or prediction of pollutant concentration at an affected dwelling, village or ecological receptor.

Third, even where cumulative construction traffic exceeds those same screening criteria, the Applicant does not undertake quantitative dispersion modelling. Instead, it relies on historic Long Stratton monitoring, predicted future improvements in vehicle emissions, the temporary nature of construction and traffic-management measures to conclude that cumulative effects remain not significant.

The issue is therefore not whether Chapter 13 demonstrates an exceedance of an air-quality objective. It is whether the Applicant has produced sufficiently

representative evidence to justify ruling out significant effects across a geographically dispersed rural NSIP. BEPS submits that it has not.

13.2 Policy and Scoping Requirements

The Energy National Policy Statements remain the primary policy framework for this NSIP. The August 2026 National Planning Policy Framework is nevertheless a relevant material consideration and materially reinforces the air-quality issues raised in this chapter.

Policy P3 requires development to be appropriate for its location having regard to the likely effects, including cumulative effects, of pollution upon health, living conditions and the natural environment. It also requires particular attention to the sensitivity of the surrounding population, including groups such as children and older people who may be more vulnerable to pollution effects. Development should avoid unacceptable effects from pollution and should mitigate and reduce adverse effects to an acceptable degree.

This is directly relevant to East Pye because the Scheme would generate substantial construction traffic across a rural network containing homes, schools, nurseries, farms and sensitive ecological receptors, while the Applicant has not undertaken scheme-specific ambient monitoring across the wider Order Limits and relies substantially upon background mapping, screening thresholds and qualitative dust assessment.

The Planning Inspectorate agreed that construction dust could be scoped out of detailed assessment only on the basis that a construction dust risk assessment would be undertaken, sensitive receptors identified and appropriate mitigation specified in the OCEMP. It also agreed that NRMM emissions could be scoped out only provided that the ES identified the type, number, location and operational hours of NRMM sufficiently to demonstrate that significant effects were unlikely. By contrast, the Inspectorate expressly refused to scope out construction road-traffic emissions because the Applicant’s own forecast of approximately 108 daily two-way HGV movements exceeded the EPUK/IAQM screening criteria.

The Inspectorate similarly agreed to scope NRMM emissions out only conditionally. It required the ES to provide sufficient information on the type, number, location and operational hours of machinery to demonstrate that no likely significant effects would occur. It also specifically directed the Applicant to DEFRA’s PM2.5 guidance and required the ES to explain how key pollution sources had been identified and how PM2.5 and precursor emissions had been minimised.

Road-traffic air quality was therefore not an issue that PINS regarded as inherently insignificant. It was specifically brought back into the assessment because the scale of proposed construction traffic warranted proper examination. The robustness of the final baseline, screening exercise and cumulative assessment is consequently material to the weight that can safely be placed on Chapter 13.

13.3 The Applicant Has No Representative Measured Baseline for the Rural Scheme Area

South Norfolk Council's consultation response materially qualifies the Applicant's statement that there was no relevant local monitoring. The Council states that EarthSense Zephyr monitors are deployed within the area and that the data can be made available on request.

BEPS's point is that the Applicant has not demonstrated that available local monitoring has been incorporated into a representative Scheme-specific baseline covering the principal construction routes, sensitive settlements and receptors likely to experience the highest traffic or dust exposure.

Chapter 13 states at paragraph 13.5.3 that there is 'sufficient baseline data to inform the assessment' and that consequently 'no Scheme-specific air quality monitoring has been undertaken'. That assertion is difficult to reconcile with the geographical distribution of the monitoring evidence actually relied upon.

Of the eight diffusion-tube locations selected for Table 13.7, seven are in Long Stratton. The only exception is DT3 at Poringland. The only continuous indicative monitor relied upon for measured NO2, PM10 and PM2.5 is Zephyr 1516, again positioned beside the A140 in Long Stratton. Figure 13.1 makes the concentration of the measured monitoring around Long Stratton particularly clear.

This is not representative of where most of East Pye would be built. The Scheme consists of numerous geographically dispersed solar sites and cable corridors across predominantly agricultural countryside. The affected environment comprises open fields, hedgerows, woodland, farms, villages, hamlets and minor rural-road networks. Long Stratton is a town and, when most of the monitoring data relied upon were collected, carried strategic A140 through-traffic. It is therefore a materially different receiving environment from the locations in which most of the generating infrastructure and associated construction activity would occur.

The Applicant's own numerical evidence demonstrates the scale of that difference:

Applicant's evidence	2024 annual mean NO2
A140 Long Stratton roadside monitor DT7	**23.7 µg/m³**
Other selected Long Stratton monitors	**14.4–21.5 µg/m³**
DEFRA-modelled background across most Scheme sites	approximately **5.4–6.3 µg/m³**

Table 13.7 records the Long Stratton measurements, while Table 13.9 gives the much lower predicted background concentrations across the Order Limits.

The significance of this comparison is not that the higher Long Stratton concentrations breach the statutory objective: they do not. It is that the Applicant describes monitoring from a substantially more traffic-affected environment as among the ‘closest and most representative’ monitoring locations for a Scheme whose principal generating sites lie elsewhere. Measured NO2 at the selected A140 Long Stratton roadside location in 2024 was more than four times the modelled NO2 background at many Scheme sites. The two environments are plainly not interchangeable.

There is also a temporal problem. The principal diffusion-tube dataset relied upon covers 2020–2024, when A140 through-traffic still passed through Long Stratton before completion of the bypass. Those measurements therefore characterise the former traffic environment of Long Stratton rather than the low-traffic countryside into which much of the Scheme’s construction traffic would be introduced.

The Zephyr monitor does not cure that deficiency. Monitoring commenced on 7 August 2024 and Chapter 13 reports only a single 2024 period mean and a single 2025 period mean to 12 November 2025. The 2024 dataset had only 40% data capture. More importantly, the Applicant does not disaggregate the 2025 data into pre- and post-bypass periods. It therefore provides no evidence from which the Examination can determine the extent to which the 2025 Long Stratton value reflects the changed traffic conditions following opening of the bypass.

The Applicant has therefore modelled background concentrations for the rural Scheme area but has not measured them. Its measured evidence is overwhelmingly drawn from a different and substantially more traffic-affected environment. Figure 13.1 illustrates rather than resolves that deficiency. The statement that the Long Stratton monitoring locations are the ‘closest and most representative’ locations is not demonstrated by the evidence.

This matters because the EPUK/IAQM methodology adopted by the Applicant assesses the significance of pollutant change partly by reference to existing concentrations at the receptor. A representative baseline is therefore not peripheral to the assessment; it forms part of the mechanism by which the scale and significance of change are characterised.

13.4 The Absence of Scheme-Specific Monitoring Is Not Adequately Justified

BEPS does not suggest that IAQM guidance requires bespoke monitoring for every development. The issue here is specific to East Pye. This is a geographically dispersed NSIP extending across numerous rural sites, villages, haul routes and cable corridors, while the measured dataset selected by the Applicant is concentrated overwhelmingly in one town and its former strategic-road corridor.

That distinction is particularly important because the Applicant’s own evidence demonstrates a pronounced difference between measured Long Stratton conditions and the modelled background across the Scheme. Where measured NO2 at the A140 monitoring location was 23.7 µg/m³ in 2024 but modelled NO2 across much of the Order Limits is only around 5.4–6.3 µg/m³, there is an obvious

evidential case for validating the rural baseline at representative affected receptors before relying upon it to underpin conclusions of negligible effect.

A proportionate rural monitoring programme need not have been extensive. Representative diffusion tubes and, where justified, particulate monitoring at a limited number of affected villages, dwellings or construction routes could have established whether the national background mapping accurately characterises local conditions. It would also have provided an auditable pre-construction baseline against which any subsequent deterioration could be identified.

Instead, the assessment moves directly from historic Long Stratton monitoring and national background mapping to screening conclusions. This leaves an important evidential gap: the Applicant has no measured baseline at the rural receptors upon which the Scheme would impose new construction traffic.

Chapter 13 records that South Norfolk Council accepted the general air-quality assessment methodology during pre-application engagement and subsequently supplied monitoring data. That is relevant, but it does not answer this objection. Agreement with the general methodology is not evidence that seven Long Stratton diffusion tubes and one A140 Zephyr monitor are geographically representative of the entire Order Limits. Nor does Chapter 13 record SNC agreeing that Scheme-specific rural monitoring was unnecessary notwithstanding the marked difference between the measured Long Stratton concentrations and the Applicant’s own modelled rural background.

The distinction is important because the Applicant cannot rely on consultee agreement to a methodological framework as proof that every evidential input subsequently used within that framework is representative. The burden remains on the Applicant to demonstrate that the baseline is adequate for the receptors actually affected.

BEPS therefore submits that Chapter 13 has not adequately justified the decision to undertake no Scheme-specific monitoring. This deficiency does not establish that statutory objectives will be exceeded. It does mean, however, that the Applicant lacks representative measured evidence for the low-traffic rural environment across much of the Scheme and has not validated the baseline upon which its subsequent screening and ‘negligible’ conclusions depend.

13.5 Screening Thresholds Are Being Used as a Substitute for Receptor-Specific Assessment

The Applicant relies heavily on the EPUK/IAQM traffic-flow screening criteria to determine whether construction traffic requires detailed air-quality assessment. Appendix 13.2 describes the relevant thresholds outside an AQMA as an increase of more than 500 LDV AADT or more than 100 HDV AADT, expressly describing these as ‘Indicative Criteria to Proceed to a Detailed Air Quality Assessment’.

Chapter 13 then takes a further step. Paragraph 13.5.21 states that where traffic generated by the Scheme falls below those screening criteria, the resulting change in pollutant concentration is simply ‘accepted’ as being less than 0.5% of the relevant Air Quality Objective and the impact is therefore classified as

‘negligible’. No receptor-specific concentration is calculated in reaching that conclusion.

That treatment sits uneasily with the purpose of the screening criteria as described by the Applicant itself. At paragraph 13.11.7, Chapter 13 quotes EPUK/IAQM as explaining that the criteria are precautionary and indicative and are intended to operate as a sensitive ‘trigger’ for initiating assessment where there is a possibility of significant effects. The Applicant's own Scoping Report was clearer still: it stated that the criteria identify circumstances in which there is a possibility of significant air-quality impacts and a detailed dispersion-modelling assessment would be required.

BEPS does not object to the legitimate use of screening criteria to determine where more detailed work may be necessary. The concern is the way those criteria are applied here. A traffic-flow threshold is not a measured or modelled pollutant concentration at a receptor. Chapter 13 nevertheless converts passing the traffic screening test directly into an assumed concentration change of less than 0.5% and hence an assumed negligible environmental effect.

The Scheme-alone assessment illustrates the consequence. Table 13.11 predicts a maximum Scheme increase of 295 AADT on the A140 north of the B1527 and a maximum HDV increase of 70 AADT on the B1332. Because the individual links remain below the generic 500 LDV/100 HDV thresholds, paragraph 13.8.7 concludes that impacts on pollutant concentrations at human receptors are negligible and that the overall effect is not significant. No dispersion modelling of NO2, PM10 or PM2.5 at the affected human receptors is undertaken.

The concern is amplified by the character of the receiving environment. The Applicant's own transport evidence distinguishes the A140 and other arterial routes from the wider network of rural roads, many of which have variable widths, intermittent markings and single-track sections. Earlier Applicant traffic data recorded, for example, only 290 AADT on Triple Plea Road, 552 on Field Lane and 863 on Low Road. The significance of introducing additional HGV traffic alongside rural dwellings and villages cannot therefore be understood simply by asking whether each road remains below a generic absolute screening threshold.

This is particularly important when read with the baseline deficiency identified above. The Applicant has no representative measured air-quality baseline for those rural receptors. The assessment therefore combines an unverified rural baseline with a screening methodology that assumes rather than predicts the resulting concentration change. BEPS submits that this is insufficiently robust to support the blanket conclusion of negligible effects across the Scheme.

Screening criteria are an assessment tool, not a substitute for understanding the receptor. Where traffic increases exceed a screening threshold, or where sensitive receptors lie close to constrained routes, the Applicant should demonstrate why the selected assessment method remains proportionate and why a more detailed receptor-specific assessment is unnecessary.

This is particularly important because the Planning Inspectorate refused to scope out construction traffic emissions precisely because the Applicant’s forecast traffic exceeded the relevant EPUK/IAQM screening criteria.

13.6 Cumulative Traffic Exceeds the Screening Criteria but Still Receives No Quantitative Dispersion Assessment

The weakness becomes more pronounced in the cumulative assessment because the Applicant's own screening thresholds are substantially exceeded.

Table 13.12 predicts cumulative construction increases of 1,387 AADT, including 806 HDVs, on A140 Link 01; 1,313 AADT, including 806 HDVs, on Link 03; and 1,160 AADT, including 806 HDVs, on Link 21. Paragraph 13.11.6 expressly acknowledges that the EPUK/IAQM criteria are exceeded on all three links.

Those are not marginal exceedances. The cumulative HDV increase of 806 AADT is more than eight times the 100 HDV AADT screening threshold applicable outside an AQMA. Yet the exceedance does not trigger quantitative dispersion modelling.

Instead, paragraphs 13.11.8–13.11.11 reason that East Pye itself contributes only a proportion of the cumulative traffic; that historic A140 monitoring remained below the relevant Air Quality Objectives; that pollutant concentrations are expected to improve by the peak construction year; that construction will be temporary; and that construction traffic will be controlled through the CTMP. On that basis the cumulative effect is again declared ‘not significant’.

This creates a significant internal inconsistency in the assessment. Below the screening thresholds, Chapter 13 treats the effect as negligible without modelling. Above the thresholds, it still does not model the effect, but substitutes a qualitative argument for doing so. The Applicant's own Scoping Report had stated that the purpose of these thresholds was to identify where detailed dispersion modelling would be required. As applied in the final ES, the screening methodology therefore appears incapable of triggering the detailed assessment which the screening exercise was designed to identify.

The reliance on historic A140 monitoring is also particularly problematic for the reasons set out in Sections 13.3 and 13.4 above. Much of the monitoring evidence derives from Long Stratton before the bypass, while the cumulative assessment concerns construction conditions in 2029. The Applicant effectively relies simultaneously on historic traffic-polluted monitoring to demonstrate ample headroom against statutory objectives and on anticipated future reductions in pollution to conclude that the much greater cumulative construction traffic will nevertheless remain insignificant. That is not a substitute for modelling the cumulative pollutant concentrations at the receptors actually affected.

There is also a transparency issue. Table 13.12 attributes as many as 739 additional HDV AADT to ‘committed development’ on the A140, but Chapter 13 does not identify in that table which projects generate those flows or their individual contributions. Instead, the reader is referred to the wider cumulative-scheme appendix. Given the scale of the cumulative increase, the air-quality

assessment should make clear which developments, programmes and routing assumptions produce it and whether all material overlapping construction periods are represented.

That issue is not hypothetical. South Norfolk Council identified combined construction effects from multiple major projects, including traffic, disturbance and pollution, as a significant concern. It specifically referred to Tasway Energy Park, Norwich to Tilbury and other consented and proposed energy and infrastructure schemes, stating that their significant cumulative impact on the district had not been adequately explored. Norfolk County Council similarly identified significant cumulative impacts from East Pye together with other major infrastructure as a strategic concern.

BEPS therefore considers that the Applicant should be required to identify the developments and construction programmes underlying the cumulative traffic figures and undertake quantitative dispersion modelling on the links where its own screening thresholds are exceeded. A conclusion of ‘not significant’ based on qualitative reasoning after the Applicant's own trigger for detailed assessment has been substantially exceeded is not sufficiently evidenced.

The fact that traffic exceeds an EPUK/IAQM screening criterion does not, of itself, dictate a particular modelling technique. It does, however, require a sufficiently robust assessment of the likely effect at relevant receptors. Where the Applicant elects not to undertake quantitative dispersion modelling despite exceedance of the screening criteria, it should explain why the available evidence is nevertheless sufficient to exclude significant effects.

That issue becomes more important cumulatively. NPPF Policy P3 now expressly requires consideration of cumulative pollution effects, while National Highways has separately sought a more granular cumulative traffic assessment at affected strategic junctions. The air-quality assessment should therefore be consistent with the transport case ultimately advanced, including any materially revised routeing or worker-traffic assumptions.

13.7 Construction Dust: ‘High Risk’ Before Mitigation

The treatment of construction dust requires similar scrutiny. Chapter 13 acknowledges that earthworks, construction and trackout activities have been assessed as presenting a ‘high risk’ of dust impacts and expressly states that ‘high risk’ is the maximum construction-dust risk category. Nevertheless, construction, operational replacement and decommissioning dust are all scoped out of Chapter 13 on the basis that mitigation contained in the CEMP, OEMP and DEMP will reduce the resulting effects to not significant.

BEPS does not contend that PINS prohibited that approach. The Scoping Opinion agreed that construction dust could be scoped out, but only provided that the OCEMP identified the general construction works, the location of sensitive receptors, the necessary mitigation and how that mitigation would be delivered. The significance conclusion is therefore expressly dependent on the adequacy and enforceability of the mitigation relied upon.

That distinction is important. A high pre-mitigation dust risk has not disappeared merely because a management plan is proposed. It means that effective mitigation is essential to the Applicant's conclusion. Section 13.9 then identifies no additional mitigation because the effects are already said to have been rendered not significant by the embedded measures.

SNC’s Environmental Management comments specifically require PM2.5 to be considered throughout the construction dust risk assessment. The Council also recommends real-time monitoring including PM2.5 and states that the assessment should consider existing background concentrations rather than treating particulate risk solely as a generic construction-dust issue. The Applicant should therefore demonstrate that the final mitigation and monitoring regime responds to PM2.5 as well as PM10, particularly at the most sensitive residential, school and nursery receptors

The Examination should therefore test the substance of the controls rather than simply the existence of an outline plan. For a project dispersed across numerous construction sites, cable routes, compounds and rural haul roads, the secured arrangements need to establish where particulate monitoring will occur; whether PM10 and PM2.5 will be monitored at appropriate sensitive receptors; what trigger levels will require intervention; what measures apply during extended dry or windy conditions; how trackout, wheel washing, haul-road surfacing and vehicle speeds will be controlled; who is responsible for monitoring and corrective action; and how those commitments are secured and enforced through the DCO.

The ecological dimension is also material. Natural England specifically identified a series of SSSIs whose notified habitats or species may be sensitive to air-quality change and required assessment of construction traffic and dust, including Sexton Wood, Flordon Common, Hedenham Wood and Tindall Wood, Ditchingham. Norfolk Wildlife Trust separately identified construction-related air-quality impacts on habitats and species as an important issue in its statutory consultation response.

The Applicant's conclusion can therefore only be relied upon if the mitigation on which it depends is sufficiently specific, receptor-based and enforceable. The fact that the underlying dust risk is categorised as ‘high’ makes that a substantive examination issue rather than a matter that can simply be left to post-consent management.

13.8 PM2.5 and Human Health: Compliance Is Not the Same as Minimisation

Chapter 13 records an important warning from the UK Health Security Agency. UKHSA advised that pollutants associated with road traffic and combustion, particularly particulate matter and nitrogen oxides, are non-threshold pollutants: an exposed population may be subject to potential harm at any level, and reducing exposure below statutory air-quality standards can still provide public-health benefits. UKHSA specifically supported approaches that minimise exposure, address inequalities in exposure and maximise wider health benefits.

Norfolk County Council Public Health similarly advised that potential health impacts should form an integral part of the construction-dust assessment, particularly in relation to vulnerable populations.

The Applicant's principal response is that standard UK practice assesses development against regulatory standards, while also stating that DEFRA's PM2.5 planning guidance has been considered. That does not fully answer the point made by UKHSA. Whether a statutory objective is exceeded and whether avoidable exposure has been minimised are different questions.

The distinction is particularly relevant here because the Applicant's own background modelling indicates a comparatively clean rural environment. Table 13.9 predicts PM2.5 concentrations generally around 5.6–6.2 µg/m³ across the Order Limits in 2025, substantially below the 10 µg/m³ interim annual mean target. The fact that existing concentrations are low is not a reason to disregard additional exposure; it is evidence that the Scheme is introducing traffic and construction emissions into locations where existing pollution is comparatively limited.

Chapter 13 identifies measures such as reducing worker trips, construction routing, green infrastructure and the absence of a centralised combustion energy centre as contributing towards PM2.5 reduction. However, it does not quantify the contribution of those measures or demonstrate at receptor level how far emissions and exposure have been minimised. The principal traffic assessment continues to turn on whether generic screening thresholds or statutory objectives are exceeded.

BEPS therefore submits that the Applicant should demonstrate not merely that predicted concentrations remain below regulatory limits, but that PM2.5 emissions and exposure have been reduced as far as reasonably practicable, particularly at residential and other vulnerable receptors along construction routes. Wider consequences for children, older residents and other vulnerable groups are addressed in the Human Health chapter and are not repeated here.

The point is not that East Pye has been shown to breach an air-quality objective. The issue is that compliance with an ambient standard does not remove the separate planning requirement to minimise avoidable pollution effects, particularly where vulnerable receptors are present and where the Scheme may increase particulate exposure during construction.

The August 2026 NPPF reinforces this distinction through Policy P3 by requiring consideration of the sensitivity of the affected population and cumulative pollution effects rather than relying solely on compliance with statutory concentration limits.

13.9 Other Emission Sources Are Scoped Out or Deferred

A number of additional emission pathways are removed from substantive assessment on the basis of compliance assumptions, future design or later management. Individually these issues are secondary to the baseline and traffic-assessment deficiencies above, but together they reinforce the narrowness of Chapter 13.

For NRMM, PINS agreed to scoping out only on the express condition that the ES provide information on the **type, number, location and operational hours** of the machinery sufficient to demonstrate that no likely significant effects would occur. Chapter 13 states that information on type and number is contained in Chapter 4, that emissions standards are secured through the CEMP and that working hours are contained in the CEMP. It does not, however, identify in its response to the Scoping Opinion where the required information on the location of NRMM is provided. The Applicant should identify precisely where each element of PINS's conditional scope-out has been discharged rather than relying on a general reference to regulatory emissions compliance.

The position on the National Grid substation backup generator is more significant. PINS agreed at scoping stage that operational combustion emissions could be scoped out on the stated basis that **'no combustion plant is proposed'** and expressly required the project description to confirm that there would be no operational plant emissions requiring further assessment. That factual premise has subsequently changed.

The final ES now provides for a backup diesel generator of up to 500 kVA at the National Grid substation if a local-grid connection is not possible. Its specification has not been defined. Chapter 13 nevertheless concludes that its air-quality effects will be not significant because operation is expected to be infrequent, the nearest residential receptor is more than 250 m away and mitigation such as increased stack height and Selective Catalytic Reduction could be used. Detailed assessment is deferred until after the generator has been specified and would only be undertaken if its emissions exceed the 5 mg/s screening criterion.

The basis on which PINS originally agreed to scope combustion emissions out therefore no longer exists. The ES now contains an operational combustion source but declares it non-significant before its specification or emissions have been established, relying in part on mitigation that has itself not yet been designed. The appropriate course is to assess a defined generator or a robust worst-case specification within the examination, rather than defer the substantive emissions assessment until after consent.

Lifecycle replacement activity is treated in a similarly assumption-led manner. The Applicant's own Scoping Report states that solar panels may require replacement up to twice and batteries up to four times over the operational life of the Scheme. Chapter 13 nevertheless scopes operational road-traffic emissions out, stating that approximately five routine maintenance visits per month and vehicle movements associated with panel and BESS replacement remain below the EPUK/IAQM thresholds. Fugitive dust associated with those replacement activities is also scoped out and managed through the OEMP.

BEPS does not suggest that each replacement event will necessarily reproduce the full construction phase. The concern is that repeated large-scale replacement of major components over a 60-year operating life is a foreseeable part of the Scheme rather than an exceptional event. The Applicant should therefore provide a transparent replacement scenario, associated traffic assumptions and the basis on which those activities have been screened out, rather than relying on broad statements that the resulting traffic will remain below generic thresholds.

BESS-fire emissions are addressed separately in the Outline Battery Safety Management Plan and are only signposted here. Chapter 13 itself acknowledges that a BESS fire can generate emissions to air but scopes the pathway out on the basis of the 200 m residential offset and mitigation in the BSMP. BEPS's substantive concerns regarding fire scenarios, plume effects and emergency response are addressed in the Major Accidents and Disasters/BESS chapter and should be read alongside this air-quality representation. The human-health and air-quality implications of the emergency plume scenario must remain consistent with the BESS safety case ultimately relied upon.

13.10 Decommissioning Is Based Predominantly on Assumption

The Applicant’s decommissioning air-quality conclusion is not based on a quantified decommissioning scenario. It assumes that decommissioning traffic will be similar to or lower than construction traffic, that future vehicles and plant will have lower emissions, and that construction-style mitigation can be reapplied approximately six decades from now.

The Scoping Report itself adopted essentially the same approach, stating that decommissioning emissions were anticipated to be similar to or less than construction emissions and could therefore be managed through a future Decommissioning Environmental Management Plan.

BEPS does not suggest that the Applicant can predict vehicle technology or ambient air quality in detail 60 years in advance. The appropriate requirement is a clearly defined reasonable worst-case decommissioning envelope which identifies the types of activity capable of generating dust and traffic emissions and secures a process for demonstrating compliance when decommissioning takes place.

The present conclusion is therefore conditional rather than demonstrated. It rests upon assumptions that future plant will be cleaner, traffic will not exceed the construction case and comparable mitigation will remain available.

13.11 Overall Conclusion

BEPS does not contend that the evidence presently demonstrates widespread exceedance of statutory air-quality objectives. The concern is that Chapter 13 has not demonstrated with sufficient evidential robustness that the effects of this geographically dispersed Scheme will be negligible or not significant at the receptors actually affected.

The weaknesses are cumulative. The measured baseline is overwhelmingly derived from Long Stratton rather than from the rural Scheme area; most of the generating sites and construction routes lie in materially different low-traffic countryside; no Scheme-specific monitoring validates the much lower modelled rural background; sub-threshold traffic flows are automatically treated as producing negligible concentration changes; and cumulative traffic substantially exceeds the Applicant's own screening criteria without triggering quantitative dispersion modelling. Dust, NRMM, operational replacement activity and generator emissions are then controlled through assumptions, outline

management measures or later assessment rather than being fully resolved within Chapter 13.

The Applicant's own evidence illustrates the baseline problem particularly clearly. In 2024 the selected A140 Long Stratton roadside monitor recorded annual mean NO2 of 23.7 µg/m³, while the Applicant's own DEFRA mapping predicts NO2 concentrations across much of the Order Limits of only approximately 5.4–6.3 µg/m³. This is not a minor spatial variation. It demonstrates that the traffic-influenced Long Stratton environment from which most of the measured evidence is drawn is materially different from the rural receiving environment across most of East Pye.

The cumulative assessment then exposes a further methodological weakness. The Applicant relies on the EPUK/IAQM criteria to justify no modelling where the Scheme-alone traffic falls below the screening thresholds, yet declines to model cumulative effects even when the same criteria are substantially exceeded. The resulting conclusion of no significant effect therefore rests heavily on qualitative judgement, historic monitoring and predicted future improvement rather than quantified concentrations at the affected receptors.

Taken together, these matters materially reduce the weight that can safely be placed on Table 13.14 and the conclusion that all assessed construction and decommissioning air-quality effects are ‘not significant’. The evidence does not establish that significant effects will necessarily occur; it does establish that the Applicant has not yet provided the receptor-specific evidence necessary to exclude them with the confidence claimed.

13.12 Remedies Sought

BEPS requests that the Examining Authority require the Applicant to provide sufficient additional information during the Examination to resolve the evidential deficiencies identified above.

In particular, the Applicant should be required to provide a receptor-based air-quality assessment founded on a representative current baseline for the rural Scheme area. That should either include proportionate monitoring at representative rural receptors or provide a clear technical justification, supported by validation evidence, for why the DEFRA background mapping alone is sufficient. Historic Long Stratton monitoring should be distinguished explicitly from the conditions at the rural project sites and, where Long Stratton data continue to be relied upon, pre- and post-bypass conditions should be separated.

The Applicant should undertake quantitative dispersion modelling on the road links where its own cumulative EPUK/IAQM screening criteria are exceeded and report predicted NO2, PM10 and PM2.5 concentrations at appropriate human receptors. It should also identify transparently the developments, construction programmes and routing assumptions producing the cumulative traffic figures, including the 739 additional HDV AADT attributed to committed development on the A140, and demonstrate that all relevant overlapping projects and final construction routes have been captured.

For construction dust and PM2.5, the Applicant should demonstrate that the controls relied upon to reduce the acknowledged ‘high risk’ dust pathway to a

not-significant effect are specific and enforceable. The secured framework should identify appropriate monitoring locations, pollutants to be monitored, trigger levels, action thresholds, controls during prolonged dry or windy conditions, trackout and haul-road measures, responsibility for intervention and the mechanism by which compliance will be enforced.

The Applicant should also demonstrate expressly how each condition attached to the Inspectorate's air-quality scope-outs has been discharged. This should include the required information on NRMM type, number, location and operating hours; the basis for scoping operational replacement activity out; and the measures by which decommissioning effects are constrained within a clearly defined worst-case envelope. PINS's Scoping Opinion required these matters to be justified by evidence and, where mitigation is relied upon, to be clearly secured.

The backup diesel generator requires particular resolution. PINS agreed to scope operational combustion emissions out on the factual basis then presented that no combustion plant was proposed. The final Scheme now includes provision for a diesel generator of up to 500 kVA whose specification and emissions remain undefined. The Applicant should either specify and assess the proposed generator during the Examination or undertake a robust worst-case assessment against parameters secured through the DCO. Assessment of an undefined emissions source should not simply be deferred until after consent.

Pending that information, BEPS asks the Examining Authority to give limited weight to Chapter 13's conclusion that all residual air-quality effects are negligible or not significant. The Applicant should be required to demonstrate that conclusion through representative baseline evidence and receptor-specific assessment, rather than through screening assumptions and post-consent controls alone.

Chapter 14: Socio-Economics

14.1 Executive summary

The Applicant’s socio-economic case is materially overstated. Chapter 14 counts employment, skills and supply-chain activity as benefits, but does not demonstrate that those benefits will be local, genuinely additional, deliverable or secured. At the same time, it understates foreseeable adverse effects on tourism, temporary accommodation, the private rented sector, local businesses, agriculture, community wellbeing and cumulative labour-market capacity.

The employment case rests on headline workforce figures rather than a robust assessment of net local benefit. The Applicant forecasts an average construction workforce of 278 workers per day, a peak of approximately 720 workers and about 360 ‘net direct’ jobs after applying a 50% displacement rate. Yet the evidence does not adequately explain the basis for that displacement assumption, how leakage has been treated, how many jobs would be filled by South Norfolk residents, or how many would simply be taken by an existing mobile construction workforce.

The labour-market geography is also poorly defined. Chapter 14 uses administrative study areas extending from the Order Limits to South Norfolk, Norfolk, Suffolk, the East of England and England, but does not identify a functional labour market by occupation, phase or travel-to-work behaviour. Suffolk County Council states that Suffolk is included formally but not analysed substantively, and that the assessment does not demonstrate how cross-boundary workforce effects or benefits would arise.

Leakage, displacement and additionality are acknowledged as difficult to quantify, but that uncertainty is not reflected in the weight assigned to the claimed benefits. Chapter 14 accepts that wider socio-economic effects require professional judgment because local evidence is limited, yet still attributes major and moderate beneficial effects to employment and skills. Suffolk County Council considers those conclusions unjustified because they derive largely from gross employment estimates rather than a realistic assessment of net additional benefit or delivery.

The workforce and accommodation case is similarly weak. The Applicant estimates that only around 120 workers may require temporary accommodation, but does not provide a sufficiently detailed breakdown of worker origin, duration of stay, rotation, accommodation type or seasonal demand. Mid Suffolk District Council and Suffolk County Council both identify the risk of pressure on tourism accommodation, private rented housing and affordability, particularly when other major projects are drawing on the same regional stock.

Cumulative effects are underassessed. The Applicant tends to aggregate employment generated by multiple projects as a cumulative benefit, without adequately assessing competition for skilled labour, wage inflation, displacement, training-capacity constraints, accommodation demand and delivery risk. Suffolk County Council identifies Sizewell C and other major infrastructure projects as material competing demands on the same finite regional workforce.

The Outline Employment, Skills and Supply Chain Strategy is generic and weakly secured. It does not contain binding local employment targets, quantified apprenticeship commitments, enforceable local supply-chain expenditure, clear governance arrangements or meaningful consequences for underperformance. Both Suffolk County Council and South Norfolk Council seek stronger authority involvement in the detailed strategy and its discharge.

Tourism is assessed too narrowly. Chapter 14 identifies tourism employment, nearby attractions and accommodation capacity, but does not adequately assess the economic consequences of landscape industrialisation, construction traffic, loss of tranquillity, disruption to rights of way, reduced visitor appeal or displacement of tourist accommodation by workers.

Other adverse socio-economic effects are fragmented across the ES. Agricultural business impacts sit in the soils chapter; business-access effects sit in transport; mental wellbeing and attachment to place sit in health and equality documents; and effects on recreation and tranquillity sit in landscape and PRoW assessments. The result is that the Applicant counts benefits in Chapter 14 while dispersing the corresponding local costs across other chapters.

The claimed benefits are therefore uncertain, while many of the harms are immediate and concentrated. They fall on local residents, farmers, tourism businesses, tenants and small firms, while much of the claimed employment and supply-chain activity may accrue outside South Norfolk.

Chapter 14 does not provide a sound evidential basis for assigning substantial weight to the claimed socio-economic benefits. Those benefits should be treated as uncertain unless the Applicant provides detailed workforce, skills, accommodation and delivery evidence and secures measurable outcomes through enforceable DCO Requirements.

14.1.1 Updated policy and scoping context

The Energy National Policy Statements remain the primary policy framework for this NSIP. The August 2026 National Planning Policy Framework is nevertheless a relevant material consideration and gives additional weight to several of the issues raised in this chapter.

The current NPPF supports sustainable economic growth in both urban and rural areas and expressly recognises the importance of agriculture, other rural and land-based businesses, leisure and tourism to local economic resilience. Policy E4 supports the sustainable growth and diversification of rural businesses, facilities supporting rural leisure and tourism, accessible local shops and services, and development which maintains and enhances farm viability and domestic food production.

The socio-economic assessment is also subject to an important project-specific scoping history. The Applicant originally proposed to scope socio-economic effects out on the basis that predicted positive and adverse effects would either be insignificant or addressed elsewhere in the ES. The Planning Inspectorate expressly rejected that approach because insufficient baseline evidence had been provided to rule out significant socio-economic effects and required a standalone socio-economic assessment informed by relevant NSIP socio-economic guidance.

The relevant examination question is therefore not merely whether Chapter 14 now exists as a standalone chapter. It is whether it addresses, with sufficient evidence, the local employment, labour-supply, accommodation, tourism, rural-business and community effects which caused the Inspectorate to require that standalone assessment in the first place.

14.2 Scope of Chapter 14 is too narrow

14.2.1 Socio-economic effects are reduced to four topics

Chapter 14 limits its assessment to four principal matters: employment; education, skills and training; temporary worker accommodation; and tourism. That scope is too narrow for a 1,212-hectare, landscape-scale project with a proposed operational life of 60 years.

The assessment does not bring within its socio-economic framework the effects on agricultural businesses and the rural economy. Norfolk County Council identifies the loss of high-quality agricultural land as a strategic concern not only for food production but for the wider farming community. Yet Chapter 14 does not assess farm-business restructuring, tenancy effects, agricultural employment, local contractors, machinery services or the economic activity displaced from productive land.

Nor does it assess disruption to local firms arising from road closures, abnormal-load movements, construction traffic, access restrictions, dust or noise. South Norfolk Council expressly identifies cumulative economic consequences for local businesses and tourism from overlapping infrastructure construction. These are socio-economic effects, not merely transport or amenity matters.

Housing-market effects are also inadequately addressed. Mid Suffolk District Council identifies the risk that temporary workers may compete for private rented properties, reduce availability for local households and worsen affordability. Chapter 14 focuses on hotel, B&B and short-term-let capacity but does not assess whether landlords may switch stock from ordinary residential use, whether rents may rise, or whether lower-income households may be displaced.

The treatment of business effects is similarly incomplete. Home-based businesses, equestrian enterprises, farms, tourism accommodation, cafés and other rural enterprises may be affected by construction disruption, reduced visitor confidence, noise, landscape change or access constraints. Chapter 14 does not identify them as a discrete receptor group or assess their vulnerability.

The chapter also omits a proper assessment of community cohesion, public-service demand, wellbeing and attachment to place. Norfolk County Council records concern about long-term mental-health effects, anxiety, perceived safety, community disruption and fears about housing and business values, particularly for elderly and vulnerable residents. Those effects have clear socio-economic dimensions but are not integrated into Chapter 14.

Most importantly, the Applicant does not assess who receives the benefits and who bears the harms. Mobile construction workers and national contractors may capture the employment and supply-chain benefits, while local residents,

farmers, tenants and small businesses bear the adverse effects. A socio-economic assessment that does not address that distribution is incomplete.

The Scoping Opinion is important in this respect. PINS did not require a standalone socio-economic chapter merely so that four selected topics could be re-presented in one place. It did so because the available baseline was insufficient to exclude significant socio-economic effects. The final assessment should therefore demonstrate that the relevant economic and population receptors have actually been identified and assessed rather than relying upon other ES chapters to fragment effects which are experienced cumulatively by the same businesses and communities.

14.2.2 Cross-chapter effects are not brought together

The Applicant places relevant socio-economic consequences across separate ES chapters on transport, landscape, agriculture, health, recreation and equality. That may be administratively convenient, but it prevents a coherent assessment of the combined economic and social effect of the Scheme.

For example, construction traffic may cause delay, road closures and loss of customer access; landscape change may reduce visitor appeal; loss of tranquillity may affect tourism accommodation; agricultural land take may alter farm viability; and cumulative construction may affect mental wellbeing and community confidence. Each effect may be discussed elsewhere, but Chapter 14 does not bring them together to assess their combined consequences for local businesses, households and the rural economy.

This matters because the Scheme's socio-economic effects will not occur in isolation. A B&B may experience construction noise, traffic disruption, landscape change and displaced visitor demand simultaneously. A farm business may face land take, altered access, workforce disruption and long-term restructuring. A village may experience pressure on housing, public services, roads and community cohesion at the same time.

The social and economic consequences of a landscape-scale energy project cannot be understood by counting jobs in Chapter 14 while leaving the costs to tourism, farming, housing, business access and community wellbeing elsewhere. The Applicant should provide an integrated cross-chapter socio-economic assessment rather than relying on fragmented topic-by-topic conclusions.

14.3 The employment case is gross, not net

BEPS does not dispute that construction of a project of this scale would generate substantial employment demand. The narrower issue is the extent to which that demand constitutes a local or additional socio-economic benefit rather than gross project employment which may be filled by workers already active elsewhere in the regional or national construction and energy sectors.

14.3.1 Headline job numbers are not the same as local benefit

The Applicant identifies an average construction workforce of approximately 278 workers per day, a peak workforce of around 720 and approximately 360 net direct jobs after applying a 50% displacement rate. Those figures are presented as evidence of substantial socio-economic benefit, but they do not establish a corresponding benefit to South Norfolk.

The basis for the 50% displacement assumption is not adequately demonstrated. Nor is it clear whether the resulting ‘net’ figure also accounts for leakage out of the local area, substitution between projects, deadweight or the use of workers already employed in the construction sector. Chapter 14 acknowledges that leakage and displacement are difficult to quantify and require professional judgment, but does not provide sufficient local evidence to justify the assumptions adopted.

The assessment also does not state with sufficient clarity how many workers would be resident in South Norfolk, how many would come from elsewhere in Norfolk or Suffolk, and how many would be drawn from the national mobile construction workforce. It does not identify the proportion of genuinely new entrants, unemployed residents, apprentices or workers displaced from other local employers.

These distinctions are critical. A worker temporarily reassigned from another infrastructure scheme is not a new local job. A contractor travelling into the district is not a local employment benefit merely because the work occurs within South Norfolk. A short-term role filled by an existing mobile worker does not demonstrate enduring economic improvement.

The Applicant should therefore disclose the derivation of the displacement rate, the leakage assumptions, the home-based and non-home-based workforce split, and the number of jobs expected to be genuinely additional to the local economy.

The distinction matters because gross job numbers do not identify displacement, leakage or the proportion of posts likely to be filled by residents of the study area. Nor do they establish that the Scheme creates equivalent long-term employment: the operational workforce is materially smaller than the temporary construction workforce.

14.3.2 Local benefit is likely to be limited

Suffolk County Council concludes that only a small proportion of the employment generated by the Scheme would be realised locally, with the majority supported outside the host and neighbouring areas. It considers that the Applicant has therefore overstated the magnitude and significance of the local beneficial effects.

That criticism is consistent with the Applicant’s own baseline. South Norfolk is a net exporter of labour, with 54% of employed residents travelling outside the district for work, while 57% of those working in South Norfolk live elsewhere.

These figures show a highly interconnected labour market, but they do not prove that East Pye jobs will be filled by local residents.

The construction sector already accounts for 17% of employment in the defined Local Area, substantially above the proportion in South Norfolk, Norfolk, Suffolk and England. That may indicate some local capacity, but it may equally mean the existing workforce is already fully engaged and vulnerable to displacement or wage competition. Chapter 14 does not test either possibility.

A job created by the Scheme is not automatically a benefit to South Norfolk. The available evidence does not demonstrate what proportion of the construction workforce can realistically be sourced locally, particularly for specialist HV, substation, BESS, cable-jointing and grid-infrastructure roles. The Applicant should therefore distinguish between total construction employment, jobs expected to be filled within South Norfolk or Norfolk, and specialist labour likely to be imported from the wider region or nationally. Cleve Hill's construction workforce were sourced from Greece. Chapter 14 does not answer those questions about local employment with sufficient precision.

14.3.3 Construction employment is short-lived

The Applicant expects the construction phase to last approximately 24 months. The headline peak of 720 workers will therefore be temporary and will not represent the typical workforce throughout the build period.

The assessment should clearly distinguish between the peak workforce, the average daily workforce, full-time-equivalent employment, local resident employment and wider regional or national supply-chain activity. These are different measures and should not be presented as interchangeable evidence of benefit.

The long-term operational employment case is substantially weaker than the construction case. Solar and BESS developments are relatively low-employment operations once built, and Chapter 14 does not establish that the operational phase will generate a significant number of durable local jobs.

The Applicant should therefore not present a brief construction peak as a durable transformation of the local economy. Temporary employment may carry some weight, but that weight must reflect its duration, geographical distribution, additionality and the extent to which it is secured. The planning balance should distinguish sharply between a two-year construction surge and lasting local economic benefit.

14.4 Labour-market geography is inadequately defined

14.4.1 No coherent functional labour market

Chapter 14 does not define a coherent functional labour market for the Scheme. It identifies a series of administrative study areas, but it does not establish where the construction workforce will actually come from, how far workers will travel, which occupations are locally available, or how labour sourcing will vary between construction, operation, maintenance and decommissioning.

Suffolk County Council identifies this as a material defect. It states that Suffolk is formally included within the assessment, but is not substantively analysed as a distinct or functional labour market. The assessment remains predominantly Norfolk-focused and does not provide robust cross-boundary workforce modelling, skills-capacity analysis or delivery mechanisms for Suffolk, despite the interconnected nature of the regional labour market.

That omission is serious because the Applicant's own baseline shows that South Norfolk is not a self-contained labour market. Only 46% of employed South Norfolk residents work within the district, while 54% commute elsewhere. Conversely, only 43% of those working in South Norfolk also live there, meaning that 57% of the district's workforce is imported from outside. Those figures demonstrate cross-boundary labour movement, but they do not establish that the Scheme can recruit the required workforce or that employment benefits will accrue locally.

The Applicant should therefore define the functional labour market by evidence, not administrative convenience. It should provide:

- workforce catchments for each project phase;
- travel-to-work assumptions;
- home-based and non-home-based worker splits;
- occupational and skills requirements;
- expected labour sourcing by district and county;
- the relationship between recruitment geography and accommodation demand;
- the proportion of jobs expected to be filled by existing workers, new entrants and trainees.

Until that work is done, the Applicant cannot reliably claim that the Scheme will deliver substantial local employment benefits.

14.4.2 The study areas are administratively convenient, not economically realistic

Chapter 14 uses the Order Limits, a collection of surrounding Lower Layer Super Output Areas, South Norfolk, Norfolk and Suffolk, the East of England and England as its study areas and comparators. Those areas provide baseline statistics, but they do not explain how the labour market will operate in practice.

Nested administrative boundaries are not a substitute for a functional economic geography. They do not show which workers possess the required qualifications, whether those workers are already employed, how far they are willing to travel, whether training providers can supply the required skills, or how concurrent infrastructure projects will affect labour availability.

Suffolk County Council states that the absence of defined workforce geographies prevents meaningful assessment of labour-market effects, infrastructure impacts and community interaction. It also prevents coordinated planning through the regional skills system.

The Applicant must therefore demonstrate the labour market through travel patterns, occupational supply, skills capacity, contractor recruitment practice

and competing project demand. Without that evidence, the study areas are descriptive only. They cannot support the conclusion that the claimed jobs are locally deliverable or that the regional labour market can absorb the Scheme without displacement or imported labour.

This uncertainty affects more than the claimed employment benefit. Workforce origin determines accommodation demand, commuting patterns, worker traffic, local expenditure and the extent to which economic benefit is retained within the local study area. The same assumption should therefore be used consistently across Chapters 11 and 14.

14.5 Skills benefits are asserted, not demonstrated

The August 2026 NPPF gives additional context to this issue through its objective of supporting business investment, employment and long-term economic growth while recognising the characteristics and needs of particular local economies.

BEPS does not suggest that national policy requires a fixed quota of local workers or apprenticeships for every NSIP. However, where the Applicant relies upon local employment, training and skills uplift as positive effects in the planning balance, the Examination should be able to identify what is actually committed, how delivery will be measured and what proportion of the claimed benefit is reasonably likely to occur.

14.5.1 No demand-led skills analysis

The Applicant claims beneficial effects through education, skills, training and supply-chain opportunities, but does not provide a sufficiently detailed demand-led assessment of the workforce required to deliver them. Chapter 14 identifies broad categories of employment and skills, but does not transparently define demand by occupation, qualification, project phase or duration.

Suffolk County Council states that the assessment does not provide the granular workforce modelling required to determine how many workers are needed, what skills they must possess, when those skills are required or for how long. It also notes the absence of a distinction between key construction roles and between home-based and non-home-based employment.

A meaningful skills assessment should identify:

- each principal occupational role;
- the qualifications and experience required;
- the number of workers required by phase;
- the timing and duration of demand;
- the number of apprenticeships and training places;
- the number of trainees expected to complete;
- the capacity of local further-education and training providers;
- the proportion of trainees likely to obtain employment on the Scheme or elsewhere.

Without that information, the claimed skills benefit is aspirational. The Applicant has not shown that the local training system can produce the required workforce, that local residents can access the opportunities, or that the training will lead to durable employment.

14.5.2 Existing skills constraints are not properly assessed

Chapter 14 classifies skills and the labour market as a high-sensitivity receptor. It relies on lower qualification levels in some comparator areas, labour-market mismatch and dependence on workers from outside the district.

That finding should trigger a rigorous capacity assessment. Instead, the Applicant treats the same labour market as capable of supplying the Scheme and generating major or moderate beneficial effects without properly assessing existing shortages, training constraints or competing demand.

Suffolk County Council states that the Applicant has not adequately assessed skills shortages, barriers to local labour participation, further-education capacity, apprenticeship pipelines or alignment with local skills strategies. It concludes that the sensitivity of the labour market and skills system is not robustly evidenced and that the Applicant has not demonstrated sufficient capacity to support the Scheme.

The contradiction is stark. A high-sensitivity labour market cannot simply be assumed capable of supplying a major infrastructure project. If the existing system is already constrained, the Scheme may intensify shortages, displace workers from other sectors, increase reliance on imported labour and create delivery risk.

The Applicant must therefore quantify existing and forecast skills gaps, identify available training capacity and demonstrate how those constraints will be overcome. Until then, the claimed skills benefit should be given little weight.

14.5.3 Training commitments are not enforceable

The Outline Employment, Skills and Supply Chain Strategy does not secure measurable outcomes. It describes broad intentions to promote employment, training, skills and supply-chain participation, but does not fix binding local employment targets, apprentice numbers, trainee places, completion rates or post-training employment outcomes.

Suffolk County Council identifies the absence of secured mitigation and delivery mechanisms as a major weakness. It states that there is no evidence that local employment, training or skills commitments are adequately secured through the DCO and that, without a detailed enforceable strategy, the claimed benefits remain uncertain.

A promise to prepare a later strategy is not evidence that benefits will occur. Unless commitments are quantified, monitored and enforceable, they remain discretionary and may be reduced after consent without consequence.

14.6 The Outline Employment, Skills and Supply Chain Strategy is insufficient

14.6.1 No quantified commitments

The Outline Employment, Skills and Supply Chain Strategy is too general to support the weight the Applicant places on socio-economic benefits. It does not clearly secure:

- local employment targets;
- apprenticeship numbers;
- training places;
- local or regional supply-chain expenditure;
- SME participation;
- reporting frequency;
- performance indicators;
- corrective action if targets are missed.

Suffolk County Council describes the Strategy as largely descriptive and insufficiently detailed to inform assessment of workforce, housing, accommodation, transport and public-service effects. It also states that supply-chain opportunities are identified but not quantified and that local business capacity has not been assessed.

Without quantified commitments, the Strategy cannot demonstrate either deliverability or additionality. It cannot establish how many local residents will benefit, how much expenditure will remain in the region, or whether smaller local businesses will gain access to contracts.

The detailed Strategy should therefore be required to include binding numerical targets, reporting duties and remedial measures. General statements of intent should carry no material weight.

14.6.2 No clear governance

The governance arrangements are also inadequate. Suffolk County Council seeks named consultation rights, participation in joint governance, agreed performance measures and a formal role in the preparation, implementation and monitoring of the detailed Strategy. It specifically requests that SCC be named as a consultee in the relevant DCO Requirement.

South Norfolk Council likewise requests that Norfolk County Council be consulted on the discharge of the Skills, Supply Chain and Employment Requirement.

Those requests are justified. The Strategy concerns cross-boundary labour markets, education provision, apprenticeships, supply-chain development and cumulative project demand. It cannot be left solely to the Applicant and a single host authority.

The DCO should name the relevant local authorities, regional skills bodies, further-education providers and economic-development partners as consultees.

It should require agreed monitoring arrangements, published performance data and review mechanisms throughout construction.

14.6.3 Benefits should not be given weight unless secured

The Applicant presents employment, skills and supply-chain outcomes as planning benefits, but the mechanism for delivering them remains outline and largely discretionary.

An outline strategy is not itself a benefit. Only commitments that are fixed in the DCO, measurable, monitored and enforceable should carry material weight in the planning balance.

Where the Applicant seeks positive weight for local jobs, apprenticeships or supply-chain expenditure, it must accept corresponding binding obligations. If it will not secure the outcomes, the decision-maker cannot assume they will occur.

The weight attributed to employment and skills benefits should reflect their degree of certainty. Aspirational measures may still be relevant, but they should not be given the same weight as quantified commitments secured through the DCO or another enforceable mechanism. If the Applicant relies materially upon apprenticeships, local procurement, training placements or supply-chain expenditure as Scheme benefits, the final strategy should identify measurable outputs, reporting arrangements and a delivery mechanism capable of being monitored.

14.7 Cumulative labour-market effects are materially underassessed

Cumulative labour demand is not necessarily an adverse effect. Several simultaneous infrastructure projects may increase employment and training opportunities. The corresponding issue is whether competition for the same specialist workforce could reduce the local share of employment, generate additional inward commuting, place greater pressure on temporary accommodation or create labour-supply constraints for other local employers.

The cumulative assessment should therefore consider both sides of the effect rather than counting the employment generated by each project as an additive benefit while ignoring competition for the same labour pool.

14.7.1 Multiple projects draw from the same finite workforce

The Scheme will not recruit in isolation. Norfolk and Suffolk are already subject to an exceptional concentration of major energy, transmission, road and construction projects drawing on the same regional and national labour pool.

Suffolk County Council identifies Sizewell C as a major existing demand that is not adequately reflected in the cumulative assessment. It also points to the wider interaction with other NSIPs and major infrastructure projects across Norfolk and Suffolk. Mid Suffolk District Council similarly requires the cumulative assessment to use up-to-date construction programmes, transparent overlap

assumptions and realistic modelling of labour, accommodation and socio-economic pressures.

The cumulative assessment should include, at minimum:

- Sizewell C;
- Norwich to Tilbury;
- Sea Link;
- other solar and BESS NSIPs;
- offshore wind projects and associated infrastructure;
- National Highways schemes;
- other major developments in Norfolk and Suffolk.

It should identify construction peaks, occupational overlap, recruitment geography, training demand and accommodation consequences. Without that work, the Applicant cannot establish that the workforce will be available or that the claimed benefits are deliverable.

14.7.2 Aggregating jobs is not cumulative assessment

The Applicant's cumulative case appears to treat employment generated by multiple projects as an additional beneficial effect. That approach is fundamentally incomplete.

Suffolk County Council states that the assessment aggregates employment outputs rather than assessing labour-market capacity. It does not adequately examine competition for skilled workers, displacement between projects, wage inflation, training constraints or delivery risk.

Multiple schemes do not create unlimited labour. They compete for the same electricians, engineers, plant operators, drivers, construction managers, environmental specialists, accommodation and training places. Where demand exceeds supply, the result may be imported labour, increased costs, delayed programmes and displacement from existing businesses.

A cumulative assessment must therefore ask whether the workforce exists and what happens when several projects require it at the same time. Simply adding job numbers together converts a potential constraint into a purported benefit and materially overstates the socio-economic case.

14.7.3 Scenario testing is required

The cumulative assessment should test a range of realistic labour-market scenarios rather than relying on a single professional-judgment outcome.

At minimum, it should model low, medium and high scenarios for:

- local labour availability;
- reliance on imported workers;
- construction-programme overlap;
- temporary accommodation demand;
- workforce displacement;
- wage pressure;

- training-provider capacity;
- delay and delivery risk.

Suffolk County Council expressly criticises the absence of scenario testing and workforce modelling. It notes that the Applicant has not tested alternative levels of home-based employment or quantified local versus non-local labour.

Without scenario testing, the assessment presents a favourable central case while concealing the consequences of reasonable worst-case overlap. That is not a robust basis for an EIA conclusion or for assigning substantial weight to claimed employment and skills benefits.

14.8 Temporary accommodation assessment is not robust

BEPS does not contend that the evidence establishes that the local housing market is incapable of accommodating the construction workforce. The present problem is that the Applicant has not demonstrated where the non-local component of that workforce is expected to stay, how large that component is likely to be, or whether seasonal accommodation availability has been tested against peak workforce demand.

14.8.1 The 120-worker assumption is inadequately evidenced

The Applicant estimates that approximately 120 workers may require temporary accommodation during construction. Suffolk County Council records that estimate but seeks a clear plan explaining where those workers would stay and how peak demand would be managed.

The figure is not sufficiently transparent. Chapter 14 does not clearly show how 120 was derived from a peak workforce of about 720, what proportion would be home-based, how many would rotate through the Scheme, how long they would remain, or how accommodation demand would vary across the construction programme.

The Applicant should provide:

- the evidential basis for the 120-worker figure;
- average and peak accommodation demand;
- seasonal variation;
- worker rotation assumptions;
- expected length of stay;
- accommodation type;
- geographic distribution;
- interaction with other projects drawing on the same stock.

Without that information, the accommodation assessment is no more than an unsupported central estimate.

14.8.2 Headline room availability is misleading

Chapter 14 identifies 596 hotel and similar rooms in South Norfolk, with an estimated 129 rooms unoccupied on average over a 12-month period, together with approximately 557 active Airbnb listings. Those figures create a superficial appearance of spare capacity, but they do not demonstrate that the capacity is available to the Scheme when needed.

District-wide room numbers do not in themselves establish practical availability. The relevant questions include seasonal occupancy, geographic distribution, length-of-stay restrictions, suitability for long-stay contractors, competition with tourism demand, commuting distance to dispersed compounds and the extent to which private rental accommodation would also be used. The assessment does not establish whether those rooms are:

- available during peak tourism periods;
- affordable for prolonged workforce use;
- within a reasonable journey of the works;
- suitable for long stays;
- already relied upon by other projects;
- genuinely interchangeable with visitor accommodation.

An annual average occupancy figure is especially weak in a seasonal market. Capacity available in winter cannot simply be assumed available during summer construction peaks. Nor can every Airbnb listing be treated as stable workforce accommodation: listings fluctuate, may be unavailable for long stays and may already serve tourism demand.

Equally, local residents who oppose the scheme may not wish to rent their accommodation to its workforce. There is no obligation for them to do so. And it is quite likely that they will decide not to.

The headline stock figures therefore overstate practical capacity and understate the risk of displacement.

14.8.3 Private rental effects are omitted or understated

Mid Suffolk District Council identifies a broader risk that temporary workers may compete for private rented homes, reduce access for local households and worsen affordability. It also raises concerns about social integration and cumulative pressure from other NSIPs.

Chapter 14 does not adequately assess:

- rental displacement;
- rent inflation;
- landlords switching from ordinary residential tenancies to short-term workforce use;
- effects on lower-income households;
- reduced availability for local residents;
- additional pressure on local services.

This omission is material. Workers who cannot access hotels or short-term lets do not disappear; they may enter the private rented sector. The Applicant should therefore assess housing-market effects directly rather than treating accommodation as a tourism-room arithmetic exercise.

The accommodation assumption is inseparable from worker transport. A workforce housed principally in Norwich, Diss or other larger settlements would generate a different route pattern from workers staying close to the Scheme. Chapter 14 should therefore identify accommodation assumptions sufficiently clearly for Chapter 11's worker-traffic distribution to be tested against them.

14.9 Tourism assessment is too narrow

Current national policy expressly recognises rural leisure and tourism as part of the rural economy. NPPF Policy E4 supports facilities for rural leisure and tourism and the retention and expansion of accessible local shops and services.

The relevant issue at East Pye is therefore not simply the total number of tourists visiting South Norfolk. It is whether businesses whose product depends upon rural character, tranquillity, landscape quality, recreation or visitor accommodation are affected disproportionately by the construction and operation of the Scheme.

14.9.1 Counting attractions is not a tourism impact assessment

Chapter 14 lists nearby attractions, campsites, museums, the gliding club, Seething Observatory, Red House Farm Bed and Breakfast and other tourism assets. It also presents tourism employment and visitor expenditure data.

That is baseline description, not a full tourism impact assessment. The Applicant does not adequately assess:

- visitor perception;
- loss of tranquillity;
- change in rural character;
- repeat bookings;
- outdoor recreation;
- walking and cycling;
- dark-skies value;
- cumulative industrialisation;
- construction traffic, road closures and disruption.

Tourism in rural South Norfolk depends not only on formal attractions but on the experience of place. A visitor may choose accommodation because of quiet, views, walking routes and landscape character. Those qualities can be degraded even where no attraction closes.

The Applicant has not provided sufficiently localised evidence demonstrating why tourism businesses close to the Scheme, construction routes or materially altered landscapes would experience no significant economic effect. The Applicant's tourism conclusions are therefore too narrow and too dependent on whether a named attraction remains physically accessible.

14.9.2 Small businesses may be highly sensitive

The local tourism sector includes B&Bs, holiday lets, campsites, cafés, museums and recreation-based businesses whose viability may depend on landscape quality, quiet and ease of access. Chapter 14 classifies tourism as a medium-sensitivity receptor at sector level.

That aggregate classification may conceal severe effects on individual businesses. A small B&B or campsite may be highly vulnerable to reduced bookings, construction disturbance or loss of visitor appeal, even where the wider district tourism economy absorbs the change.

A small local tourism sector may be numerically modest but economically fragile. Low aggregate employment does not mean low sensitivity for individual businesses.

The Applicant should therefore assess individual tourism businesses where exposure is foreseeable, rather than relying only on district-wide percentages.

14.9.3 Tourism accommodation may be displaced by workers

Suffolk County Council and Mid Suffolk District Council both identify potential conflict between temporary workforce accommodation and visitor accommodation.

If rooms and holiday lets are occupied by construction workers, tourism capacity may fall precisely when visitors would otherwise use it. That may reduce visitor spending elsewhere in the local economy and affect businesses that depend on accommodation-led demand.

The Applicant should provide a Tourism Accommodation Protection and Monitoring Plan covering seasonal capacity, worker demand, cumulative project demand, occupancy monitoring and corrective action where visitor capacity is materially displaced.

14.10 Local businesses are not adequately assessed

Policy E4 now expressly recognises agricultural, land-based, rural leisure and tourism businesses as components of the rural economy which planning policy seeks to support. This increases the importance of identifying businesses whose economic activity is tied directly to the landscape, road network or agricultural function affected by East Pye rather than treating the local economy principally through district-wide employment statistics.

14.10.1 Construction disruption

South Norfolk Council identifies cumulative economic consequences for local businesses and tourism from overlapping construction programmes and calls for coordinated traffic and phasing measures.

Chapter 14 does not adequately assess the business effects of:

- road closures;
- abnormal indivisible load movements;
- access restrictions;
- delivery delays;
- reduced passing trade;
- noise and dust;
- loss of visitor confidence.

These are not merely transport effects. They can directly affect turnover, staffing, customer access and business continuity. The Applicant should identify businesses exposed to construction routes and works and assess the economic consequences, not simply the traffic change.

14.10.2 Home-based businesses

The affected area contains businesses operating from homes and rural premises, including tourism, equestrian, agricultural, professional and educational uses. These may be especially sensitive because the business and residential receptor are the same place.

Chapter 14 does not provide a business receptor schedule or identify which home-based enterprises may be affected by noise, traffic, visual change, access disruption or loss of amenity.

The Applicant should identify all foreseeable business receptors and undertake business-specific assessment where impacts are plausible. Without that work, the claim of negligible or minor local business effects is unsupported.

Several businesses have asked to be included as category 3 persons due to specific noise and disruption effects stated in the application, yet have not been included.

14.10.3 No compensation or business support framework

Norfolk County Council calls for compensation for affected households, communities and businesses and for a Community Benefit Fund.

Those are different matters. A voluntary community benefit fund cannot substitute for compensation where a business suffers demonstrable loss because of construction or operation.

The Applicant should provide a business-support and compensation framework covering access disruption, verified loss, emergency mitigation and claims handling. Any community fund must be additional, not treated as a cure for unmitigated harm.

14.11 Agricultural and rural economic effects are fragmented

The August 2026 NPPF also expressly supports development which maintains and enhances farm viability and sustainability and supports domestic food production.

Chapter 14 should therefore be read together with Chapter 15. The socio-economic effect of agricultural land conversion is not exhausted by the number of directly displaced agricultural jobs. It may include changes to individual farm-business structure, contracting, agricultural supply chains, diversification and the productive use of land over the 60-year operational period.

14.11.1 Agricultural land is an economic asset

The Scheme occupies approximately 1,212 hectares, with Norfolk County Council recording that 68.4% of the land is best and most versatile agricultural land. NCC links that loss to food production, farming communities and cumulative effects on the wider agricultural economy.

Agricultural land is not merely an environmental receptor. It supports farm businesses, tenants, contractors, machinery suppliers, hauliers, agronomists and local service activity. Removing land from production for up to 60 years has economic consequences even where the land may theoretically return to agriculture later.

14.11.2 Chapter 14 does not integrate agricultural loss

Chapter 14 does not adequately assess:

- farm business restructuring;
- contractor impacts;
- tenancy consequences;
- local agricultural employment;
- machinery and service businesses;
- supply-chain effects;
- long-term loss of productive capacity.

Those effects are fragmented into the soils and agricultural land chapter and are not brought back into the socio-economic balance.

The omission produces an obvious asymmetry: the Applicant counts construction jobs created by the Scheme but does not properly count the economic activity displaced from the land. That is not a complete socio-economic assessment.

14.12 Community wellbeing and distributional effects

14.12.1 Benefits and harms fall on different groups

The claimed employment and supply-chain benefits may accrue largely to mobile workers, specialist contractors and national firms. The harms are more concentrated: residents experience construction disruption; farmers lose productive use; tenants face housing pressure; tourism businesses face reduced visitor appeal; and local firms bear access and traffic impacts.

Chapter 14 does not expressly assess that distribution. It treats benefits and harms as aggregate effects, obscuring who gains and who loses.

A proper socio-economic assessment should identify the affected groups, the scale and duration of effects, and whether the benefits compensate the same communities that bear the burdens. In this case, they may not.

BEPS does not rely upon generalised assertions that community opposition itself constitutes a socio-economic harm. The relevant concern is distributional: many claimed benefits, including renewable generation and some employment expenditure, arise at regional or national level, while construction disturbance, landscape change, route disruption and effects on individual rural businesses are concentrated within a relatively small number of communities.

That distribution does not determine the planning balance by itself, but it should be described accurately rather than presenting gross regional benefits and highly localised adverse effects as though they accrue to the same population.

14.12.2 Vulnerable communities

Norfolk County Council identifies concern about long-term mental-health effects, attachment to place, fears about safety, housing and business values, and impacts on elderly and vulnerable populations.

Those are not only health effects. They become socio-economic where they affect household stability, business confidence, community cohesion, property decisions and willingness to remain in the area.

The Applicant should therefore integrate these effects into Chapter 14 rather than leaving them isolated in health or equality documents.

14.12.3 Community benefit is absent or undefined

NCC seeks a Community Benefit Fund. The application does not presently define one with sufficient clarity.

Any fund should be:

- additional to mitigation and compensation;
- transparent;
- independently governed;
- targeted at affected communities;

- subject to published criteria and reporting.

It must not be used to offset planning harm that should first be avoided or mitigated.

14.13 The assessment relies too heavily on professional judgment

Chapter 14 acknowledges that there is no solar-specific socio-economic methodology and that leakage and displacement are difficult to quantify. It therefore relies materially on professional judgment.

Professional judgment is an ordinary and legitimate component of socio-economic EIA. The difficulty arises where the judgment cannot be traced to sufficiently localised baseline evidence or where the assumptions determining magnitude—such as workforce origin, accommodation availability or tourism sensitivity—remain uncertain.

Where the methodology is judgment-led and the benefits are uncertain, the Applicant must provide more evidence, not less. Uncertainty should not be converted automatically into beneficial significance.

The assessment should disclose:

- all material assumptions;
- the basis for leakage and displacement rates;
- sensitivity testing;
- confidence ranges;
- alternative scenarios;
- independent review;
- the consequences of uncertainty for significance.

Without that, the conclusions are not reproducible and should be given limited weight.

14.14 Significance judgments are applicant-friendly

14.14.1 Receptor sensitivity may be understated

Chapter 14 classifies temporary accommodation as low sensitivity and tourism as medium sensitivity. Those judgments may understate real vulnerability.

Seasonal accommodation constraints may justify a higher sensitivity at peak periods. Individual tourism businesses may be far more vulnerable than district-wide data suggests. Housing affordability and private rental access should be treated as a separate receptor rather than folded into accommodation supply. Farming and rural business should also be assessed independently.

The present classifications smooth over local fragility by relying on broad sector averages.

14.14.2 Beneficial effects are given more confidence than adverse effects

The assessment gives substantial positive weight to uncertain employment, skills and training benefits, while treating tourism, accommodation and business effects as minor or negligible despite acknowledged uncertainty.

That asymmetry is not defensible. The Applicant applies optimism to benefits and caution to harms. Where both depend on uncertain assumptions, both should be tested with equal rigour.

The result is an applicant-friendly significance framework that inflates the positive case and suppresses the adverse one. Until the imbalance is corrected, the Chapter 14 conclusions should carry limited weight.

14.15 Cumulative accommodation, tourism and community effects

The cumulative socio-economic assessment is materially incomplete. East Pye will not be constructed in isolation. Mid Suffolk District Council identifies the need for active cross-project coordination to manage overlapping labour demand, temporary accommodation pressure and wider community effects. It warns that concurrent NSIPs may place pressure on tourism accommodation, private rented housing, affordability and the social integration of temporary workforces.

South Norfolk Council likewise identifies cumulative economic consequences for local businesses and tourism arising from overlapping construction programmes, prolonged disruption, abnormal-load movements and road works. It calls for construction phasing and traffic management to be coordinated across projects to minimise harm to residents and businesses.

Suffolk County Council identifies the overlap with Sizewell C, Norwich to Tilbury, Sea Link and other major energy projects as a material omission from the Applicant’s assessment. It criticises the failure to assess cumulative competition for labour, training capacity, accommodation and transport, and notes that the same finite regional workforce and visitor accommodation stock will be drawn upon by several projects at once.

The Applicant’s present approach is too narrow because it treats cumulative employment largely as an additional benefit rather than testing the adverse consequences of simultaneous demand. A proper assessment must examine:

- worker accommodation demand;
- private rented housing pressure;
- displacement of tourists from hotels, B&Bs and short-term lets;
- additional pressure on local services;
- cumulative road disruption and access constraints;
- effects on business confidence and visitor demand;
- competition for labour and training places;
- community integration and cohesion.

These effects are interconnected. Imported workers may increase accommodation and rental demand; reduced tourism capacity may affect local

spending; road disruption may damage business access; and cumulative construction may undermine community confidence and wellbeing. The Applicant has not assessed that combined pathway with sufficient realism.

Cumulative assessment should therefore consider whether overlapping infrastructure projects compete for the same temporary accommodation, specialist labour and road capacity, and whether repeated or simultaneous construction affects rural tourism and other landscape-dependent businesses. The assessment should avoid counting cumulative employment demand as wholly beneficial while separately assuming that accommodation, tourism and local services have sufficient spare capacity.

The cumulative assessment must therefore be rebuilt around actual project overlap, workforce demand, accommodation capacity and local vulnerability. Without that work, the conclusion that cumulative socio-economic effects are beneficial or not significant is not reliable.

14.16 Monitoring and adaptive management are absent or weak

The Applicant relies heavily on future strategies and management plans, but does not provide a sufficiently robust monitoring and corrective-action framework. The Outline Employment, Skills and Supply Chain Strategy does not establish binding performance indicators, transparent reporting requirements or clear consequences where claimed benefits are not delivered. Suffolk County Council expressly identifies the absence of agreed governance, monitoring and performance measures as a major weakness.

A meaningful monitoring framework should record, at minimum:

- local employment achieved;
- workforce origin;
- apprentice and trainee numbers;
- completion and employment outcomes;
- local and regional supply-chain expenditure;
- SME participation;
- workforce accommodation use;
- pressure on the private rented sector;
- tourism occupancy and displacement;
- complaints and losses reported by local businesses;
- cumulative labour, housing and training pressures.

Where the Applicant relies upon employment, accommodation or worker-spending assumptions that cannot be fixed precisely before construction, proportionate monitoring should be used to verify them. Relevant indicators could include workforce origin, local employment, apprenticeship delivery, local procurement, worker accommodation location and modes of travel.

Monitoring is particularly important where the Applicant seeks positive weight for local benefits. It should demonstrate whether those benefits are actually being delivered rather than merely record adverse effects after they occur.

Monitoring must not be confined to recording activity. It must include trigger levels and remedial action. If local employment falls below target, training delivery fails, tourism capacity is materially displaced, rental pressure increases or business disruption exceeds forecast levels, the Applicant should be required to implement corrective measures.

Those measures should include revised recruitment and training programmes, alternative accommodation arrangements, additional business-support measures, coordinated action with other NSIPs and, where appropriate, compensation for demonstrable loss.

The monitoring regime should be independently reviewable, reported publicly and overseen by the relevant local authorities and regional skills bodies. Without that structure, the claimed benefits remain aspirational and the adverse effects may emerge without any enforceable response.

14.17 Overall conclusion

Chapter 14 was included because the Planning Inspectorate expressly rejected the Applicant’s original proposal to scope socio-economic effects out. PINS considered that the available baseline was insufficient to exclude significant socio-economic effects and required a standalone assessment. Pins scoping response

The final chapter provides considerably more information than the Scoping Report, but important uncertainties remain in the matters which determine the scale and distribution of both the claimed benefits and potential adverse effects.

The construction employment case is presented principally in gross terms and does not establish what proportion of jobs, expenditure or skills benefit will be retained locally. Workforce origin remains insufficiently defined, which in turn affects the accommodation and transport assessments. The employment and skills strategy remains substantially outline and therefore provides limited certainty about the apprenticeships, local procurement and training benefits upon which positive weight may be placed.

The temporary-accommodation assessment relies heavily upon aggregate availability and does not demonstrate how peak workforce demand would interact with seasonal tourism, private rental accommodation or commuting from larger settlements. Tourism and local-business effects are assessed at a scale which risks obscuring individual rural enterprises whose economic value depends directly upon landscape character, tranquillity, access or agricultural activity.

The August 2026 NPPF reinforces the relevance of those receptors by expressly supporting rural business growth, agricultural and land-based businesses, rural leisure and tourism, farm viability and domestic food production.

BEPS does not submit that the evidence demonstrates a significant adverse socio-economic effect in every one of these categories. The narrower conclusion is that the evidence does not justify treating the positive employment and skills effects as certain while treating potentially adverse local effects as negligible on the basis of less-developed assumptions.

The weight afforded to the Scheme's socio-economic benefits should therefore reflect the extent to which they are quantified, additional, local and secured. Correspondingly, the Applicant should provide sufficient localised evidence to demonstrate that construction labour demand, accommodation use, tourism effects and impacts upon rural businesses have been adequately characterised before the ExA reaches its conclusions.

Chapter 14 therefore materially overstates uncertain socio-economic benefits and understates concentrated local harms. Its beneficial conclusions should carry limited weight unless the Applicant provides a detailed, demand-led and cumulative assessment and secures measurable outcomes through the DCO.

14.18 Remedies sought

BEPS requests that the Applicant:

- distinguish gross construction employment from additional and locally retained employment;
- identify the assumed geographic origin and occupational composition of the construction workforce;
- explain how those workforce assumptions have been reconciled with Chapter 11 worker-traffic forecasts;
- provide measurable commitments, monitoring and reporting for any employment, apprenticeship, skills or local-supply-chain benefits relied upon in the planning balance;
- provide a peak-period accommodation assessment reflecting the likely non-local workforce, seasonal occupancy and realistic commuting distances;
- assess the interaction between construction-worker accommodation demand and rural tourism accommodation;
- identify rural businesses particularly dependent upon landscape character, tranquillity, visitor access, agriculture or affected construction routes and demonstrate how material effects upon them have been assessed;
- reconcile the socio-economic assessment of agriculture and farm businesses with Chapter 15;
- assess cumulative competition for labour, accommodation and tourism capacity from relevant overlapping infrastructure projects; and
- secure proportionate monitoring of workforce origin, local employment, skills delivery, accommodation and local procurement where those matters are relied upon as Scheme benefits.

If those matters remain unresolved, the ExA should apply correspondingly reduced weight to the Applicant's claimed local employment, skills and supply-chain benefits and should not assume that potentially adverse effects on accommodation, tourism and rural businesses are negligible.

That work should include realistic low, medium and high scenarios and identify the consequences of overlapping construction with other NSIPs.

Secured delivery

A detailed Employment, Skills and Supply Chain Plan should be secured through the DCO. It should contain:

- binding local employment targets;
- quantified apprenticeship and training commitments;
- local and regional supply-chain expenditure targets;
- SME participation measures;
- named local authority and regional skills consultees;
- public monitoring and reporting;
- corrective action where targets are missed.

Only outcomes secured in this way should carry material weight in the planning balance.

Accommodation and business mitigation

The DCO should also require:

- a Workforce Accommodation Management Plan;
- protection of tourism accommodation capacity;
- monitoring of private-rental effects;
- business access and continuity measures;
- a transparent compensation mechanism for demonstrable business loss;
- coordinated workforce and accommodation planning with other NSIPs.

The accommodation plan should address seasonal demand, worker rotation, geographic distribution, cumulative project pressure and the risk of displacement from both tourism and residential housing.

Decision consequence

The Examining Authority should give limited weight to the claimed socio-economic benefits unless they are evidenced, additional, locally deliverable and secured. Consent should not be granted on the basis of headline job figures while foreseeable adverse effects on housing, tourism, local businesses, agriculture and community wellbeing remain unresolved.

Chapter 15: Soils and Agriculture

Introduction

Introduction

Chapter 15 does not demonstrate that East Pye Solar can occupy, traffic, trench, industrialise and later restore this agricultural landscape without lasting harm. Its conclusions depend on an incomplete baseline, a methodology which automatically treats any assertedly reversible effect as low magnitude, and repeated assumptions that future management will prevent damage which has not yet been measured or designed out.

The Scheme is concentrated on high-quality land. The surveyed Sites 1–10 and BESS area contain 397.4 ha of Grade 2 and 431.7 ha of Grade 3a land: 829.1 ha of surveyed BMV land. Works No. 1 alone contains 470 ha of BMV land. Yet 158.9 ha of the Cable Route Corridor (‘CRC’) remains unsurveyed, together with other smaller areas. The Applicant nevertheless presents a scheme-wide BMV percentage and assumes that all CRC land will be restored to comparable grade. That is not an assessment; it is the conclusion assumed in advance. (APP/6.1.15, Tables 15.6–15.7; §§15.4.1–15.5.7)

Natural England identifies soils and BMV land as an amber issue. It requires full ALC coverage of the CRC, clarification and avoidance of peat, reconsideration of permanent infrastructure on BMV land and a more detailed Soil Resource and Management Plan. It expressly warns that cable installation, temporary tracks and compounds can cause permanent land-quality change. Norfolk County Council objects to the scale and cumulative loss of high-quality agricultural land and records a worst-case permanent BMV loss of 28.9 ha, rising to 37.9 ha when BMV mitigation planting is included. South Norfolk Council identifies permanent and temporary loss of productive farmland as a substantial harm. These are not matters safely deferred to post-consent management.

The Chapter should therefore be given limited weight. Its significant adverse worst-case finding is real; its benign ‘likely’ case is not demonstrated.

15.1 Impact of solar infrastructure on soil quality

Recent peer-reviewed UK field evidence challenges the assumption that ground-mounted solar on agricultural land is soil-neutral or readily reversible. A multi-site study of operational solar farms in England and Wales (Carvalho et al., 2025, *Environmental Research Letters*) found statistically significant and consistent changes in soil condition beneath panels within the first decade of operation. Mean soil bulk density (a direct indicator of compaction) was 14–15% higher beneath panels than in adjacent gap or pasture areas, indicating structural compression associated with construction trafficking, access and ongoing disturbance. Soil organic carbon concentrations were approximately 9% lower beneath panels, and particulate organic matter—critical to aggregation, pore formation and resilience—was reduced by around 29%. The study links these changes to reduced plant biomass, altered soil moisture dynamics, and impaired structural development under panel cover.

These findings are materially more serious on **heavy clay BMV soils** such as those prevalent across the South Norfolk Claylands. In clay soils, increased bulk density and loss of particulate organic fractions constrain macroporosity, impair drainage, restrict root penetration, and reduce the soil's capacity to recover after trafficking. Importantly, the studied sites were relatively young (0–10 years). The measured degradation therefore occurs **before** any mid-life repowering cycle and before decommissioning, meaning the Scheme's disturbance profile is likely to be cumulative rather than a single, 'one-off' disruption. In clay landscapes with high groundwater levels and hydrological connectivity to chalk aquifers and streams, compaction and loss of soil structural fractions also increase waterlogging and surface run-off risk, creating linked agricultural and water-environment consequences.

15.1.1 Avoiding the 'temporary use / condition will fix it' trap

Recent appeal decisions show a recurring approach in which BMV land is treated as not 'lost' if (i) the land remains in some agricultural use (typically grazing), (ii) 'the soil remains on the land,' and (iii) the development can be removed and returned to arable at end of life, secured by condition. East Pye must be distinguished from that template reasoning on the facts.

First, **heavy clay + high groundwater** means the principal harm is not topsoil removal but **whole-profile structural impairment** (smearing, pore collapse, reduced infiltration and drain failure) which may persist for decades and is not reliably reversed by routine subsoiling. Secondly, the Scheme lifecycle is not a single disturbance event followed by restoration: modern solar arrays commonly entail a major repowering phase around the 30-year point, re-mobilising heavy plant and re-disturbing soils and drainage, followed later by decommissioning. Thirdly, the Scheme includes **industrial nodes and linear infrastructure** (400kV substations, bunding, hardstanding, cable corridors, BESS platforms and haul roads) that require engineered formation levels, imported sub-bases, deep service corridors and long-term access constraints. In such circumstances, it is not safe to assume that 'soil remains' in its functional state or that return to BMV arable capability is 'reasonably and easily' achievable.

Accordingly, whether BMV capability can be reinstated is not a matter for assumption or deferral. It requires (i) parcel-specific baseline soil and ALC data, (ii) quantified performance benchmarks for restoration (bulk density, infiltration/drainage performance, organic matter recovery and yield capability), (iii) verification by post-restoration monitoring, and (iv) secured financial provision sufficient to deliver full-depth remediation where required. A condition requiring a future plan cannot substitute for missing baseline data, nor can it guarantee outcomes without measurable benchmarks and enforceable funding.

15.1.2 Agricultural sterilisation, soil structure loss and hydrological consequences

For the purposes of this Examination, **agricultural sterilisation** does not mean simply that panels occupy a proportion of a field. It means that land is rendered **functionally incapable of returning to viable, productive BMV agriculture within a reasonable timeframe** because the Scheme causes (alone or in combination):

- persistent whole-profile compaction and smearing of heavy clay subsoils;
- disruption or long-term impairment of underdrainage and soil moisture regimes;
- physical fragmentation and operational lock-in (loss of workable headlands, constrained turning, restrictions on deep cultivation and drainage repair, permanent access corridors and fenced exclusion zones); and
- long-term infrastructure and contamination constraints associated with substations, bunding, hardstanding, cable corridors and BESS platforms.

At East Pye, sterilisation risk arises not only from panel footprints but from the cumulative footprint of: driven piles across heavy clay BMV soils; continuous cable trenching and backfilled service corridors; construction compounds and internal haul roads; permanent access tracks and fencing; and industrialised infrastructure at Sites 1 and 5 (400kV substations, bunding, hardstanding, safety buffers and BESS). These elements affect the **functional whole** of field units: agricultural machinery access and drainage maintenance are constrained; deep remediation becomes impracticable; and the ability to reinstate arable rotations is progressively lost.

Sterilisation is therefore a **whole-system land capability** issue, not a narrow ‘area under panels’ calculation. These findings are particularly material for heavy clay Best and Most Versatile (BMV) soils, where increased bulk density and reduced organic fractions significantly constrain drainage, root penetration and recovery potential. Importantly, the sites examined were relatively young (0–10 years), meaning the documented compaction and carbon reductions precede any mid-life repowering or decommissioning disturbance cycles. On clay soils with high groundwater levels and hydrological connectivity to sensitive chalk aquifers and streams, the demonstrated increase in compaction and reduction in soil structural fractions represent not merely short-term disturbance but a credible pathway toward long-term degradation and reduced agricultural functionality.

The empirical findings of elevated bulk density and reduced soil organic fractions beneath operational solar arrays are directly relevant to the concept of agricultural sterilisation. Sterilisation, in planning terms, arises where land is rendered functionally incapable of returning to viable BMV agricultural use within

a reasonable timeframe. The documented 14–15% increase in bulk density and substantial reduction in particulate organic matter indicate measurable structural degradation of the soil profile within the first decade of operation. On heavy clay BMV soils, increased bulk density constrains macroporosity, impairs drainage and restricts root penetration; reduced particulate organic matter diminishes aggregate stability and resilience to trafficking. These are not superficial effects limited to vegetation cover but changes to the physical and biological architecture of the soil. Where such degradation occurs during initial construction and operation, and is then compounded by mid-life repowering and eventual decommissioning disturbance, the cumulative outcome is persistent structural impairment. In hydrologically sensitive clay-over-chalk systems with high groundwater tables, compaction further alters runoff patterns and infiltration dynamics, increasing the likelihood of waterlogging and sediment mobilisation. In combination, these processes transform productive BMV land into land of diminished agronomic function and heightened environmental risk. The research therefore provides empirical support for the contention that large-scale ground-mounted solar on heavy clay BMV soils carries a credible risk of long-term agricultural sterilisation rather than temporary displacement.

15.1.3 Specific Risk to Best and Most Versatile (BMV) Heavy Clay Soils

The South Norfolk Claylands are characterised by slowly permeable, seasonally waterlogged heavy clay soils, much of which is classified as Best and Most Versatile (Grades 2 and 3a). These soils are:

- Structurally sensitive to compaction.
- Highly vulnerable to smearing when trafficked in wet conditions.
- Dependent on intact subsoil structure for drainage and root penetration.
- Slow to recover once compacted.

The ADAS / Welsh Government (2023) study and ISEP (2025) guidance confirm that:

- Deep compaction in clay soils can persist for decades.
- Soil structure collapse cannot reliably be reversed without full profile restoration.
- Recovery of pre-disturbance yield potential is uncertain.

Construction of a 2,000+ hectare NSIP across heavy clay land inevitably involves:

- Repeated heavy plant trafficking.
- Excavation and backfilling of trenches.
- Subsoil mixing.
- Drainage disruption.

On clay soils with a high natural water table, trafficking under less-than-ideal conditions causes irreversible pore collapse and lateral smearing. Once subsoil structure is lost, water infiltration decreases, surface ponding increases, and roots cannot penetrate effectively. Yield potential declines and drainage systems fail.

A 60-year consent period therefore equates to the effective removal of BMV land from productive use for a generation and potentially beyond.

Under **NPPF (August 2026)** and **NPS EN-1 (2023)**, such long-term loss of BMV land requires clear and compelling justification. Temporary terminology does not negate functional permanence.

15.2 Policy and the correct decision-making question

The applicable national policy continues to require specific consideration of agricultural land quality rather than treating it as an undifferentiated land-use constraint. EN-1 requires the Secretary of State to ensure that BMV land is not used without justification and, where agricultural development is necessary, that poorer-quality land is preferred. EN-3 similarly states that poorer-quality agricultural land should be preferred to higher-quality land, avoiding BMV land where possible, and requires the Applicant to explain its site choice. The August 2026 NPPF now expresses the same principle through national decision-making policy N2(1)(b): development proposals should take account of the quality of agricultural land, including whether it is BMV and its grade, and, where significant development of agricultural land is necessary, use poorer-quality land where possible. The new NPPF must also be read fairly with policy W3, which gives substantial weight to the energy-security, economic-development and net-zero benefits of renewable energy infrastructure. That additional policy weight does not remove the separate requirement to identify and minimise agricultural-land harm or to explain why higher-quality land is required in the location proposed. Chapter 15 acknowledges agricultural land quality but does not demonstrate that it has operated as an effective avoidance criterion once the broad land portfolio had been selected.

The correct question is not whether panels can stand above grass or whether soil remains physically present. It is whether the Applicant has shown that the Scheme is located on the least damaging land reasonably available; that the full soil resource is known before consent; that BMV capability, drainage and farm function will be maintained through the whole lifecycle; and that restoration to an enforceable agricultural end-state is technically and financially secured. The application fails each limb.

15.3 Incomplete and inconsistent ALC baseline

15.3.1 The detailed survey reveals substantially more BMV land than the strategic mapping

The provisional 1:250,000 mapping showed mainly undifferentiated Grade 3 land. The detailed survey instead found that 78.7% of Sites 1–10 and the BESS area is Grade 2 or 3a. Chapter 15 accepts that the lighter and more calcareous soils produced a higher ALC outcome than expected. That discovery should have

triggered a renewed alternatives and layout review. Instead, the Applicant states that panel installation does not affect land quality and therefore gives ALC limited influence over siting. (APP/6.1.15, §§15.6.4–15.7.3)

That approach reverses the mitigation hierarchy. Once field survey showed extensive Grade 2 and 3a land, the first response should have been avoidance, reduction and relocation, not a post hoc assertion that long-term solar occupation is harmless.

ISH1 has since clarified how BMV land entered the selected portfolio. The Applicant explained that, during Stages 1–3 of site selection around Norwich Main, it had initially sought to avoid BMV land. By the end of Stage 3 it concluded that insufficient non-BMV land remained to deliver a scheme of the scale proposed, and at Stage 4 it therefore reintroduced land which could contain BMV. Following the change to Great Moulton, Stage 5 again sought potentially suitable non-BMV alternatives before Stage 6 again allowed BMV land to be considered. The Applicant's evidence is therefore that BMV avoidance was relaxed because avoiding BMV would not provide sufficient land for a scheme of the chosen scale. That does not of itself establish a policy breach, because EN-3 recognises that large solar schemes may use agricultural land. It does, however, sharpen the Examination question: whether the proposed scale and configuration justified the resulting use of this quantity and quality of BMV land, and whether reasonable opportunities to reduce that use were taken once the detailed ALC evidence became available.

15.3.2 The figures are internally inconsistent

Table 15.6 gives 829.1 ha of surveyed BMV land. Paragraph 15.8.128 nevertheless values the economic benefit of ‘868 ha of BMV within the Scheme’. Chapter 15 also describes 68.4% of the Order Limits as BMV, even though the CRC has not been surveyed. The Applicant must reconcile 829.1 ha, 868 ha, 68.4% and the earlier approximately 80% figure, and identify which denominator and assumptions are used in each case.

The defect is material because percentages are then used to frame the effect as regionally negligible. A percentage derived partly by assuming the grade of unsurveyed land is not a measured scheme-wide baseline.

15.3.3 The CRC omission is contrary to the Scoping Opinion and Natural England’s advice

The Scoping Opinion stated that the ALC survey should cover the whole site, including the CRC, unless substantial justification was provided. Natural England repeated that advice before submission. The Applicant chose not to comply and now proposes survey only after consent, once the cable alignment has been refined. (APP/6.1.15, Table 15.1; Table 15.2)

Natural England’s Relevant Representation rejects the sufficiency of that approach. It states that survey across the entire corridor is needed to inform the EIA, route refinement, soil handling and restoration, and warns of long-term or permanent BMV loss if cable works, access tracks and compounds are undertaken inappropriately. The missing survey is therefore not a minor limitation. It prevents informed avoidance and reliable assessment.

15.4 Defective assessment methodology

15.4.1 Reversibility is assumed, then used to suppress significance

Chapter 15 defines every temporary and reversible loss as low magnitude, regardless of area or duration. It then assumes that compounds, tracks, cabling, trafficking, project substations, BESS works and decommissioning are reversible because they will be controlled by later plans. That circularity predetermines a minor result. (APP/6.1.15, §§15.5.17–15.5.29)

A 60-year removal of BMV land, with repeated construction access and uncertain restoration, is not rendered low magnitude merely by being labelled temporary. Duration, frequency, depth of disturbance and probability of successful restoration must affect magnitude. Chapter 15 says those factors matter, but its fixed rule prevents them from doing so.

15.4.2 Soil sensitivity is understated

The Applicant concludes that no soil is highly sensitive because Field Capacity Days are below 150. Yet it also accepts that the soils are predominantly slowly permeable, seasonally waterlogged and clay-rich, and are prone to structural damage when wet. The oSRMP describes moisture control as critical. Formal categorisation cannot override the site-specific susceptibility which the Applicant itself records.

15.4.3 Farm businesses are downgraded by definition

Every farm business is classified as low sensitivity because none is dairy and arable businesses are said to be adaptable. Exposure to weather, prices and policy does not make a farm insensitive to the 60-year loss of 18%, 25%, 26%, 29% or 35% of its land. The methodology effectively ensures that even a medium impact becomes minor.

The assumption of resilience is particularly weak where holdings rely on field drainage, contract farming, livestock relationships, stewardship prescriptions and coherent blocks of land. No business viability analysis supports the blanket classification.

15.4.4 Unassessed matters are removed by assumption

Chapter 15 assumes that all land adjoining the CRC will remain accessible and therefore provides no assessment of short-term disruption. It assumes that habitat areas will continue to be farmed without soil disturbance. It limits the study area to the Order Limits on the basis that no off-site soil or land-use effect will occur. Those are disputed outcomes, not neutral baseline assumptions. Drainage disruption, severance, altered access and contractor effects may extend beyond the red line.

15.5 The Cable Route Corridor and haul-road system

The CRC is approximately 24 km long. It is generally around 50 m wide, narrows to about 13 m and widens in places to about 405 m. Open-cut works may require a 25 m working width, trenches up to 7 m wide and 2 m deep, joint bays,

trenchless launch and reception areas, three large compounds, spoil storage, laydown areas and temporary access. (APP/7.21)

Norfolk County Council's highway authority position makes the corridor still more consequential. It requires numerous sites to be served from appropriate roads by internal haul routes or CRC connections. The Applicant's unsurveyed corridor is therefore also a principal construction logistics route.

Chapter 15 dismisses the CRC as short-term and temporary and excludes it from the farm-business interviews. That is untenable. A long linear route crossing multiple holdings, drainage systems and soil types may cause compaction, smearing, mixing, severance and delayed reinstatement. Without the ALC and soil survey, the Applicant cannot show that the final route avoids Grade 2 land, peat, wet soils, sensitive drainage or stewardship areas.

The comparison with Cottam does not answer the defect. The question is not whether another DCO accepted a later survey in different circumstances. It is whether this EIA contains sufficient information to assess this Scheme, particularly where the highway authority expects extensive use of the corridor for haulage and Natural England expressly maintains its objection.

15.6 Soil vulnerability, compaction and empirical evidence

15.6.1 The Applicant's own evidence identifies the mechanism of harm

Beccles 1 soils are described as slowly permeable, seasonally waterlogged fine loamy over clayey soils; Burlingham 1 soils have slowly permeable subsoils and seasonal waterlogging. Chapter 15 accepts that wet trafficking can damage structure and that vehicle trafficking presents the greatest potential soil effect. It nevertheless asserts that compaction will be temporary, capable of correction with ordinary agricultural machinery and very unlikely to affect drainage or ALC grade. (APP/6.1.15, §§15.6.15–15.6.20; 15.8.26–15.8.31; 15.8.67–15.8.72)

Those conclusions are unsupported by quantified baseline bulk density, infiltration, drainage performance or compaction modelling. Photographs of shallow pits and generic examples from other solar farms do not demonstrate whole-profile recovery at East Pye.

15.6.2 UK field evidence contradicts the claim of no operational adverse effect

Carvalho et al. studied 32 operational solar farms in England and Wales. Beneath panels, soil compaction was approximately 14–15% higher, soil organic carbon approximately 9% lower than in gaps, and particulate organic matter approximately 29% lower than in gaps. Plant cover and biomass were also reduced. These changes occurred within the first decade of operation.

That evidence does not prove identical effects everywhere. It does prove that Chapter 15's categorical propositions—'there will be no compacting of soils', 'there are no adverse impacts' and grassland will necessarily produce a net soil benefit—are too absolute. The Applicant has not assessed the under-panel and inter-row microclimates, soil carbon, vegetation cover or operational compaction against site-specific baselines.

Soils, Compaction and Irreversibility on BMV Heavy Clay Land

Authoritative evidence from the ADAS / Welsh Government (March 2023) 'The impact of solar photovoltaic (PV) sites on agricultural soils and land' and the ISEP (2025) 'Solar PV on Agricultural Land: Essential Components of Environmental Assessments and Reports' establishes that ground-mounted solar on Best and Most Versatile (BMV) agricultural land—particularly heavy clay soils—presents a high and often underestimated risk of long-term structural compaction and loss of soil function. Both documents emphasise that soil is a living, structured system: productivity depends on intact pore networks, aggregation, biological activity and functioning underdrainage. Heavy clay soils, such as those prevalent across the South Norfolk Claylands, are especially vulnerable because trafficking in moist conditions causes subsoil smearing, pore collapse and lateral compaction that can persist for decades. ADAS identifies that deep compaction below 30–40cm is rarely fully reversible without complete soil profile reconstruction; ISEP confirms that claims of 'temporary use' or 'reversibility' must be evidenced by site-specific soil surveys, bulk density measurements, structural assessments and restoration trials. Absent such evidence, long-term yield decline and impaired drainage must be assumed to be likely outcomes.

At NSIP scale, compaction risk occurs not once but three times: (1) during initial construction (piling, trenching, heavy plant movement, crane pads, substation platforms, BESS bases, cable installation); (2) at mid-life repowering(anticipated at c.30 years), when panels, mounts and associated infrastructure are removed and replaced, re-mobilising heavy plant and re-disturbing soils; and (3) at decommissioning (c.60 years or earlier under commercial failure scenarios), involving removal of foundations, hardstanding, bunds and cable corridors. Each cycle introduces further trafficking pressure, particularly in clay soils prone to seasonal waterlogging. The cumulative effect is not neutral. Repeated trafficking over decades compounds subsoil density, reduces macroporosity, restricts root penetration, and increases surface ponding and runoff. ADAS evidence indicates that once clay structure collapses, drainage performance degrades and remediation by subsoiling is frequently ineffective. Thus, the three-phase disturbance profile fundamentally undermines any assertion that BMV land can be restored to pre-development agricultural condition.

Compaction risk extends beyond the solar arrays themselves. Construction and abnormal indivisible load (AIL) routes typically require temporary or semi-permanent haul roads across fields, including land outside the operational redline. On heavy clay BMV land, haul roads constructed for HGV and transformer deliveries generate intense axle loading, producing rutting and subsoil shear failure. Even if 'temporary' matting is used, ground pressure remains substantial. Where haul routes must be reused for mid-life repowering and ultimate decommissioning, the land is subjected to recurring high-load trafficking events over a 60-year period. Repeated use prevents full soil structural recovery between phases. The result is linear corridors of persistent compaction, altered drainage and yield suppression across otherwise unaffected fields. Such corridors fragment field systems, impair headland management, and may require permanent access retention, further entrenching sterilisation.

ISEP (2025) stresses that assessment of solar schemes on BMV land must consider not merely surface cover but **whole-profile soil function over the lifetime of the development**, including restoration feasibility and cumulative disturbance. Where evidence demonstrates high vulnerability to deep compaction, planning policy requires precaution. Under **NPS EN-1 (2023) §4.2** and the **NPPF (Dec 2024)**, decision-makers must afford significant weight to the protection of BMV agricultural land and ensure that land use is sustainable in the long term. In the absence of robust, parcel-specific soil surveys, quantified compaction modelling, and secured restoration bonds capable of funding full soil profile reconstruction, the risk profile for heavy clay BMV land subjected to three disturbance cycles and repeated haul-road trafficking is one of **probable long-term sterilisation rather than temporary displacement**.

15.7 Agricultural drainage, groundwater and connected receptors

Soil structure is inseparable from agricultural drainage. Compaction, trenching, pile driving, hardstanding and track formation can break drains, change lateral flow, concentrate runoff and create preferential pathways. Chapter 15 does not map existing underdrainage or assess the combined effect of the CRC, panel cabling, haul roads and permanent foundations on drainage systems.

The Environment Agency’s scoping response stated that the hydrogeological baseline was inadequately understood, required ground conditions to remain scoped in, sought foundation and piling risk assessments, required hydrogeological risk assessment for HDD and identified uncertainty around private water supplies. It also asked for assessment of heat effects from buried high-voltage cables. Those concerns are directly relevant to the soil chapter because disturbed clay layers and trenches control pathways between fields, ditches, groundwater and the Chalk aquifer.

Norfolk County Council, as Lead Local Flood Authority, has also identified incomplete groundwater-flood evidence and challenged assumptions about field ditches and flood extents. Natural England accepts no adverse effect on linked designated sites only if runoff and water-quality controls are secured. The Chapter 15 conclusion that no effects occur beyond the Order Limits is therefore not demonstrated.

BEPS does not assert that aquifer damage or off-site flooding is inevitable. The objection is evidential: the Applicant has not mapped and modelled the source–pathway–receptor relationships needed to dismiss those outcomes.

15.8 Peat and other soils requiring avoidance

Natural England requires clarification of whether peat is present and states that any peat soils should be avoided. It identifies the Isleham 2 association south of Fairstead Lane as deep permeable sandy and peaty soils affected by groundwater. The application contains no definitive field-verified peat map and no binding avoidance area.

Peat should not be treated as another soil-handling unit. Excavation, drainage and aeration may cause irreversible carbon and hydrological loss. Confirmed

peat and organic soils must be identified before consent and removed from permanent infrastructure, trenches, compounds and haul routes.

15.9 Permanent and long-duration BMV loss

15.9.1 The Applicant’s own worst case is significant

The National Grid substation and pylons permanently remove 6.1 ha of Grade 2 land. If the BESS and project substations cannot be restored, the permanent BMV total becomes 18.2 ha. If tracks are retained or cannot be restored, it becomes 28.9 ha. If BMV mitigation planting is also treated as permanent, the total becomes 37.9 ha. Chapter 15 itself classifies the latter two outcomes as moderate adverse and significant. (APP/6.1.15, §§15.8.61–15.8.66; 15.10.1)

These figures must not be obscured by repeatedly presenting individual components as less than 20 ha and therefore minor. The Scheme must be assessed as a whole. The 37.9 ha scenario is likely: the National Grid infrastructure is expressly permanent; deep BESS and substation piles may prevent comparable restoration; tracks may remain; and woodland is intended to remain.

15.9.2 Natural England requires avoidance, not arithmetic minimisation

Natural England advises that the permanent National Grid infrastructure should be reconsidered to avoid BMV land. The Applicant answers that all of Site 1 is Grade 2 and avoidance is therefore impossible within the selected site. That does not demonstrate that the selected site or connection arrangement is the least harmful reasonable alternative. It merely shows that the chosen envelope contains no poorer land. National Grid itself is not committed to this location for a new substation.

The same issue arises for compounds and substations placed on Grade 2 land for access, landscape or operational convenience. The hierarchy requires a transparent comparison of alternative locations, not a statement that BMV is unavoidable inside a preselected boundary.

15.10 Whole-life disturbance, replacement and decommissioning

The assessment presents construction, operation and decommissioning as discrete phases and repeatedly characterises operational soil disturbance as negligible. ISH1 has now provided a more precise account of the whole-life disturbance pattern. The Applicant confirmed that temporary internal haul routes serving Sites 7 and 8 would be removed after initial construction, although permanent maintenance tracks would remain within the solar sites. More importantly, when asked about future panel replacement, the Applicant confirmed that the same construction-compound areas would be needed again, on a phased basis, when the modules are replaced. The application also assumes complete replacement of the solar panels once during the operational period and replacement of the BESS up to five times.

The relevant soil disturbance is therefore not a single construction event followed by approximately 60 years of undisturbed operation. It comprises initial construction and compound formation; routine maintenance and repair; continuing use of permanent tracks; remobilisation of at least some of the original compound areas for panel replacement; potentially repeated BESS replacement; and eventual decommissioning and restoration. The Applicant has not demonstrated that Chapter 15 assesses the cumulative effect of those successive disturbance cycles on compaction, soil structure, drainage or restoration capability. Phasing may reduce the area disturbed at any one time, but it does not remove repeated disturbance from the same soils.

The decommissioning case is equally assumption-led. Chapter 15 says narrow cable trenches will be fully reversible, piles will be pulled out in dry conditions, stored topsoil will be replaced after 60 years and no adverse land-quality effects will result. It provides no trial evidence, performance standard or allowance for deteriorated stockpiles, deep foundations, cable retention, changed contours, drainage failure or contamination.

The Outline DEMP further states that the National Grid substation will remain, some cables may remain, some biodiversity areas may remain and future land use will be chosen by landowners. The application therefore does not secure a complete return to agricultural use or BMV grade.

15.11 Existing stewardship function and public investment

15.11.1 Stewardship is part of the existing baseline

Parts of the Order Limits are managed under Sustainable Farming Incentive, Countryside Stewardship and earlier Environmental Stewardship arrangements. BEPS' review of Natural England spatial data identifies substantial agreement land associated with Sites 4, 5 and 7, including Entry Level Plus and Higher Level Stewardship extending from approximately 2013 to at least 2028. The management pattern includes low-input land, field margins, winter food or stubble and habitat mosaics relevant to skylark, lapwing and turtle dove.

Chapter 15 acknowledges agri-environment management but treats it principally as uncropped land, a future trend away from food production, or evidence that solar land take is relatively unimportant. That is a serious mischaracterisation. Stewardship land remains part of an agricultural holding, generates farm income and delivers publicly funded environmental functions.

15.11.2 The ecological function cannot be replaced by the label 'grassland'

The stewardship function includes open nesting habitat, reduced disturbance, seed resources, winter food, field margins and continuity between fields, hedges and ditches. The Applicant's own ecology surveys recorded 81 skylark territories, including 70 within permanent development areas. That is direct evidence that the present managed landscape supports a substantial breeding population.

Dense panel rows, fencing, access tracks and screening planting transform open field geometry. For skylark and lapwing, openness and sightlines are part of the habitat. For turtle dove, the value lies in the relationship between seed-rich

foraging areas and nesting scrub or hedgerows. Generic grass beneath panels is not functionally equivalent.

15.11.3 Expiry of an agreement does not erase the baseline

The fact that some agreements may expire near the proposed 2028 construction start does not remove their ecological or agricultural legacy. Habitats and species do not disappear when a payment contract ends. Replacement environmental schemes, voluntary continuation or comparable management are plausible future baselines. The Applicant has effectively compared the Scheme with an assumed degraded future and then claimed benefit from ending intensive arable use.

The application should identify each affected agreement, its options, duration, public value, target outcomes, termination consequences and any repayment liability. It should then demonstrate functional replacement. A positive BNG score does not answer that question because the metric does not measure species-specific nesting success, open sightlines or continuity of stewardship management.

15.11.4 The loss is immediate; replacement is uncertain

Construction is proposed to begin when identified stewardship agreements may end. The transition would therefore be directly from stewardship management to fencing, piling, trenching and machinery. Existing nesting, winter-food and margin functions would cease immediately. Replacement habitats would take time to establish and their carrying capacity is unproven.

The soil and agricultural chapter must recognise that loss as both an agricultural-management effect and an ecological baseline effect. It cannot be left wholly to Chapter 8.

15.12 Mechanical mowing, herbicides and the absence of agricultural continuity

15.12.1 The Applicant’s documents are internally inconsistent

Chapter 15 repeatedly relies on possible sheep grazing. It says the land may be grazed, that sheep would level minor ruts, that affected livestock businesses may graze beneath panels, and that the agricultural enterprises operating at decommissioning will be based on sheep production. The Applicant has now stated, however, that the intended vegetation-management regime is mechanical mowing and herbicide use, with grazing no more than a possible future option. The assessment therefore evaluates and claims benefits from a land-management scenario which is not the proposed operational case. (APP/6.1.15, §§15.8.86, 15.8.90, 15.8.95 and 15.8.144)

That inconsistency matters. Chapter 15 uses grazing to support continuing agricultural use, farm-business resilience, food-production claims and its assumed decommissioning baseline. If grazing is not intended, those conclusions must be withdrawn and the actual mowing-and-herbicide regime assessed.

15.12.2 Mechanical mowing creates recurrent trafficking and compaction risk

Mechanical vegetation control is not soil-neutral. It requires repeated access by tractors, mowers or specialist machinery throughout the operational life, including travel beneath and between arrays, turning at row ends and access during periods when vegetation control is operationally necessary rather than when soil conditions are ideal. On slowly permeable, seasonally wet clay soils, repeated wheelings can create rutting, localised compaction and shear damage, particularly along fixed routes and headlands.

Chapter 15 states that there will be no requirement for heavy machinery during operation and that there will be no compacting of soils. Those categorical conclusions cannot stand if mowing is the principal management method. The Applicant has not identified machinery type, axle load, tyre pressure, frequency, seasonal timing, access pattern, wet-weather restrictions or remedial thresholds. Nor has it assessed cumulative compaction from mowing together with cleaning, inspections, repairs and component replacement. (APP/6.1.15, §§15.8.83–15.8.100)

Mowing also removes biomass from the sward if cuttings are collected and may create a thatch layer or nutrient redistribution if they are left. Either outcome affects the Applicant’s assumed increase in soil organic matter. The management plan does not state whether arisings will be removed, mulched or retained, how nutrient export will be addressed, or how bare ground and erosion caused by repeated cutting will be prevented.

15.12.3 Herbicide use is unquantified and incompatible with the claimed soil benefit

The Applicant proposes that vegetation may be controlled by herbicides, yet identifies no active substances, application method, target vegetation, quantities, frequency, seasonal restrictions, exclusion zones or maximum lifetime chemical loading. It therefore provides no basis for assessing effects on soil organisms, microbial activity, non-target plants, organic-matter formation, water quality or restoration to food production.

This omission directly undermines Chapter 15’s beneficial-soil case. The Chapter argues that conversion from arable farming will reduce chemical inputs and allow biological and organic-matter recovery. It cannot claim that benefit while retaining an undefined right to apply herbicides for up to 60 years. A statement that use will be ‘reduced’ or ‘minimised’ is not an assessment unless the existing baseline and proposed products, rates and frequency are quantified.

The risk is heightened by field drains, ditches, private water supplies and the connected water environment. Herbicide application beneath arrays may occur in shaded or sparsely vegetated areas where runoff and infiltration differ from open fields. Any use near drains, watercourses, the CRC, substations or the Chalk

aquifer requires a source–pathway–receptor assessment and binding buffers. The current Chapter contains none.

15.12.4 Mowing and herbicides do not amount to continued agricultural use

A regime of mechanical cutting and chemical weed control is vegetation maintenance for an electricity-generating installation. It does not produce food, maintain an arable rotation or demonstrate that the land remains available for ordinary agricultural management. The Applicant cannot rely on the statutory breadth of the term ‘agriculture’ or on a hypothetical future grazier to disguise the operational reality.

The loss is therefore more severe than Chapter 15 presents. Productive Grade 2 and 3a land would cease commercial agricultural production for approximately 60 years and would instead be maintained to protect access, equipment performance, fire safety and ecological prescriptions. That is long-term agricultural displacement, not dual use.

15.12.5 The actual management regime must be fixed and monitored

The DCO must not leave the choice between mowing, grazing and herbicides to an unspecified future LEMP. Those methods have materially different soil, water, biodiversity, fire and farm-business effects. The Applicant must identify the proposed regime now and assess its reasonable worst case.

At minimum, the operational land-management plan should specify machinery and ground-pressure limits; mowing frequency, timing and routes; wet-soil stop-work criteria; treatment of cuttings; prohibited and permitted herbicides; application rates and methods; no-spray buffers; records and public reporting; soil-biological and chemical monitoring; water-quality monitoring where pathways exist; and remediation triggers. Broadcast or routine prophylactic herbicide use should be prohibited. Chemical treatment should be confined to exceptional, targeted circumstances where non-chemical control has failed.

Without those controls, the Applicant has not demonstrated either the claimed operational soil benefit or the absence of adverse operational effects.

15.13 Farm-business effects, compulsory acquisition and severance

15.13.1 The baseline is incomplete

Appendix 15.2 excludes the CRC. Chapter 15 therefore has no whole-scheme farm-business assessment despite the corridor crossing multiple holdings and being required for haulage, compounds and cable construction.

15.13.2 The affected proportions are substantial

The Applicant records approximately 25% of Farm 2, 35% of Farm 3, 26% of Farm 4, 18% of Farm 5, 29% of Farm 6 and 26% of Farm 8 within the Scheme. These are not minor changes. The farms include arable crops, livestock, poultry, sugar beet, local grain outlets, contract farming, stewardship and diversified activities. (APP/6.1.15, Table 15.15; APP/6.3.15.2)

The assessment repeatedly says businesses will benefit from secure income. It does not identify which landowners receive rent, which tenants or contractors lose work, what compensation applies, whether replacement land exists, or how the retained businesses will operate. Secure income is asserted, not evidenced.

15.13.3 Compulsory acquisition is not cured by compensation

Where freehold land or permanent rights are compulsorily acquired, a business may lose a coherent block, access, drainage control, grazing relationships or contractor economies. It may need to reduce scale, reorganise rotations, obtain replacement land or cease part of its operation. Compensation does not preserve business continuity and does not answer the planning harm.

The Applicant should provide a holding-by-holding acquisition, severance and viability assessment identifying owners, tenants, contractors, rights sought, operational function of the affected land and the measures by which each remaining business can continue.

15.13.4 Decommissioning effects are speculative

Chapter 15 assumes that future enterprises will be sheep-grazing businesses of low sensitivity and can simply move elsewhere during one to two years of decommissioning. The businesses operating in 60 years are unknown. The assessment cannot lawfully reduce future sensitivity by assuming the very land-use change caused by the Scheme.

15.14 Food production, rural economy and cumulative effects

15.14.1 The economic valuation is artificially narrow

Chapter 15 values BMV land only by the marginal yield difference between a high and average cereal budget, producing an estimate of approximately £190,000 per year and 1,020 tonnes of incremental output. That does not measure the ‘economic and other benefits’ of BMV land.

The calculation omits rotational flexibility, crop choice, resilience in wet or dry years, livestock and poultry integration, drainage investment, stewardship income, local contracting, storage, haulage and the strategic value of retaining domestic production capacity. It also assumes a hypothetical non-BMV comparator without identifying an alternative site.

15.14.2 National percentages do not answer local concentration

The Applicant repeatedly compares East Pye with total national or county land and production, making the effect appear negligible. That logic would make every individual large scheme negligible and would never identify cumulative concentration.

Norfolk County Council identifies East Pye, Droves, Tasway and High Grove as affecting more than 4,750 ha. It objects to the lack of a strategic approach and the cumulative implications for food production, communities and businesses. Chapter 15's cumulative assessment must address overlapping land removal, construction, contractor demand, drainage and farm restructuring, not merely project-by-project national percentages.

15.14.3 Stewardship land is not 'unused' land

The comparison with uncropped arable and agri-environment land is misleading. Land in stewardship is delivering environmental goods, remaining within farm systems and often retaining future production potential. Its existence does not justify converting additional BMV land to industrial use.

15.14.4 Imports and predicted productivity do not remove the harm

Chapter 15 relies on stable self-sufficiency, international trade and predicted productivity growth. Those matters do not prove that this BMV-heavy location is necessary or optimal. Nor do they remove the resilience value of productive domestic land in a period of climatic and geopolitical uncertainty.

15.15 BNG, restoration and the absence of a fixed end-state

The Applicant relies on permanent or long-term woodland, grassland and habitat creation as mitigation and BNG, while also describing the agricultural loss as temporary. Both propositions cannot be assumed simultaneously.

If BNG habitats and woodland remain after decommissioning, the land does not return to its former agricultural use. If the land is returned fully to arable production, habitat units relied on during operation may be destroyed. The Outline DEMP does not identify which habitats will remain, what biodiversity units will survive decommissioning or how restoration works will avoid them.

ISH1 exposed the same conflict within the operational lifecycle itself. The Applicant described Site 6 as being given over in its entirety to biodiversity mitigation once construction is complete, but confirmed that Site 6 is also used as a construction compound. When asked what would occur when the solar modules are replaced, the Applicant stated that the same construction-compound areas would be needed again on a phased basis. When BEPS asked how land could function as an ecological area and later return to construction-compound use, the Applicant did not provide an answer and agreed to take the matter away for ecological input. The soil consequence is equally unresolved: if a compound is demobilised, restored and established as habitat, but must subsequently be remobilised for major replacement works, the assessment must account for the second cycle of trafficking, hardstanding or ground preparation, soil disturbance, habitat loss and subsequent restoration rather than treating the first restoration as a permanent end-state.

The conflict is particularly acute on stewardship land. The Scheme may replace existing publicly funded ecological function with new metric habitat, then count the latter as gain without accounting properly for the species-specific function lost.

A fixed post-decommissioning land-use plan is required. It must identify permanent infrastructure, retained habitats, agricultural restoration areas, target ALC grades and the mechanism for resolving any conflict between BNG obligations and agricultural reinstatement.

15.16 Soil management, monitoring and financial security

15.16.1 The oSRMP is necessary but not sufficient

Natural England welcomes the rainfall and stop-work controls but states that key methods and controls remain high level and deferred. A later detailed SMP cannot cure a missing pre-consent baseline or demonstrate that the authorised layout has avoided sensitive soils.

The ExA has now expressly identified this as an Examination issue. ExQ1 Q1.13.1 asks the Applicant and Natural England whether the oSRMP provides sufficient certainty where cable-route surveys, soil characterisation, stockpile arrangements, monitoring procedures and restoration methodologies are to be developed post-consent, and asks what additional matters would need to be defined or secured before the Secretary of State could conclude on likely significant effects. The question closely reflects the distinction made in this Written Representation. Later work may legitimately refine an already demonstrated acceptable soil-management and restoration solution; it should not be relied upon to establish after consent the baseline characteristics, mitigation requirements or restoration capability necessary to determine whether an acceptable solution exists at all.

The plan also relies heavily on contractor monitoring and sign-off. Restoration should be independently verified against measurable criteria, not accepted because the soil has been replaced and grass has grown.

15.16.2 Required performance standards

The DCO should require parcel-specific baselines and restoration thresholds for bulk density by depth, structure, infiltration, organic carbon, particulate organic matter, drainage function and contamination. ALC reclassification and at least two cropping seasons of yield evidence should be required before final sign-off.

Operational monitoring should compare under-panel, inter-row, track-edge and control areas. It should occur at defined intervals and before and after major replacement works. Trigger exceedances must require remediation. That monitoring should also expressly cover construction-compound areas before initial construction, after first reinstatement, immediately before and after their reuse for replacement works, and following final restoration.

15.16.3 Private decommissioning securities do not yet secure agricultural restoration

The Applicant has now stated that private landowner agreements contain decommissioning securities intended to provide protection against default or insolvency and capable of periodic revaluation or top-up. BEPS therefore does not contend that no financial provision exists.

The unresolved issue is whether those private contractual arrangements are sufficient to secure the agricultural and soil-restoration outcomes relied upon in the Environmental Statement.

A landowner-specific security may provide valuable financial protection to the contracting farmer, but its existence does not establish that the amount secured will be sufficient to meet the full cost of decommissioning and restoration after approximately 60 years. In particular, it is unclear whether the security covers only removal of panels and associated infrastructure or also the potentially more expensive consequences identified in this Chapter: removal of tracks and foundations, drainage reconstruction, deep decompaction, restoration of soil structure, contamination remediation, reinstatement of field systems and prolonged aftercare where agricultural capability does not recover immediately.

That distinction is critical for East Pye's heavy, slowly permeable and seasonally wet BMV soils. If decommissioning reveals deep compaction, damaged drainage, contamination or persistent loss of soil structure, the cost of restoring the land to its former Agricultural Land Classification may materially exceed the cost originally assumed for equipment removal. The Applicant should therefore demonstrate that the security is valued against the full restoration obligation existing at each review date, rather than merely by applying indexation to an original estimate.

The Examination also needs to understand who determines the required amount, how often it is reviewed, whether the valuation is independent, who can require a top-up and what happens if the undertaker fails to provide one. The security should remain available until restoration has been independently verified against objective soil, drainage and agricultural-capability standards.

There is also a wider coordination issue. East Pye is one integrated NSIP spread across multiple agricultural holdings. If the undertaker defaulted, it is not clear whether individual landowners would each be required to procure decommissioning and restoration on their own land or whether a single body would remain responsible for Scheme-wide coordination. Private financial security cannot by itself guarantee coherent restoration across shared access routes, drainage systems, cable corridors, ecological mitigation areas and adjoining holdings.

Nor is it yet clear whether the relevant planning authority responsible for enforcing the DCO would have any right to call upon the private securities if the undertaker became insolvent. A contractual remedy available to an individual landowner is not necessarily equivalent to a publicly enforceable, whole-Scheme restoration mechanism.

The Applicant should therefore disclose sufficient information to establish the common structure of the decommissioning securities, including their form, beneficiary, scope, valuation methodology, review frequency, insolvency protection, transferability, enforcement mechanism and coverage of soil and drainage restoration.

The DCO should continue to place clear responsibility for whole-Scheme decommissioning and agricultural restoration on the undertaker or its successor and should require objective restoration standards, independent verification and

sufficient financial provision to remain in place until those standards have been achieved.

The existence of private landowner securities therefore changes the factual position, but it does not resolve the underlying planning issue. The Applicant has still not demonstrated that the agricultural restoration on which it relies is financially secured across the whole Scheme if restoration proves materially more difficult or expensive than presently assumed.

15.17 Site-specific conclusions

15.17.1 Site 1

Site 1 is the Scheme's principal industrial node. It contains the BESS, project substations, proposed National Grid substation, overhead-line works, permanent access and compounds on predominantly Grade 2 land. The National Grid substation is permanent; the BESS and substations may require piles up to 10–12 m; and the Applicant accepts that comparable restoration may not be achievable.

Natural England's avoidance objection is therefore directly engaged. The Applicant has not shown that this concentration of permanent and deep-founded infrastructure is the least harmful connection solution or that all land and powers remain necessary. Until the grid design is fixed, permanent acquisition and industrialisation of Grade 2 land should not be authorised.

15.17.2 Site 5

Site 5 is predominantly Grade 2 land and forms part of a functioning arable and stewardship landscape. Its drainage connects toward the River Tas catchment. The 400 kV project substation may be positioned partly on Grade 3b land, but the surrounding construction, access and panel development remain on BMV fields.

The detailed ALC result should have triggered a renewed alternatives review. The Applicant has not shown why the Grade 2 panel and compound areas cannot be removed or reduced, nor has it assessed the combined effects on field drainage, stewardship function and downstream pathways.

15.18 Overall conclusion

Chapter 15 reaches its benign conclusions by assuming what it must prove. The unsurveyed CRC is assumed restorable; 60-year effects are assumed reversible; clay soils are assumed repairable; drainage effects are assumed contained; arable businesses are assumed resilient; a hypothetical grazing regime is used to preserve the appearance of agricultural continuity even though the intended management is mechanical mowing and herbicide use; stewardship land is treated as future non-production; and decommissioning is assumed funded and successful.

The Applicant's own evidence points the other way. The Scheme contains 829.1 ha of surveyed BMV land; the full corridor remains unsurveyed; the highway strategy depends in part on internal haul routes and CRC connections, while some temporary haul routes are intended to be removed and permanent maintenance/access tracks retained; permanent BMV loss may reach 37.9 ha

and is significant; farm holdings lose substantial proportions of land; Natural England maintains amber objections; and the councils identify strategic and cumulative harm.

The Secretary of State cannot safely treat those effects as minor or reversible. The correct response is substantial redesign and avoidance. If that cannot be achieved within the Examination, consent should be refused.

15.19 Remedies sought

BEPS requests the following:

- A complete detailed ALC and soil survey of the entire CRC and every haul route, compound, laydown area, access, crossing and other disturbed agricultural area, submitted during Examination.
- A reconciled BMV schedule explaining the 829.1 ha, 868 ha, 68.4%, approximately 80%, 6.1 ha, 18.2 ha, 28.9 ha and 37.9 ha figures.
- A renewed alternatives and mitigation-hierarchy assessment using the final detailed ALC evidence, with permanent infrastructure, compounds, woodland and long-duration tracks removed from BMV and peat wherever practicable.
- A definitive peat survey and binding avoidance of confirmed peat and organic soils.
- A revised significance methodology which does not classify every assertedly reversible effect as low magnitude irrespective of scale, duration and frequency.
- A parcel-specific compaction and drainage assessment covering construction, maintenance, emergency repair, replacement and decommissioning.
- Mapping, protection, repair and hydraulic verification of agricultural underdrainage, coordinated with the FRA, LLFA and Environment Agency requirements.
- Independent baseline and monitoring of bulk density, structure, infiltration, organic carbon, particulate organic matter, drainage and contamination in panel, inter-row, track, compound and control areas.
- Operational monitoring of soil biology and chemistry, including organic carbon, particulate organic matter, microbial indicators and any herbicide residues, with comparison between under-panel, inter-row, mown, treated and untreated control areas.
- A full stewardship schedule identifying agreements, options, public investment, target functions, termination consequences and species-specific replacement measures.
- A fixed operational vegetation and land-management plan based on the actual proposed regime, identifying machinery, mowing frequency and routes, wet-weather restrictions, treatment of cuttings, any herbicide products and maximum application rates, no-spray buffers, monitoring and remediation triggers; routine broadcast herbicide use should be prohibited, and grazing must not be relied upon unless it is secured and fully assessed.
- A whole-scheme farm-business, tenancy, contract-farming, compulsory-acquisition, severance and viability assessment including the CRC.
- A revised food-production and rural-economy assessment addressing cumulative regional concentration and the full economic and resilience value of BMV land.
- A fixed post-decommissioning agricultural and ecological end-state reconciling retained BNG habitats with restoration to BMV use.

- Independent restoration standards, ALC reclassification, at least two cropping seasons of yield verification and enforceable remediation triggers.
- An independently costed, index-linked and insolvency-proof decommissioning and soil-restoration security, established before commencement and reviewed periodically.
- DCO Requirements preventing commencement of any phase until the relevant survey, avoidance, soil, drainage, stewardship, monitoring and financial-security measures have been approved.

Absent those measures, the residual uncertainty cannot lawfully be transferred to post-consent plans. The application has not demonstrated acceptable effects on soils, BMV land, stewardship functions or agricultural businesses.

Principal evidence

ES Chapter 15 – Soils and Agricultural Land, APP/6.1.15.

ES Figure 15.1 – ALC Results, APP/6.2.15.1.

ES Appendix 15.1 – Agricultural Land Classification, APP/6.3.15.1.

ES Appendix 15.2 – Farm Reports, APP/6.3.15.2.

Outline Soil Resource and Management Plan, APP/7.9.

Outline Cable Route Construction Statement, APP/7.21.

Outline Decommissioning Environmental Management Plan.

Natural England Relevant Representation, 10 June 2026, especially NE5–NE8.

Norfolk County Council Relevant Representation, 10 June 2026, including LLFA comments.

South Norfolk District Council Relevant Representation, 10 June 2026.

Environment Agency scoping and examination representations on groundwater, piling, HDD, private water supplies and watercourse protection.

Carvalho et al. (2025), Plant and soil responses to ground-mounted solar panels in temperate agricultural systems, Environmental Research Letters 20 024003.

ADAS/Welsh Government, The impact of solar photovoltaic sites on agricultural soils and land.

ISEP, Solar PV on Agricultural Land: Essential Components of Environmental Assessments and Reports.

BEPS review of Natural England Environmental Stewardship spatial data and the Applicant’s ecology evidence on farmland birds.

Applicant vegetation-management statements and the Outline Landscape and Ecology Management Plan concerning mechanical cutting, herbicide use and optional grazing.

dship under the Planning Act 2008 and national policy.

5.20 Agri-Environment Stewardship Land and Loss of Function for Ground-Nesting Farmland Birds

5.20.1 Existing Stewardship Function

Multiple parcels within the Scheme boundary are subject to publicly funded agri-environment stewardship prescriptions specifically designed to support priority ground-nesting farmland birds, including lapwing (*Vanellus vanellus*), skylark (*Alaudala arvensis*), and turtle dove (*Streptopelia turtur*). These prescriptions typically require:

- Retention of open, unfragmented field systems;
- Maintenance of specific sward heights or fallow conditions during breeding season;
- Provision of bare or sparsely vegetated ground for nesting;
- Wet features or damp soils for invertebrate-rich chick foraging (lapwing);
- Skylark plots or undrilled areas within arable fields;
- Seed-rich margins and low-disturbance foraging areas (turtle dove);
- Minimal structural intrusion within breeding territories.

These schemes are evidence-led. They are designed to reverse documented national declines in breeding farmland bird populations and are calibrated to habitat structure, openness, and disturbance thresholds required for reproductive success. They are not generic grassland enhancement schemes; they are species-targeted interventions with measurable ecological objectives.

The presence of such stewardship agreements is therefore strong evidence that the land currently performs a defined ecological function of regional importance.

5.20.2 Structural Change Under Solar Development

The proposed development would introduce:

- Dense rows of photovoltaic panels across open fields;
- Perimeter security fencing;
- Internal access tracks and infrastructure corridors;
- Substation compounds and associated hardstanding;
- Increased vertical structures across previously open landscapes;
- Long-term fragmentation of field units.

These elements materially alter the physical and perceptual openness of the land. For species such as lapwing and skylark, which evolved in open, low-structure environments with wide sightlines for predator detection, the introduction of vertical elements and field fragmentation is ecologically significant.

Solar arrays convert large, contiguous open territories into compartmentalised environments. Even if ground cover remains vegetated, the structural envelope changes. Habitat suitability for open-country breeders depends not only on vegetation composition but on landscape geometry and visibility.

5.20.3 Species-Specific Functional Impacts

Lapwing

Lapwing require open landscapes with clear sightlines, short or patchy vegetation for nesting, and damp soils rich in surface invertebrates for chick feeding. Fragmentation and structural intrusion reduce habitat attractiveness and may increase perceived predator risk. Shading patterns and altered soil moisture dynamics beneath panels change invertebrate distribution and may reduce chick foraging efficiency. Disturbance during construction and operational phases further compromises breeding success.

Skylark

Skylarks depend on large, unbroken expanses of arable or open ground. They are sensitive to vertical structures and enclosure. The introduction of panel rows and fencing reduces effective territory size and may displace breeding pairs. Skylark plots within arable systems cannot be functionally replicated beneath industrial arrays without demonstrable evidence of comparable territory structure and nesting success.

Turtle Dove

Turtle doves require mosaic landscapes: open foraging ground, seed-rich margins, scrub nesting habitat, and access to clean water. Uniform under-panel vegetation and fragmented field patterns do not replicate this mosaic. Changes in ground flora composition and shading regimes may reduce seed availability. Infrastructure density increases disturbance and reduces suitability of open feeding areas.

5.20.4. Stewardship Objectives vs. Solar Habitat Claims

Agri-environment stewardship schemes are designed around measurable species outcomes, particularly breeding success and territory retention. Biodiversity Net Gain (BNG) metrics, by contrast, measure habitat area and condition scores rather than species-specific reproductive performance.

A development may technically deliver grassland units within a BNG metric while simultaneously reducing suitability for target farmland bird species. Habitat area and structural openness are not interchangeable metrics.

The critical examination question is therefore:

Has the Applicant demonstrated that the post-development environment will maintain or enhance breeding success for lapwing, skylark and turtle dove at least equivalent to current stewardship performance?

Absent species-specific modelling, breeding surveys under array conditions, and evidence from comparable large-scale installations, such equivalence cannot be assumed.

5.20.5. Functional Habitat Loss Despite Nominal Habitat Retention

The Scheme does not merely change land use from arable to grass. It transforms open, stewardship-managed farmland into an enclosed industrial landscape with persistent vertical infrastructure. For ground-nesting birds whose conservation prescriptions rely on openness and minimal structural intrusion, this constitutes functional habitat loss even if vegetative cover remains.

Where publicly funded stewardship land designed for farmland bird recovery is converted to solar infrastructure, the burden rests on the Applicant to demonstrate that conservation objectives will not be undermined. Replacement of targeted stewardship habitat with generic grassland beneath solar arrays does not demonstrate ecological equivalence.

5.20.6. Conclusion

The fields affected by the Scheme currently operate as active components of a species-specific farmland bird recovery framework. The proposed development introduces structural fragmentation, vertical intrusion, and long-term landscape modification incompatible with the ecological conditions under which these stewardship prescriptions were designed.

Without robust, site-specific evidence demonstrating maintenance of breeding territories and reproductive success for lapwing, skylark and turtle dove, the Scheme represents a loss of functional priority habitat rather than a neutral land-use change.

In ecological terms, the issue is not whether vegetation remains. It is whether the ecological function for which the land is currently protected can realistically persist under a fundamentally altered landscape structure.

Chapter 16: Ground Conditions

16.1 Executive summary and principal objection

The Applicant has not demonstrated that East Pye Solar can be constructed, operated and decommissioned without unacceptable effects arising from historic contamination, contaminant mobilisation, groundwater pathways, private water supplies, peat, ground instability and intrusive construction methods.

Chapter 16 is not founded on a comprehensive investigation of the land within the Order Limits. Its technical basis is a Phase 1 desk study and qualitative preliminary risk assessment, drawing heavily on published mapping, historic records and a sparse network of pre-existing boreholes. The Applicant accepts that representative ground-investigation information is available for only a small proportion of this geographically extensive Scheme. That was the reason the Planning Inspectorate rejected the original proposal to scope ground conditions out: historic workings had not been adequately considered, the risk across most of the site remained unknown, and there was insufficient information to exclude significant effects.

The final ES has not cured that evidential defect. It has supplemented the desk study, but still postpones the intrusive ground investigation, Phase 2 assessment, Foundation Works Risk Assessments, piling assessments and crossing-specific hydrogeological assessments until after consent. The Environment Agency’s own Relevant Representation confirms that further work remains necessary on piling and deep foundations, underground cabling, private and public water supplies, historic contamination and the adequacy of the proposed post-consent investigation and Foundation Works Risk Assessments. The ExA has now separately identified the same issue in ExQ1 Q1.16.1 and Q1.16.2, asking how a no-significant-effect conclusion can presently be supported where intrusive ground investigation and the principal foundation and hydrogeological risk assessments remain post-consent.

That deferral is critical because the outstanding matters do not concern minor construction detail. They determine whether driven piles, deep foundations, trenches and HDD may penetrate protective strata, mobilise existing contamination, create preferential pathways to the Chalk or Crag aquifers, affect private water supplies, disturb peat or require the deletion or redesign of parts of the Scheme.

Four central failures follow.

First, the contamination baseline is incomplete and artificially restricted. Only a small number of discrete sources are identified, RAF Tibenham is excluded on distance grounds, and the source-search methodology does not amount to an assessment of groundwater catchments or contaminant travel.

Second, there is no reliable site-wide hydrogeological model. The Order Limits extend across numerous sub-sites, cable corridors, river catchments and variable superficial deposits, but the assessment relies on regional mapping, historic

boreholes and broad assumptions about the continuity and protective function of Diamicton.

Third, the assessment relies on untested embedded mitigation and post-consent investigation to convert acknowledged uncertainty into a conclusion of no significant effect. A future investigation may refine design and mitigation; it cannot retrospectively supply the environmental baseline required to determine whether likely significant effects can presently be excluded.

Fourth, the assessment does not adequately test the actual worst-case construction envelope. The Scheme permits driven and screw piles, deep foundations, trenches up to 2 m deep, grouped trenches up to 7 m wide, HDD, pipe-jacking and substantial below-ground works. Those methods are capable of introducing, mobilising or transmitting contaminants, yet the detailed risk assessments remain deferred.

Chapter 16 nevertheless concludes that all residual ground-condition effects are minor adverse or negligible and not significant. That conclusion is not supported by the evidence and should be afforded no material weight.

16.2 Scope of the objection

This objection addresses the adequacy of the Applicant’s assessment of historic contamination, worked and potentially infilled ground, groundwater and surface-water pathways, private water supplies, peat, geotechnical uncertainty and intrusive construction methods.

It includes the former RAF airfields at Hardwick, Seething and Tibenham; potential PFAS, petroleum hydrocarbons, de-icers, metals, asbestos, radiological materials and unexploded ordnance; historic landfills, pits and refuse deposits; and the risk that construction or decommissioning may mobilise those materials.

It also addresses the vulnerability of the Chalk and Crag Principal Aquifers, Secondary A aquifers within alluvium, river terrace and sand-and-gravel deposits, private wells, boreholes and permitted abstractions, and the relationship between groundwater, ordinary watercourses, the River Tas, Hempnall Beck and groundwater-dependent habitats.

The objection further concerns construction-created pathways and pollution risks arising from driven and screw piles, deep foundations, trenching, HDD and pipe-jacking, launch and reception pits, dewatering, concrete and cement, drilling fluids and frac-out, disturbance of landfills or made ground, utility strikes, and the retention or removal of below-ground infrastructure during decommissioning.

Ground stability, peat, mineral sterilisation, contaminated spoil, remediation, monitoring and long-term liability are also addressed where they bear upon the acceptability or deliverability of the Scheme.

Chapter 16 cannot properly be read in isolation. The Applicant has divided closely connected matters between Chapter 9 on the water environment, Chapter 12 on noise and vibration, Chapter 15 on soils and agricultural land, Chapter 16 on ground conditions, and Chapter 18 on other environmental

matters. That division risks fragmenting the assessment. A contaminant source, a pathway created by piling or trenching, and a groundwater or private-water receptor form one source–pathway–receptor system. They must be assessed together.

The Environment Agency has itself identified inconsistencies between the significance matrices used in Chapters 9 and 16 and has stated that comparable impacts cannot be reliably evaluated between them. It also identifies omitted water-quality risks to private and public supplies and the potential for cable-trench materials and disturbed soils to act as preferential groundwater or contaminant pathways.

16.3 The assessment remains preliminary and desk-based

16.3.1 The Phase 1 assessment is not a site investigation

The technical assessment supporting Chapter 16 is principally desk-based. It relies on published BGS geological mapping, historic Ordnance Survey mapping, aerial photography, Groundsure datasets, historic BGS exploratory boreholes and water-well records, Environment Agency abstraction data, local authority private-water-supply records and a Tier 1 qualitative preliminary risk assessment.

Those sources may identify potential hazards and inform an initial conceptual site model. They do not establish the actual contaminant concentrations, soil and groundwater conditions, groundwater levels, continuity of low-permeability strata, presence of sand lenses, condition of private abstractions or location of unrecorded disposal areas across the final Order Limits.

No comprehensive intrusive investigation has been undertaken across the Scheme. The Applicant instead proposes that the post-consent investigation will inform later assessments, including Foundation Works Risk Assessments. Chapter 16 expressly records that the ground investigation and subsequent assessments are to be undertaken after consent.

The assessment is therefore preliminary in substance, irrespective of the confidence expressed in its final significance conclusions.

16.3.2 The original data gap remains unresolved

The Environment Agency identified substantial uncertainty across the majority of the site. It warned that the conceptual understanding was based on a limited set of historic exploratory-hole records, that the underlying Principal Aquifer and abstractions were sensitive receptors, and that pollutant pathways to deep groundwater could not be discounted. It recommended intrusive site investigation to characterise the ground and update the preliminary risk assessment.

The Planning Inspectorate reached the same essential conclusion. The Phase 1 information covered only a small proportion of the site, leaving an unknown risk

across the majority of the Scheme, and was insufficient to rule out significant effects.

The Applicant’s answer was not to undertake the recommended investigation before application. It undertook further desk-based analysis of Diamicton thickness and agreed that ground investigation could be secured post-consent through the Outline CEMP.

That does not resolve the original deficiency. It merely relocates the fact-finding exercise to a stage after the principle and extent of the development have been authorised.

A post-consent investigation may refine mitigation. It cannot retrospectively provide the baseline evidence required to establish whether likely significant effects can presently be ruled out. The August 2026 NPPF now states this requirement particularly clearly. National decision-making policy P2 requires sites proposed for development to be suitable for their proposed use taking account of ground conditions, contamination and land-instability risks, and expressly requires ‘adequate site assessment information, prepared by a competent person’ to be available to inform those considerations. The policy also places responsibility for securing a safe development on the developer and/or landowner. The NPPF is not the primary policy framework for this NSIP, but its current decision-making policy reinforces the same evidential distinction identified by PINS and the Environment Agency at scoping: later investigation may refine an established solution, but adequate information about the site must exist before a reliable conclusion can be reached on the acceptability of the development.

16.3.3 The local authority evidence confirms the uncertainty

Norfolk County Council’s LLFA identifies extensive uncertainty in the Applicant’s treatment of ground conditions and drainage. It notes that the Scheme extends across 33 sub-sites and 14 cable-route corridors, six river basins and variable ground conditions, yet some drainage conclusions rely on single or unidentified-location calculations. It also identifies contradictory statements as to whether infiltration is viable and says the evidence does not establish where infiltration will work or where runoff will discharge if it does not.

The LLFA’s concern is fundamental. Without site-specific investigation and infiltration testing, it is not possible to determine whether the geological and hydrogeological assumptions in Chapters 9 and 16 are representative of actual conditions at each sub-site and infrastructure location.

The Environment Agency’s examination-stage representation reinforces the same point. It continues to require further work on piling and deep foundations, cabling, private and public supplies, historic contamination and the adequacy of the post-consent investigation framework.

The Applicant’s conclusion of no significant effect therefore rests on conditions that have not yet been established.

16.4 Artificially narrow definition of ground-condition effects

16.4.1 Existing contamination is separated from new construction risks

Chapter 16 confines itself principally to existing contamination in the ground. The Applicant expressly states that only existing contamination is considered in this chapter and that physical changes to groundwater or surface-water pathways are addressed elsewhere.

That distinction is artificial. The environmental effect depends on the interaction between the existing ground and the Scheme. A contaminant may be harmless while undisturbed but become a material risk when piling, trenching, drilling, dewatering or excavation creates a new migration pathway. Equally, a utility strike, grout release, concrete bleed or drilling-fluid breakout may introduce new contamination into the same soil and groundwater system.

Anglian Water identified pressurised sewers and rising mains as potential contamination sources if struck during construction. The Applicant’s response was that the introduction of new contamination falls outside Chapter 16. That does not remove the risk. It demonstrates the defect created by dividing a single foreseeable pollution pathway between separate technical chapters.

The correct question is whether the authorised works can introduce, release or mobilise contaminants into soil, groundwater, surface water or a private supply. It is immaterial for environmental assessment purposes whether the contaminant was present before the Scheme or introduced by it. That approach is also consistent with the revised NPPF. Policy P3 requires development proposals to take account of the likely effects, including cumulative effects, of pollution on health, living conditions and the natural environment, whether those effects arise from the development itself or from pre-existing conditions in its vicinity. The Applicant’s methodological separation between existing ground contamination and contamination introduced or mobilised by construction therefore does not remove the need to assess the resulting source–pathway–receptor effect as a whole.

16.4.2 The source–pathway–receptor model must include scheme-created pathways

A lawful and technically coherent conceptual model must assess the full construction envelope, including driven and screw piles for the solar arrays; deep piled foundations for the BESS and substations; trenches up to 2 m deep; grouped trenches up to 7 m wide; HDD and pipe-jacking; launch and reception pits; dewatering; concrete, cement and grout; drilling fluids and frac-out; utility strikes; disturbed landfills and made ground; movement through sand-and-gravel horizons; and removal or disturbance during decommissioning.

The Scheme description assumes pile-driven or screw-mounted panel supports to a maximum depth of 4 m. Cable trenches may be up to 2 m deep and, where

multiple trenches are grouped, up to 7 m wide. HDD and pipe-jacking are proposed at sensitive crossings.

These works can create both vertical and lateral pathways. The Environment Agency has specifically warned that piled foundations may create contaminant-migration pathways to deeper groundwater and that HDD may introduce drilling fluids or mobilise contamination into controlled waters. It required Foundation Works or Piling Risk Assessments and hydrogeological assessment of sensitive trenchless crossings.

The Agency has also identified the blinding layer and disturbed backfill surrounding cable trenches as potential preferential flow paths for groundwater or mobile contamination.

Generic pollution-prevention measures do not answer those matters. They may reduce accidental releases, but they do not establish the absence, location or significance of source–pathway–receptor linkages. That requires site-specific ground and groundwater evidence before the effects can be reliably classified.

16.5 The contamination baseline is incomplete and methodologically constrained

16.5.1 Only eight sources are mapped across the whole Scheme

Figure 16.3 identifies only eight sources of potential contamination across the entire Order Limits and their immediate surroundings: former RAF Hardwick; former RAF Seething; Market Lane Pit; the former refuse tip at Site 4B; the landfill west of Shelton Airfield; Hempnall sewage works; the landfill off the B1135; and a vehicle-servicing and repair garage.

The objection is not simply that eight is a small number. It is that the result is produced by a constrained search methodology and by reducing complex historic land uses to isolated points or polygons. A former military airfield is not a single uniform source. Fuel storage, fire training, aircraft maintenance, bomb storage, hardstand drainage, demolition, tipping and ad hoc disposal may occur in different locations and create different contaminant profiles. Historic ploughing, infilling and land reworking may also have redistributed contaminated material beyond the apparent source boundary.

Figure 16.3 therefore gives a misleading appearance of precision. It does not demonstrate that the eight mapped sources are exhaustive, nor that contamination is confined within the polygons shown. It records only the sources found through the Applicant’s chosen screening exercise.

16.5.2 The 250 m source-search radius is not a hydrogeological assessment

The Applicant generally limits its search for potentially contaminative land uses to 250 m from the Order Limits. It also applies only a 250 m private-water-supply

and abstraction search around PV arrays and cable trenches, reserving a 1 km search principally for the BESS and substations on the assumption that those structures may require deeper foundations.

Those distances are database-screening conventions. They are not hydrogeological boundaries. They do not establish the direction or velocity of groundwater flow, the extent of an abstraction catchment, connectivity through fissured Chalk or granular Crag, or the influence of vertical pathways created by piling and drilling.

A credible assessment must distinguish between:

- the radial distance used to search records;
- the actual groundwater catchment;
- groundwater flow direction and gradient;
- geological and hydraulic connectivity;
- the zone of influence of a private or public abstraction;
- preferential pathways through granular deposits, disturbed ground, trenches or foundations.

The Applicant's own groundwater discussion recognises that flow through fissured Chalk can occur over distances substantially greater than 250 m. A fixed search radius cannot therefore be treated as evidence that a former airfield, landfill or other source outside that radius is irrelevant.

16.5.3 No sensitivity testing of the source inventory

The ES does not show how the identified source inventory would change if alternative source buffers, groundwater travel distances, abstraction catchments or plausible preferential pathways were applied.

That omission is material. RAF Tibenham is excluded because it is approximately 1.4 km from the Order Limits, while the underlying western Scheme area is associated with Chalk groundwater, private abstractions and deep or potentially piled infrastructure. The Applicant has not tested whether a hydrogeologically defined catchment would include Tibenham or identify further former military or waste-related sources.

The Applicant should be required to repeat the source review using credible groundwater travel zones and abstraction catchments, identify any additional sources, and explain whether the conceptual site model and significance conclusions would change. Without that sensitivity testing, the current list is not a robust contamination baseline. It is the product of an untested methodological assumption.

16.6 Former RAF Hardwick: Site 3 has not been adequately characterised

16.6.1 Historic military use is a material contamination source

Site 3 includes land associated with former RAF Hardwick. The Applicant identifies runways, aircraft hardstands, perimeter infrastructure, ammunition and bomb stores. The contaminants of concern include petroleum hydrocarbons, de-icers, metals, asbestos and PFAS. The assessment also acknowledges a limited potential for radiological and other contamination associated with ad hoc disposal of aircraft, ordnance or related materials.

The Environment Agency specifically identified the former Hardwick bomb-storage area beside the north-western boundary of Site 3A and within the central part of Site 3B. It required the Applicant to consider authorised and unauthorised disposal of aircraft, ordnance and other material, including possible radium-impacted ash.

These are known historic risk indicators, not speculative concerns. Yet there has been no comprehensive intrusive investigation of the bomb-storage, hardstand, disposal or downgradient groundwater areas. The Applicant has therefore identified a potentially serious source but has not established its location, extent, concentration or relationship with proposed piling and cable works.

16.6.2 The low-hazard classification is premature

The classification of former RAF Hardwick as a low-hazard source is not supported by an adequate factual baseline.

The ground has not been comprehensively investigated. Bomb and ammunition storage areas were present. UXO constraints remain. The Environment Agency has identified possible aircraft and ordnance disposal. The land has subsequently been demolished, cultivated and altered, potentially concealing or redistributing material. Nearby receptors include construction workers, residents, groundwater, watercourses and private supplies.

The Applicant’s classification therefore rests principally on assumptions about the likely extent and age of contamination, rather than testing. That is particularly unsatisfactory where the Scheme retains pile-driven supports to a depth of up to 4 m and other intrusive works within the former airfield landscape.

The Applicant also states that later ground investigation may lead to the use of non-penetrative foundations where necessary. That concession undermines its present conclusion. If later investigation may show that the assessed pile-driven solution is environmentally unacceptable, the current construction envelope has not yet been demonstrated to be acceptable.

South Norfolk Council likewise considers that former military sites have clear contamination potential, that excavation creates direct-contact and inhalation pathways, and that the Applicant has understated the human-health risk.

16.6.3 Site 3 lies within a wider legacy-land-use cluster

Former RAF Hardwick cannot be assessed as an isolated polygon. Figure 16.3 also identifies the historic landfill ‘Off West Side of Shelton Airfield Disused’ close to Site 3. The Environment Agency had to require that this landfill be expressly included because it had been omitted from the original scoping discussion. The recorded waste included inert, commercial and liquid-sludge material.

The Site 3 conceptual model must therefore consider interacting sources: former airfield uses, bomb-storage areas, potential disposal locations and the nearby landfill. It must also consider whether construction could connect those sources to groundwater or shallow drainage pathways.

The present source-by-source screening approach risks understating the combined uncertainty. Several individually classified ‘low’ sources may create a materially different risk when they occupy the same hydrogeological setting and are disturbed by a common construction programme.

16.6.4 Named private-water receptors require individual assessment

The assessment does not provide a clear receptor-specific analysis for the supplies serving or associated with Park Farm House, Park Farm Barns, Springwood Lodge, Frog Hollow and Shelton Farmhouse. Each should be identified by precise location, construction type, depth, abstraction horizon, current use and baseline water quality.

The Applicant should also identify any additional nearby wells, boreholes or abstractions contained in local authority, Environment Agency and BGS records. It should then assess the relationship between each receptor, the former RAF and landfill sources, the proposed works and the local groundwater regime.

No direct Site 3-to-River Tas contaminant pathway should be asserted without evidence. The Applicant principally associates Site 3 with the Hempnall Beck catchment. The stronger and properly evidenced concern is the risk to groundwater, private abstractions and connected local watercourses, together with the need to reconcile the wider relationship between Hempnall Beck, its tributaries and the Tas system.

16.7 Former RAF Seething: Site 10 is also under-investigated

16.7.1 The baseline identifies contaminative uses but provides no intrusive confirmation

Sites 10A–10E and CRC14 include land associated with former RAF Seething. The Applicant identifies runways, aircraft hardstands, perimeter roads, bomb-dump structures and former fuel-storage areas. The potential contaminant groups include hydrocarbons, de-icers, metals, asbestos and PFAS.

Those uses are materially different and should not be collapsed into one generic former-airfield source. Fuel storage may generate hydrocarbon and additive contamination; bomb and ammunition areas may contain explosive residues, metals and disposal material; aircraft-maintenance areas may contain oils, solvents and metals; drainage systems may have transmitted contamination away from the immediate activity area.

None of those potential hotspots has been comprehensively confirmed or delineated by intrusive investigation. The Applicant nevertheless assigns generally low or very-low risks.

A parcel-specific schedule is required for Sites 10A–10E and CRC14 identifying:

- the known or suspected historic activity;
- the likely contaminants;
- the investigation undertaken;
- proposed construction method and maximum depth;
- nearby groundwater and surface-water receptors;
- proposed mitigation;
- remaining uncertainty.

Without that breakdown, the assessment cannot show that each part of Site 10 is suitable for the works proposed.

16.7.2 Former-airfield risks cannot be reduced to one source polygon

The single polygon used for RAF Seething obscures the spatial distribution of risk. A former fire-training area, fuel store, bomb dump, hardstand drainage system and disposal area are not environmentally interchangeable. Each requires a distinct source–pathway–receptor analysis.

The Environment Agency initially criticised the omission of RAF Seething from the site description and required its groundwater risks to be assessed. The final ES identifies the airfield but does not fully resolve the concern. Recognition of a source is not the same as characterisation of its extent, chemistry and pathways.

The Applicant should therefore identify the former activity areas separately and assess whether the proposed arrays, cables, access works and foundations would intersect or lie downgradient of them.

16.7.3 Private-water-supply receptors around Site 10 remain unclear

All private supplies around Site 10 should be identified individually. The assessment must state whether each is a shallow well, a borehole into superficial deposits, a Crag abstraction, a deeper Chalk borehole, or a spring-fed or mixed supply.

That distinction is essential. Different supplies have different source zones, travel times, construction integrity and vulnerability. A shallow well may be affected by

near-surface mobilisation; a deeper borehole may be vulnerable through defective casing, annular leakage or construction-created vertical pathways.

The current dataset does not provide the receptor-specific evidence needed to rule out effects. An assumption that a supply probably abstracts from Chalk beneath Diamicton is not an adequate substitute for knowing its location, depth, construction and abstraction horizon.

16.8 RAF Tibenham has been excluded, not shown to be irrelevant

16.8.1 The exclusion is expressly based on distance

The Applicant states that RAF Tibenham has not been considered in Chapter 16 because it lies approximately 1.4 km west of the Scheme.

That is not a finding that Tibenham presents no risk. It is an exclusion produced by the Applicant’s search methodology. No groundwater-flow analysis, contaminant inventory or abstraction-catchment assessment is offered to demonstrate that the former airfield is hydrogeologically disconnected from the western Scheme area.

Distance alone is an inadequate basis for exclusion where the relevant receptors include Principal Aquifers and groundwater abstractions. The correct question is not whether Tibenham lies within a fixed radius, but whether contamination associated with it could enter the groundwater system or influence a receptor affected by the Scheme.

16.8.2 The omission is especially serious around Site 1 and the BESS/substation cluster

The western cluster contains Site 1, the BESS, the National Grid substation, project substations and grid infrastructure. Those works may involve large foundations, concrete construction and deep or piled foundation solutions. The same area contains private supplies and abstractions understood or assumed to draw from Chalk.

Yet Figure 16.3 maps no source of potential contamination in the entire western cluster. That apparent clean baseline is a consequence of excluding RAF Tibenham and restricting the source review, not a product of intrusive investigation.

This creates a circular assessment: no source is mapped because Tibenham is outside the chosen radius; no pathway risk is then identified because no source is mapped; and no further assessment is considered necessary because the resulting risk is said to be low.

That reasoning does not demonstrate environmental safety.

16.8.3 Required analysis

The Applicant should provide:

- a historic-land-use assessment of RAF Tibenham;
- a preliminary inventory of likely contaminants and source areas;
- an assessment of post-war use, demolition, disposal and fire-training activity;
- groundwater-flow and catchment analysis;
- assessment of potential pathways toward Site 1 and nearby abstractions;
- reasoned justification for any final exclusion based on hydrogeology rather than radial distance.

Until that work is completed, the absence of a mapped source around Site 1 cannot be relied upon.

16.9 The PFAS assessment is speculative and deferred

16.9.1 PFAS is acknowledged but not tested

The Applicant accepts that PFAS-containing aqueous film-forming foams came into use from the 1960s. It nevertheless considers PFAS hazards at the former airfields unlikely because RAF Seething closed in 1946 and RAF Hardwick closed in 1962. PFAS is then postponed for consideration during post-consent ground investigation.

That reasoning is insufficient.

Closure dates do not establish the absence of later storage, fire training, commercial use, disposal or imported contaminated material. Hardwick’s closure date coincides with the period when the Applicant says PFAS foams emerged. The Applicant has not provided a complete post-war operational, firefighting, demolition or disposal history for either airfield. Nor has it undertaken soil or groundwater sampling.

The conclusion that PFAS is ‘unlikely’ is therefore not evidence-based. It is a temporal inference made in the absence of testing. The later commitment to consider PFAS after consent confirms that the issue has not been resolved.

16.9.2 Targeted soil and groundwater testing is required

PFAS investigation should be targeted to the locations most likely to contain or transmit contamination, including:

- known or suspected fire-training areas;
- fuel-storage and handling areas;
- hangars and maintenance hardstands;
- drainage outfalls and soakaways;
- bomb and ammunition areas;
- suspected aircraft or materials disposal locations;
- downgradient groundwater points.

The assessment should include both soil and groundwater. It must identify the analyte suite, laboratory detection limits, sampling rationale, groundwater-flow assumptions and assessment criteria.

Testing should occur before the Applicant relies on the absence or low probability of PFAS in its significance assessment. A post-consent discovery that PFAS is present could affect foundation choice, spoil management, worker protection, groundwater mitigation and the developable extent of Sites 3 or 10. Those matters go to environmental acceptability, not merely construction detail.

16.10 Private water supplies: the receptor model is not reliable

16.10.1 The datasets are incomplete and partly inferred

At scoping stage, the Environment Agency identified 35 private water supplies within 250 m for which accurate locations and abstraction-stratum information were unavailable. It required the Applicant to determine their positions, identify the strata abstracted where possible and apply a reasonable worst case, including default SPZ1 protection, where information remained absent.

The revised assessment combines local authority private-supply records, BGS water-well records and Environment Agency abstraction data. The Applicant acknowledges possible duplication and, where one record contains depth or aquifer information and another does not, may assume that the information applies to both.

That approach may be useful for preliminary screening. It is not a reliable receptor model. The location, construction, depth and abstraction horizon of a private supply determine its actual vulnerability. Those facts cannot safely be inferred from a nearby or apparently duplicated record.

16.10.2 Wells and boreholes are not interchangeable

The ES does not adequately distinguish between:

- shallow dug wells;
- shallow boreholes abstracting from superficial deposits;
- deep Chalk boreholes;
- Crag abstractions;
- spring-fed or mixed supplies.

Those receptors behave differently. A shallow well may respond rapidly to near-surface contamination and agricultural drainage. A borehole into Crag may be vulnerable through permeable sand and gravel. A deep Chalk borehole may have a wider source catchment and may be affected through fissures, defective casing, annular leakage or vertical pathways created by foundations.

The absence of a distinction prevents a reliable assessment of travel time, dilution, attenuation and vulnerability. It also prevents the Applicant from defining proportionate monitoring and contingency measures for each receptor.

16.10.3 The conclusion that no supply lies near a mobilisable source is circular

The Applicant concludes that none of the potentially active supplies within the 1 km study areas lies within 1 km of an on-site source from which contamination could be mobilised by construction.

That conclusion depends on:

1. the narrow list of mapped sources;
2. the selected source-search buffers;
3. the exclusion of RAF Tibenham;
4. inferred abstraction horizons;
5. the general assumption that Diamicton protects deeper groundwater.

It therefore does not positively demonstrate that the supplies are safe. It restates the consequences of the Applicant’s own screening assumptions.

Where private supplies surround former airfields or major infrastructure, the Applicant must show the absence of a credible source–pathway–receptor linkage. It cannot achieve that by defining the source out of the study area and assuming the receptor is protected.

16.10.4 A receptor-specific schedule is required

For every potentially affected private or public supply, the Applicant should provide:

- a unique reference and address;
- verified coordinates;
- whether it is a well, borehole or spring;
- construction and casing details;
- total and screened depth;
- abstraction horizon;
- current status and use;
- baseline chemistry and yield;
- distance and direction from proposed works and identified sources;
- receptor-specific source–pathway–receptor analysis;
- monitoring, trigger levels and contingency measures.

Where the information cannot be obtained, the assessment must adopt a clearly stated reasonable worst case rather than assuming protection.

16.11 The geological and hydrogeological model is too uncertain

16.11.1 Principal Aquifers underlie much of the Scheme

Figure 16.2 shows that large parts of the Order Limits are underlain by Chalk or Crag Group bedrock. Both are classified as Principal Aquifers capable of

providing significant quantities of water and supporting surface-water and wetland systems.

These aquifers are not remote receptors. They underlie substantial parts of the authorised development, including areas containing substations, the BESS, solar arrays and cable routes. The groundwater body is also identified as the Broadland Rivers Chalk and Crag system, within which private and public abstractions occur.

The significance assessment therefore depends critically on whether the overlying superficial deposits genuinely isolate the works from those aquifers. That has not been demonstrated on a parcel-specific basis.

16.11.2 The superficial geology is heterogeneous

Figure 16.1 does not show a uniform low-permeability clay blanket. It shows Lowestoft Formation Diamicton together with alluvium, head, peat, river terrace deposits, Leet Hill Sand and Gravel and other granular deposits, particularly around watercourse valleys and the central Scheme corridor.

The Applicant classifies alluvium, river terrace deposits, Lowestoft sand and gravel and Leet Hill Sand and Gravel as Secondary A Aquifers. Those strata can support local water supplies and baseflow to rivers.

This heterogeneity matters because granular deposits may transmit groundwater and contamination laterally, while lenses within the Diamicton may create perched or partially connected groundwater systems. A scheme-wide assertion that shallow works remain within protective clay is therefore unsustainable.

16.11.3 Figure 16.4 does not establish a continuous protective barrier

Figure 16.4 plots approximate Diamicton thickness using sparse historic BGS boreholes. It does not provide a continuous investigated model across every sub-site, cable route or infrastructure location. Large areas remain without representative point control, and the recorded thickness varies across the Scheme.

A regional interpolation from historic boreholes cannot prove that a pile, trench, foundation or HDD bore at a particular location will remain within continuous low-permeability clay. Nor can it establish the absence of fractures, local thinning, granular interbeds or artificial disturbance.

The Environment Agency had previously identified errors in the Applicant’s interpretation of at least one borehole record and warned that inaccuracies could cause significant contaminant pathways to be overlooked. Further desk interpretation does not eliminate the need for site-specific verification.

16.11.4 The Applicant acknowledges water-bearing granular layers within the Diamicton sequence

Appendix 16.2 describes Lowestoft Formation Diamicton as variably sandy and silty clay and expressly states that bands of sand and gravel may occur within or above the general sequence and can be water-bearing.

That admission directly weakens the assumption that the Diamicton necessarily prevents lateral or vertical contaminant movement. A pile or trench need not penetrate the full thickness of the clay sequence to interact with a water-bearing lens, perched groundwater or a preferential flow horizon.

The correct conclusion is therefore not that the Diamicton proves isolation, but that its continuity, thickness and internal composition must be verified at the works locations before pathway risks can be excluded.

16.12 Pile driving and foundations are not adequately assessed

16.12.1 Driven piles form part of the assessed worst-case envelope

The Applicant proposes that solar mounting structures may be pile-driven or screw-mounted to a maximum depth of 4 m. Appendix 16.2 assumes the ‘mini-pile’ option as the standard basis of assessment.

Driven piling must therefore be treated as part of the reasonable worst-case construction envelope unless it is expressly prohibited by the DCO. It is not sufficient to point to screw piles, ballast or non-penetrative options that may later be selected. The environmental assessment must test the most intrusive authorised method.

Revision 2 reinforces that conclusion. Work No. 2 has been amended expressly to retain flexibility in the type of piling used for the BESS, including steel piling. The revised DCO therefore does not narrow the BESS foundation solution to one assessed construction technique. The Applicant must identify the maximum depth, diameter, density and installation method represented by the environmental assessment and demonstrate that every piling solution authorised by the revised Work No. 2 falls within that worst case.

This is particularly important at the former airfields, identified contamination sources, aquifer-sensitive areas and locations close to private water supplies.

16.12.2 Driven piles may create or extend contaminant pathways

Driven piles may:

- penetrate contaminated or made ground;
- transfer contaminated material vertically on the pile surface;
- connect perched groundwater with deeper granular units;
- puncture or locally compromise low-permeability horizons;
- create preferential flow paths around the pile;
- disturb UXO, buried aircraft material or unrecorded waste;
- transfer contaminated soil between locations through installation equipment.

Those mechanisms are not answered by saying that most piles will be only 4 m deep. Figure 16.1 shows heterogeneous superficial deposits, and Appendix 16.2 acknowledges water-bearing sand and gravel layers within or above the Diamicton.

At Sites 3 and 10, the risk is increased because the intrusive method would be used within landscapes containing identified former military sources whose actual extent remains unconfirmed.

16.12.3 Concrete, cement and grout create additional groundwater risks

The Applicant states that concrete or cement may be used for piled foundations at the BESS, National Grid substation and project substations and may also be used at trenchless crossings.

The assessment must therefore address:

- highly alkaline bleed water;
- uncured concrete entering groundwater;
- grout or cement loss into fissures or granular strata;
- changes to groundwater chemistry;
- storage and batching controls;
- spill and loss detection;
- emergency containment and remediation.

Those are foreseeable effects of the authorised construction method. They should not be left to generic method statements without first establishing whether sensitive aquifers or abstractions could be affected.

16.12.4 Foundation Works Risk Assessments are wrongly deferred

The Environment Agency expressly identified insufficient evidence to discount the risk that piling or deep foundations could create contaminant-migration pathways into deeper groundwater. It required Foundation Works or Piling Risk Assessments for the BESS, substations and any other deep-founded structures.

The Applicant proposes to undertake those assessments after consent, informed by a later ground investigation. The Environment Agency’s Relevant Representation confirms that further work remains necessary on piling and deep

foundations, historic contamination, private and public supplies and the adequacy of post-consent investigations and FWRAs.

That deferral is now more significant because the revised DCO expressly preserves additional foundation flexibility rather than selecting a less intrusive method before consent.

That is not a minor drafting issue. The FWRA will determine whether the foundations can be constructed as proposed, whether they require redesign, and whether parts of the authorised development are environmentally acceptable. The assessment needed to establish those matters cannot be wholly displaced into post-consent design.

16.12.5 South Norfolk Council's evidence demonstrates cross-topic harm

South Norfolk Council states that driven piles are unacceptable because of the noise and vibration they generate and recommends screw piles. It also requires site investigation at former military establishments and disagrees with the low human-health risk assigned to those areas because excavation creates direct-contact and inhalation pathways.

Those concerns arise under different technical headings but point to the same design conclusion. Driven piling has potential noise, vibration, contamination, groundwater, archaeological and ecological consequences. Chapter 16 cannot treat it solely as a generic foundation option whose acceptability will be determined later.

The availability of screw or non-penetrative foundations demonstrates that avoidance at source is possible. The Applicant should not retain the more intrusive method without first proving it acceptable.

16.12.6 Required control

The widening or preservation of piling flexibility in Revision 2 makes a binding control more, rather than less, necessary. Driven piling should be removed from the authorised envelope within former airfields, known or suspected contamination zones, peat, Principal or Secondary A aquifer-sensitive areas and defined private-water-supply protection areas.

Alternatively, the DCO must prohibit driven or deep foundations unless:

1. targeted intrusive investigation has been completed;
2. the contamination and hydrogeological conceptual model has been updated;
3. an FWRA has been approved following consultation with the Environment Agency and relevant local authority;
4. the assessment demonstrates no unacceptable effect on groundwater, private supplies, surface waters or human health;
5. objective criteria require screw, ballasted or other non-penetrative foundations where that demonstration cannot be made.

A requirement that merely promises later assessment is insufficient. The DCO must secure a clear prohibition and an enforceable environmental standard.

16.13 HDD and trenchless crossings remain unresolved

16.13.1 The Applicant recognises the risks but has not assessed them

Horizontal directional drilling and other trenchless methods are proposed at watercourse, ecological and infrastructure crossings. These methods may reduce direct surface disturbance, but they introduce distinct subsurface risks. The Environment Agency warned that HDD could introduce drilling fluids or mobilise existing contamination into controlled waters, particularly where drilling interacts with Principal or Secondary A aquifers, passes beneath watercourses or approaches sensitive ecological receptors. It required a hydrogeological risk assessment for such crossings.

Those risks include drilling-fluid breakout or ‘frac-out’; loss of grout or bentonite into fissures and granular deposits; disturbance of contaminated ground; altered groundwater flow; dewatering around launch and reception pits; and creation of preferential pathways between shallow groundwater, aquifers and surface waters.

The Applicant has not provided crossing-specific evidence sufficient to establish that these risks are not significant. It has instead retained the crossing method while postponing the necessary assessment.

16.13.2 Post-consent assessment ‘if required’ is not an adequate control

Chapter 16 states that where trenchless works interact with aquifers, watercourses or sensitive ecological receptors, a hydrogeological risk assessment will be undertaken ‘if required’ after consent.

That formulation is inadequate. It does not identify:

- who determines whether an assessment is required;
- the objective trigger for requiring one;
- the evidence and technical standard to be applied;
- whether the Environment Agency must approve the assessment;
- what happens if the crossing is found to be unacceptable;
- whether an alternative route or construction method remains available.

An assessment cannot be optional where the Applicant already knows that HDD will pass beneath sensitive receptors. Nor is a commitment to identify mitigation later equivalent to demonstrating now that the crossing is technically and environmentally deliverable.

Each material HDD or pipe-jacking crossing should be subject to a mandatory, crossing-specific hydrogeological assessment. The DCO must require avoidance or redesign where unacceptable risk cannot be excluded.

16.13.3 CRC7, Hempnall Beck and Fritton Grange Meadows require a crossing-specific assessment

CRC7 is particularly sensitive. The cable is proposed to pass beneath Hempnall Beck, mapped peat and Fritton Grange Meadows County Wildlife Site. The minerals assessment records that the HDD would pass beneath granular deposits, peat and the designated site, and accepts that the resulting mineral arisings would be mixed with drilling support fluids.

Natural England records that several SSSIs and ancient woodlands are hydrologically connected to the Order Limits and supports the Applicant's conclusions only on the basis that water-quality and pollution-prevention measures are secured. Norfolk County Council separately questions whether HDD is suitable at Fritton Grange Meadows, given the presence of flowing and standing water bodies and the wider hydrological setting.

The Applicant should therefore provide, during the Examination, a CRC7-specific assessment addressing:

- superficial and bedrock geology;
- groundwater levels, direction and connectivity;
- peat depth and hydrological dependence;
- drilling profile and minimum cover;
- drilling-fluid composition and pressure;
- probability and consequences of frac-out;
- launch and reception pit location;
- dewatering requirements;
- connection with Hempnall Beck and field drains;
- pollution-detection and emergency-response arrangements;
- alternative alignments and construction methods.

Until that assessment is supplied, the Applicant has not demonstrated that the proposed crossing can be constructed without unacceptable effects on peat, groundwater, Hempnall Beck or Fritton Grange Meadows.

16.14 Peat has not been consistently identified or protected

16.14.1 The extent and status of peat remain unclear

Chapter 16 identifies mapped peat beneath CRC7 and assumes that effects can be avoided because the cable will be installed beneath it using trenchless methods. Appendix 16.2 likewise treats the peat as a limited mapped deposit associated with the CRC7 crossing.

Natural England remains unsatisfied. It requires clarification as to whether peat soils occur elsewhere within the Order Limits and advises that identified peat should be avoided. It also notes possible deep permeable sandy and peaty soils affected by groundwater in the south-eastern part of the Scheme.

The Applicant has therefore not produced a reconciled account of:

- where peat occurs;
- whether it is peat as a superficial geological deposit, an agricultural soil resource, or both;
- its depth, condition and extent;
- whether it is groundwater-dependent;
- what construction exclusion is secured.

A mapped indication is not a sufficient peat baseline for a 60-year project.

16.14.2 Passing beneath peat does not eliminate hydrological effects

Norfolk County Council expressly seeks confirmation that construction beneath CRC7 will not allow the peat to dry, causing physical damage and carbon emissions. It also states that no infiltration testing or site-specific ground investigation has been undertaken and that the hydrogeological assumptions used by the Applicant cannot presently be verified.

HDD may avoid direct excavation through the peat, but it may still affect it through:

- dewatering at launch or reception pits;
- interception of groundwater feeding the peat;
- drilling-fluid loss;
- settlement;
- altered drainage;
- cable heat;
- damage to connected watercourses and field drains.

The Applicant’s conclusion depends on an assumption that physical separation equals hydrological protection. That assumption has not been demonstrated.

16.14.3 A complete peat assessment and avoidance strategy are required

The Applicant should provide:

- detailed peat mapping and depth survey;
- peat condition and composition;
- groundwater-level monitoring;
- identification of groundwater and surface-water inputs;
- assessment of HDD, dewatering and settlement;
- cable thermal assessment;
- oxidation and carbon-loss assessment;
- construction and restoration controls;
- long-term monitoring with trigger levels.

Avoidance must be the starting point. Where peat or its supporting hydrology cannot be protected with confidence, the cable route, launch pits or construction method must be changed. ‘Passing beneath’ the deposit is not proof that the peat will remain intact.

16.15 Human-health risk is understated

16.15.1 Former military sites create credible worker and resident exposure pathways

Chapter 16 considers inhalation, ingestion and dermal contact with existing contamination, but generally assigns low or very-low human-health risks to the former airfields.

That conclusion is premature. Former RAF Hardwick and RAF Seething contain or may contain bomb-storage areas, hardstands, fuel-handling areas, asbestos, hydrocarbons, metals, unexploded ordnance, possible aircraft-disposal material and potential radiological contamination. The location and extent of those materials have not been established by comprehensive intrusive investigation.

South Norfolk Council accepts that much of the long-used agricultural land may present a low risk. It does not accept that conclusion for the former military areas. It states that excavation and installation works create direct-contact and inhalation pathways and disagrees with the Applicant’s low human-health classification at the airfields.

The proposed works include pile driving, cable excavation, foundation construction, access works and later pile removal. These activities may bring workers and nearby residents into contact with material that is presently buried, bound or undisturbed.

16.15.2 Dust and contaminated-soil movement have not been adequately assessed

The assessment must address the complete chain of exposure arising from disturbed ground, including:

- contaminated dust generated during excavation and piling;
- spoil segregation and temporary storage;
- windblown material from stockpiles;
- mud and contaminated soil tracked onto roads;
- transfer through vehicles and machinery;
- worker inhalation and dermal exposure;
- effects on nearby residents and agricultural land;
- off-site transport and disposal;
- cross-contamination of clean topsoil and subsoil.

Generic dust suppression and personal protective equipment are not substitutes for identifying the contaminant, its concentration and the areas in which it may be encountered.

The Applicant should establish the baseline first and then specify risk-based controls. It has reversed that sequence by assuming standard construction measures will be sufficient before the source has been characterised.

16.15.3 An unexpected-contamination protocol cannot replace investigation

The Applicant relies on discovery protocols and future Phase 2 work if unexpected contamination is encountered. It also proposes that contaminant testing, including PFAS, will occur after consent.

A discovery protocol is appropriate for genuinely unforeseen material. It is not an answer to known former airfields, identified bomb stores, historic landfills and recognised disposal risks.

At those locations, contamination is not ‘unexpected.’ Its precise extent is unknown because the Applicant has chosen not to investigate it before consent. The DCO should not permit that absence of evidence to be converted into a low-risk conclusion.

16.16 UXO and radiological risks require more than generic CDM controls

The Applicant relies on UXO desk studies, future specialist assessment and duties under the Construction (Design and Management) Regulations 2015. Those measures are relevant to worker safety, but they do not resolve the environmental assessment.

The WR should distinguish between:

- managing the immediate risk of explosion;
- identifying contaminated soil and groundwater;
- determining whether ordnance, aircraft material or radium-impacted waste has been buried;
- preventing contaminant mobilisation;
- arranging lawful excavation and disposal;
- establishing whether the proposed foundation or cable design is feasible.

The Environment Agency specifically required consideration of authorised and ad hoc aircraft and ordnance disposal at RAF Hardwick, including possible radiological contamination. Compliance with CDM duties does not prove that such contamination is absent, that it will not be mobilised, or that environmental effects are insignificant.

Sites 3 and 10 therefore require parcel-specific UXO assessment before intrusive ground investigation and before any construction. The UXO and contamination investigations must be coordinated so that safety restrictions do not prevent representative sampling of the very areas most likely to contain contamination.

Where investigation cannot safely or adequately characterise an area, that uncertainty should lead to avoidance, not an assumed low-risk conclusion.

16.17 Utility strikes and buried infrastructure have been wrongly marginalised

16.17.1 Sewers and pressurised water infrastructure are foreseeable contamination pathways

Anglian Water identified rising mains and pressurised sewers as potential sources of pollution if struck during construction. The Applicant responded that the introduction of new contamination lies outside Chapter 16.

That answer is artificial and unacceptable. A strike to a sewage main during trenching, piling or access construction is a foreseeable source–pathway–receptor event. It may release sewage into soil, groundwater, field drainage and watercourses. Whether the pollutant existed before construction is irrelevant.

The assessment must identify:

- the location and depth of all affected pressurised assets;
- crossing and separation requirements;
- construction loading;
- ground-movement and vibration risks;
- isolation and emergency-response arrangements;
- pollution containment and remediation.

The issue cannot be dismissed simply by assigning it to another chapter.

16.17.2 The national gas transmission pipeline is a major ground and construction constraint

The interaction between the Site 7 haul-road strategy and the National Gas transmission pipeline is now an express Examination issue rather than simply a constraint identified by BEPS. At ISH1, BEPS asked how the proposed haul road through Site 7 would cross the high-pressure gas main. The Applicant did not provide the engineering solution. It referred instead to the protective provisions in the dDCO for National Gas and agreed to take away the technical question of how the crossing would actually be achieved. The transport consultant subsequently confirmed that the relevant internal haul routes are proposed for construction traffic. The existence of protective provisions therefore does not itself demonstrate the physical feasibility or environmental acceptability of the crossing.

The assessment should address:

- loading from HGVs and abnormal loads;
- temporary and permanent haul-road construction;
- excavation and trenching;
- piling and vibration;
- minimum separation distances;
- effects on pipeline coating and cathodic protection;
- interaction with electrical cables;

- continued inspection and maintenance access;
- emergency planning and isolation;
- National Gas protective provisions and technical approval.

This is not merely a utility-protection issue. It goes directly to ground stability, construction safety, route feasibility and the consequences of ground failure or asset damage.

No haul-road or intrusive work should be authorised across or beside the pipeline unless the Applicant has demonstrated an engineering solution acceptable to National Gas, including the design loading, crossing construction, protection measures, minimum cover/separation, inspection access and emergency arrangements. Protective provisions are a control mechanism; they are not evidence that an acceptable crossing design presently exists.

16.17.3 A consolidated utility-conflict schedule is required

The Applicant should provide one schedule identifying every material buried asset affected by the Scheme. For each asset it should state:

- owner and operator;
- location and depth;
- easement or protected zone;
- proposed crossing or adjacent work;
- construction method;
- required consent;
- protective provision;
- emergency response;
- residual risk.

Without that schedule, the assessment remains fragmented between utilities, transport, ground conditions and DCO protective provisions.

16.18 Ground stability and geotechnical uncertainty

The Phase 1 assessment identifies potential chalk dissolution, shrink–swell clay, running sand, compressible alluvium or peat, saturated granular deposits and possible sulphate attack on buried concrete. These conditions may affect trench stability, settlement, foundation choice, drainage and reinstatement.

The point is not that the Scheme has been proved geotechnically impossible. It is that the final foundation and construction methods depend on ground conditions that have not yet been established across most of the Order Limits.

That uncertainty is material because geotechnical and environmental risks interact. Running sand, granular lenses and groundwater may destabilise excavations and create pollutant pathways. Chalk solution features may affect foundations and facilitate rapid groundwater movement. Compressible peat or alluvium may settle when disturbed or dewatered. Sulphate-bearing soils may constrain concrete specification.

A comprehensive site-specific ground investigation is therefore needed to establish:

- foundation suitability;
- trench and pit stability;
- groundwater control;
- dissolution and settlement risk;
- material aggressivity;
- reinstatement requirements;
- whether the authorised construction envelope is deliverable.

The Applicant cannot rely on post-consent geotechnical design while simultaneously using assumed ground conditions to conclude that environmental effects are insignificant.

16.19 Mineral sterilisation: a secondary but unresolved issue

The minerals issue should be treated proportionately. Norfolk County Council, as minerals planning authority, considers that the Applicant has appropriately assessed mineral safeguarding and that impacts are limited. It accepts that post-consent investigation may inform management and reuse of excavated material.

That position should be acknowledged.

Nevertheless, Appendix 16.2 is expressly a first-stage qualitative desk study. It identifies safeguarded sand and gravel beneath parts of Sites 4, 5 and 7 and CRC6–8, and accepts that the Scheme will sterilise some of those resources for its operational life.

Three limited concerns remain.

First, describing sterilisation for up to 60 years as merely ‘temporary’ understates its practical planning duration.

Second, the occurrence of alluvium, river terrace deposits and Leet Hill Sand and Gravel confirms that the superficial geology is heterogeneous and locally permeable. That is more significant to the hydrogeological case than to mineral extraction.

Third, excavated sand and gravel, contaminated spoil and HDD arisings require clear separation, testing, reuse and disposal controls. Appendix 16.2 accepts that HDD arisings may be mixed with support fluids and unsuitable for reuse.

Mineral sterilisation is therefore not advanced as a fatal flaw, but the Applicant must secure appropriate material-management controls and avoid using the minerals assessment to support an oversimplified geological model.

16.20 Chapters 9, 15 and 16 are not adequately reconciled

The assessment divides a single physical system between several chapters:

- groundwater and hydrology between Chapters 9 and 16;
- peat between Chapters 15 and 16;
- contamination and soil-resource protection between Chapters 15 and 16;
- construction-created pollution between Chapters 9, 16 and 18;
- piling effects between Chapters 10, 12 and 16.

That division has produced inconsistencies in study areas, receptor treatment, significance criteria and baseline descriptions.

Norfolk County Council’s LLFA identifies errors in the treatment of Hempnall Beck and the wider River Tas catchment. It also confirms that field drains connected to the watercourse network are ordinary watercourses, requiring correction of the baseline.

The LLFA further states that:

- the geology and hydrogeology are variable;
- no site-specific ground investigation or infiltration testing has occurred;
- it is impossible to determine whether the assumptions in the FRA, Chapter 9 and Chapter 16 are representative;
- hydrological information is more developed in Chapter 16 than in the FRA and drainage assessment.

It also identifies internally contradictory positions on infiltration: the Applicant says infiltration is generally not viable, but elsewhere assumes that runoff from inverter units will percolate through the ground, without identifying where overflow would discharge if infiltration fails.

These are not editorial matters. They concern the direction and movement of water, the viability of drainage and the pathways by which contamination could reach receptors.

The Applicant should provide one reconciled ground–water conceptual model covering every sub-site and cable corridor. It should align geology, groundwater, surface water, drainage, peat, land drains, aquifers, abstractions and construction pathways, and apply consistent receptor and significance criteria.

16.21 Embedded mitigation is insufficiently specific

The Applicant relies extensively on embedded mitigation, but the existence of a future plan does not establish that an effect has been assessed or that the plan will be capable of making an unacceptable location acceptable.

Each proposed measure must answer four questions:

1. What identified risk does it address?

2. Where is it secured in the DCO?
3. What objective approval standard applies?
4. What happens if the investigation shows that the authorised design is unacceptable?

The present framework does not answer those questions adequately.

The outstanding measures include:

- intrusive ground investigation;
- Phase 2 contamination assessment;
- PFAS testing;
- Foundation Works Risk Assessments;
- piling risk assessments;
- HDD hydrogeological assessments;
- UXO assessment;
- private-water-supply investigation and monitoring;
- unexpected-contamination protocols;
- pollution prevention;
- soil segregation;
- remediation;
- waste and spoil management;
- decommissioning controls.

Several are expressly deferred. The FWRA is to be undertaken after consent and informed by later investigation. The HDD assessment is required only ‘if required.’ PFAS and potential effects on crops may be considered in a later Phase 2 assessment.

This framework permits the Applicant to obtain consent before establishing whether the most intrusive authorised methods are environmentally acceptable. It lacks clear prohibition criteria where mitigation cannot remove the risk.

16.22 Post-consent deferral goes to the heart of environmental acceptability

The matters left for post-consent determination include:

- actual ground conditions;
- contaminant concentrations and extent;
- PFAS presence;
- foundation method;
- need for non-penetrative mounting;
- piling and deep-foundation risk;
- HDD feasibility and frac-out risk;
- remediation;
- private-supply protection;
- treatment and reuse of some mineral arisings.

Those matters are not construction detail. They determine whether:

- the Scheme can be constructed safely;

- driven or deep piles can be used;
- Sites 3 and 10 are developable as proposed;
- private water supplies are protected;
- the CRC7 and other HDD crossings are viable;
- avoidance, rerouting or deletion is required.

The Applicant's own assessment states that a later investigation may cause non-penetrative foundations to be selected and that later FWRAs will determine the acceptability of deep foundations.

That is an admission that the environmental acceptability of the authorised envelope remains unresolved. The DCO should not authorise works first and determine their fundamental feasibility later.

Post-consent investigation is legitimate where it verifies and refines an already demonstrated solution. It is not legitimate as the primary means of discovering whether the land can safely accommodate the authorised development.

The ExA has now independently framed the same issue in ExQ1. Q1.16.1 asks the Applicant to explain how sufficient baseline information exists to characterise ground conditions, groundwater and contamination receptors and support a conclusion of no likely significant effects despite the absence of application-stage intrusive ground investigation and the reliance on post-consent investigation. Q1.16.2 then asks why it is appropriate to conclude that no likely significant effects would arise where Foundation Works Risk Assessments, hydrogeological risk assessments, detailed investigations, design refinement and other mitigation are proposed to occur post-consent. These questions go directly to the distinction made above. The issue is not whether further detail will be produced later; it is whether the outstanding work merely refines an already demonstrated acceptable solution, or is needed to determine whether an acceptable solution exists at all.

On the Applicant's own documents, several of the deferred activities fall into the latter category. Intrusive investigation may determine whether piling is acceptable; the FWRA may determine whether a deep foundation can be used without creating a contaminant pathway; hydrogeological assessment may determine whether an HDD crossing is viable; and further investigation may determine whether contamination requires remediation, avoidance or a different foundation solution. Those are matters capable of changing the development solution, not merely its detailed implementation.

The new Permitted Preliminary Works Environmental Management Plan does not remove this concern. Where preliminary works include intrusive investigation or other ground-disturbing activities, the DCO must ensure that those activities cannot themselves create the groundwater, contamination or preferential-pathway effects which the later investigation and FWRA are intended to assess. Preliminary status cannot make an environmentally consequential intrusive activity environmentally neutral.

16.23 The significance conclusions are not credible

Chapter 16 concludes that residual effects are minor adverse or negligible and not significant. It consequently proposes no additional mitigation.

That conclusion is not credible because:

- the Chalk and Crag Principal Aquifers are high-value receptors;
- private supplies are incompletely characterised;
- the contamination-source inventory is constrained;
- former airfields and landfills remain uninvestigated;
- pathway evidence is based on assumed geology;
- peat hydrology is unresolved;
- driven piling and HDD remain within the design envelope;
- essential investigation and mitigation are deferred.

The assessment repeatedly converts uncertainty into low magnitude. The correct conclusion from an unidentified source, uncertain pathway and sensitive receptor is not automatically ‘not significant.’ It is that the evidence is insufficient to exclude a significant effect. That is also difficult to reconcile with NPPF policy P2(3), which requires adequate site-assessment information to be available to inform the determination of ground-condition and contamination risk.

BEPS does not have to prove that contamination will occur. The Applicant bears the evidential burden of providing enough information for the decision-maker to identify likely significant effects and determine whether they can reliably be avoided or mitigated.

That burden has not been discharged.

16.24 Cumulative and in-combination effects

The cumulative assessment must address effects on shared aquifers, catchments and construction receptors arising from:

- other solar NSIPs;
- Norwich to Tilbury;
- grid-connection and substation works;
- highway and utility works;
- other development affecting the same groundwater body;
- repeated HDD and dewatering;
- cumulative sediment and pollution risk;
- cumulative pressure on private and public water supplies;
- overlapping construction and remediation activity.

Natural England confirms that Fritton Common, Pulham Market Big Wood, Shotesham-Woodton Hornbeam Woods, Shotesham Common, Hedenham Wood and Tindall Wood Ditchingham SSSIs, together with two ancient woodlands, are hydrologically connected to the Order Limits. Its agreement with the Applicant’s conclusions depends on the proposed water-quality mitigation being properly secured.

Those links make catchment-level assessment material. An effect need not arise at the boundary of a designated site to contribute to downstream or groundwater deterioration.

The cumulative assessment should therefore identify common groundwater bodies and surface-water catchments, overlapping construction periods, shared private-supply receptors and combined pollution or dewatering pathways. A list of projects followed by a conclusion of no significant effect is insufficient.

16.25 Application of the mitigation hierarchy

Avoid

Avoidance must be considered before investigation, management or remediation.

The Applicant should:

- remove Site 3 if contamination, UXO and groundwater risks cannot be satisfactorily resolved;
- exclude development from former airfield hotspots and suspected disposal areas;
- avoid peat and its supporting hydrology;
- avoid private-water-supply protection areas;
- avoid granular aquifer deposits where practicable;
- reroute HDD and cable works where risk is unacceptable;
- avoid buried utilities and the National Gas pipeline protection zone.

Avoidance at Site 3 must mean more than micro-siting between unidentified hotspots. If the former airfield cannot be sufficiently characterised or safely developed, the relevant parcel must be removed.

Minimise

Where development remains, the Scheme should use:

- screw, ballasted or non-penetrative foundations;
- reduced excavation depths;
- closed-loop drilling-fluid systems;
- clean and contaminated soil separation;
- restricted dewatering;
- groundwater protection and monitoring;
- site-specific construction controls.

The most intrusive method should not remain available merely because a less harmful alternative may later be chosen.

Remediate

Any remediation strategy must identify:

- remediation objectives;
- applicable soil and groundwater criteria;
- regulator approval;
- validation and verification;
- treatment and disposal routes;
- responsibility and funding;
- long-term liability.

Remediation must be shown to be technically feasible before it is relied upon to support consent.

Monitor

Monitoring must include:

- pre-construction soil and groundwater baselines;
- private-supply quality and yield;
- construction-phase groundwater and surface water;
- peat water levels;
- post-construction recovery;
- trigger thresholds;
- immediate corrective action;
- reporting and regulator access.

The principal submission is:

The Applicant treats investigation and remediation as substitutes for avoidance. At former airfields, peat, sensitive aquifers and private-water-supply zones, avoidance must come first.

16.26 Overall conclusion

First, Chapter 16 is founded on a preliminary desk study, sparse historic borehole information and incomplete private-water-supply data. It does not provide a verified site-wide baseline.

Second, the contamination assessment is artificially constrained. It reduces complex former airfields to generic polygons, uses narrow search buffers and excludes RAF Tibenham by distance rather than hydrogeological evidence.

Third, the Scheme retains construction methods capable of creating or extending contaminant pathways, including driven piles, deep foundations, trenches, HDD, dewatering and concrete or grout works.

Fourth, the investigation and risk assessments needed to determine whether those methods are acceptable are deferred until after consent. Those assessments may determine whether parts of the Scheme require redesign, non-penetrative foundations, rerouting or deletion.

Fifth, the conclusion that every residual ground-condition effect is minor or negligible and not significant is therefore unsupported. It should be afforded no material weight.

The Applicant has not demonstrated that the authorised development can be constructed across the proposed Order Limits without unacceptable risk to groundwater, private water supplies, human health, peat, connected water environments and the long-term condition of the land.

16.27 Remedies sought

A. Pre-consent evidence

Before the Examination closes, the Applicant should be required to provide:

- targeted intrusive investigation of all material development areas;
- a Phase 2 contamination assessment;
- soil and groundwater PFAS testing at former airfields;
- parcel-specific conceptual site models;
- a complete private-water-supply survey;
- groundwater-level and quality monitoring;
- a reconciled Chapters 9, 15 and 16 ground–water model;
- a hydrogeological assessment of RAF Tibenham.

B. Design avoidance

The Scheme should be amended to secure:

- removal or substantial reduction of Site 3 where risks remain unresolved;
- exclusion zones around former airfield hotspots and disposal areas;
- avoidance of peat and its hydrological support zone;
- protection zones around private supplies;
- rerouting of HDD, cables and access works where necessary;
- prohibition of development in unresolved contamination areas.

C. Foundations and piling

The DCO should prohibit driven piling within:

- former airfields;
- known or suspected contaminated land;
- peat;
- Principal or Secondary A aquifer-sensitive areas;
- private-supply protection areas.

No deep or piled foundation should proceed without completed intrusive investigation and an approved FWRA. The Requirement must compel screw, ballasted or non-penetrative foundations where acceptable risk cannot be demonstrated.

D. HDD and trenchless works

Every material trenchless crossing should require:

- a mandatory crossing-specific hydrogeological risk assessment;

- an approved frac-out response plan;
- defined drilling-fluid specifications;
- groundwater and surface-water monitoring;
- controls on launch pits and dewatering;
- alternative construction or rerouting where risk is unacceptable.

The phrase ‘if required’ should be removed.

E. Private water supplies

The Applicant should be required to provide:

- a named receptor schedule;
- verified location and construction details;
- pre-construction baseline sampling;
- construction monitoring proportionate to risk;
- water-quality and yield trigger thresholds;
- immediate alternative drinking-water provision;
- remediation and compensation;
- post-construction monitoring for an appropriate period.

F. Contamination and remediation

The DCO should secure:

- an approved remediation strategy;
- regulator consultation;
- verification and completion reports;
- an unexpected-contamination protocol;
- contaminated-soil segregation and handling;
- lawful treatment and disposal;
- clear liability through construction, operation and decommissioning.

G. Peat

The Applicant should be required to provide:

- detailed peat survey and mapping;
- hydrological and thermal assessment;
- avoidance of peat and its supporting groundwater;
- prohibition on uncontrolled dewatering or drying;
- water-level monitoring;
- restoration standards and trigger-based remedial action.

H. Utilities and buried infrastructure

The Applicant should provide a consolidated utility-conflict plan and secure:

- National Gas technical acceptance of the design, loading, protection, construction method and access arrangements for every haul-road, cable or other works crossing or approaching the transmission pipeline;

- protection of sewers, rising mains, water mains and other pressurised assets;
- minimum separation and loading criteria;
- asset-access arrangements;
- pollution and emergency-response procedures.

Unless the outstanding evidence is supplied and these controls are secured, the affected parcels and works should be removed from the Order or development consent refused.

Reasons the application should be rejected

The application should be rejected because the Applicant has not demonstrated that the Scheme can be constructed, operated and decommissioned without unacceptable risks to groundwater, private water supplies, human health, peat, connected water environments and the long-term condition of the land.

Chapter 16 is founded on a Phase 1 desk study, historic mapping and sparse pre-existing borehole records rather than a comprehensive intrusive investigation of the final Order Limits. The Planning Inspectorate originally required ground conditions to be scoped in because the available data covered only a small proportion of the Scheme and significant effects could not be ruled out. That central deficiency remains.

The contamination baseline is incomplete. Only eight sources of potential contamination are mapped across this very large scheme, despite the presence of former RAF Hardwick, RAF Seething, historic landfills, pits and potentially infilled ground. RAF Tibenham is excluded merely because it lies approximately 1.4 km from the Order Limits, not because the Applicant has demonstrated that it is hydrogeologically irrelevant.

The former airfields are materially under-investigated. The Applicant itself identifies hydrocarbons, de-icers, metals, asbestos, PFAS, ammunition and bomb-storage areas, possible aircraft or ordnance disposal, radiological contamination and UXO. Yet it assigns generally low or very-low risks without targeted soil or groundwater investigation. The Environment Agency specifically required assessment of the Hardwick bomb-storage and disposal areas, while South Norfolk Council disputes the low human-health classification for former military land.

The hydrogeological model is also too uncertain. Much of the Scheme is underlain by Chalk or Crag Principal Aquifers, while the superficial geology includes alluvium, peat, river terrace deposits and water-bearing sand and gravel as well as Diamicton. Figure 16.4 provides only sparse borehole-derived estimates of Diamicton thickness; it does not prove a continuous protective clay barrier beneath each pile, trench, foundation or HDD crossing.

Private water supplies have not been reliably characterised. The underlying records lack verified locations, construction details, depths and abstraction horizons in many cases. The Applicant combines and infers information from local authority, BGS and Environment Agency datasets, then relies on assumptions that supplies draw from deeper Chalk beneath protective

Diamicton. That is not a receptor-specific assessment and cannot establish that nearby wells and boreholes are safe.

The Scheme retains construction methods capable of creating new contaminant pathways, including driven piles to approximately 4 m, deep foundations, trenches, HDD, pipe-jacking, dewatering, concrete and grout works. The Environment Agency warned that piling could create pathways into deeper groundwater and that HDD could release drilling fluids or mobilise contamination into controlled waters. South Norfolk Council separately objects to driven piling because of its noise and vibration effects.

The Applicant’s answer is to defer the decisive work until after consent. Intrusive investigation, Phase 2 contamination assessment, PFAS testing, Foundation Works Risk Assessments, piling assessments, HDD hydrogeological assessments, remediation design and private-water-supply protection are all left wholly or substantially to later stages. Those matters do not merely refine construction detail. They determine whether piling can be used, whether Sites 3 and 10 are developable, whether HDD crossings are viable, whether private supplies are protected and whether parts of the Scheme must be rerouted or removed.

Peat and hydrological connectivity remain similarly unresolved. CRC7 is proposed beneath Hempnall Beck, peat and Fritton Grange Meadows County Wildlife Site. Natural England confirms that several SSSIs and ancient woodlands are hydrologically connected to the Order Limits, while Norfolk County Council questions whether HDD is suitable in this sensitive setting. Passing beneath peat does not itself demonstrate that dewatering, drilling-fluid loss, settlement, cable heat or altered groundwater flow will not damage it.

Chapter 16 nevertheless concludes that all residual effects are minor adverse or negligible and not significant. That conclusion is not supported by a verified baseline, a complete source inventory, a reliable site-wide hydrogeological model or assessed worst-case construction methods. It depends instead on assumptions, generic controls and future plans.

The defect is therefore fundamental. The Applicant seeks consent for intrusive works across former military land, Principal Aquifers, private-water-supply areas, peat and hydrologically connected landscapes before establishing whether those works are environmentally acceptable. Post-consent investigation cannot retrospectively supply the evidence needed to justify consent.

Unless the missing investigations are completed, the affected parcels removed or redesigned, and enforceable controls imposed on piling, HDD, peat, contamination, private supplies and buried infrastructure, the Secretary of State cannot be satisfied that the Scheme’s likely significant effects have been properly identified or can reliably be avoided. The application should therefore be refused.

Chapter 17: Electromagnetic Fields

17.1 Executive summary and principal objection

Chapter 17 does not provide a project-specific environmental assessment of electromagnetic fields. It is a high-level human-exposure screening exercise based principally on generic cable data and public-exposure reference limits. It does not model the actual East Pye electrical system, does not quantify EMF from the BESS or substations, does not provide receptor-specific exposure calculations, and does not undertake a coherent ecological EMF assessment.

The ExA has now independently identified the same evidential issue. ExQ1 Q1.6.3 requires the Applicant to explain the extent to which its conclusions rely upon scheme-specific assessment, modelling and design information rather than generic industry data, standard assumptions or published reference values. It specifically requests identification of the scheme-specific cable-design assumptions, current loads, infrastructure arrangements and receptor locations used in Appendix 17.1, together with any field measurements, modelling or calculations undertaken specifically for East Pye. Those questions go directly to the principal deficiency identified in this chapter.

The Applicant has therefore not demonstrated that the Scheme's extensive 132kV and 400kV infrastructure can operate for up to 60 years without significant effects on human health or ecology.

Five failures are central.

First, the assessment does not demonstrably comply with the Scoping Opinion. PINS required risks to both human and ecological receptors to be assessed, yet Chapter 17 confines its own methodology, significance assessment and residual-effects conclusion to human receptors.

Second, the assessment is generic rather than scheme-specific. It relies on 'typical' cable and overhead-line values from EMFS.info instead of modelling the actual East Pye cable circuits, loading, geometry, burial depths, substations, pylons and receptor locations.

Third, the human-health assessment is incomplete. Human sensitivity is reduced to 'Medium' because people routinely experience EMFs, without a proper distinction between children, vulnerable residents, users of public rights of way, workers or people with implanted medical devices.

Fourth, there is no coherent ecological EMF assessment. Bats, fish, white-clawed crayfish and aquatic invertebrates are absent from Chapter 17's receptor methodology, significance matrix and cumulative assessment, despite the exceptional ecological sensitivity of the Order Limits and the confirmed white-clawed crayfish population in the River Tas.

Fifth, mitigation and control are inadequate. The Applicant relies principally on a 15m overhead-line setback, cable insulation and CE/UKCA marking, with no EMF management plan, no baseline monitoring, no post-energisation verification, no ecological thresholds and no clear DCO control over future equipment or design change.

The 'Minor and Not Significant' conclusion is therefore unsupported.

17.2 The infrastructure that must be assessed

East Pye is not a single underground cable. It is a dispersed generating, storage and grid-connection system extending across a very large Order Limits area.

The EMF-generating infrastructure includes extensive underground cable networks operating between 33kV and 400kV; existing and diverted 400kV overhead lines; new pylons associated with the National Grid connection; Project Substations and the National Grid Substation; transformers, switchgear, inverters and conversion units; the BESS and its power-conversion equipment; and cable joints, terminations and associated sealing-end infrastructure.

Norfolk County Council confirms that the Scheme includes a new 400kV National Grid Substation at Site 1B, diversion of the existing dual-circuit 400kV overhead line and construction of up to four new pylons close to Great Moulton. Chapter 17 itself states that the assessment concerns 132kV and 400kV underground cables, existing and diverted 400kV overhead cables, Project Substations, the National Grid Substation and transformers.

Yet the technical assessment reduces that complex system to generic examples of an underground cable and an overhead line. It does not demonstrate the combined field environment created by multiple circuits, substations, inverters, BESS equipment, terminations and overhead-line works operating together.

The assessment must address the complete authorised electrical system. Generic examples cannot establish the effects of the development actually proposed.

17.3 Failure to comply with the Scoping Opinion

The Planning Inspectorate expressly refused to scope EMF out. It did so because of uncertainty surrounding cable design and proximity to receptors. It required the ES to address risks to both human and ecological receptors, take account of relevant technical guidance, and identify design measures to avoid likely significant effects in accordance with the DECC Voluntary Code of Practice.

Chapter 17 does not meet that requirement. Its own response states that a ‘high-level EMF assessment pertaining to human health’ has been undertaken, while ecological effects, including fish, are said to be considered elsewhere in Chapter 8.

That division does not discharge the Scoping Opinion.

Chapter 17’s assessment methodology scopes in only impacts to human receptors during operation. Its sensitivity criteria are framed around people and equipment. Its magnitude criteria ask whether ‘a person’ would be exposed above or below human-health limits. Its residual-effects table contains only ‘Human receptors’. Its cumulative assessment is likewise confined to human exposure.

Ecological receptors are therefore absent from:

- the receptor classification;
- the magnitude criteria;
- the significance matrix;
- the assessment of likely effects;
- the residual-effects table;
- the cumulative assessment; and
- the mitigation conclusions.

A cross-reference to Chapter 8 is not enough. The Applicant must identify precisely where each ecological EMF receptor is assessed, what exposure metric is used, what field strength is predicted, what significance methodology is applied, and how those conclusions informed Chapter 17. No such reconciliation is provided.

The Scoping Opinion has therefore not been demonstrably satisfied.

17.4 Appendix 17.1 is only a high-level screening assessment

Appendix 17.1 confirms the limited nature of the exercise. Its stated purpose is to assess EMF from the Scheme ‘with respect to safe levels for human exposure’.

That is a compliance-screening exercise, not a comprehensive EIA.

A compliance screen asks whether generic field values are above or below general public reference levels. A lawful EIA must identify the actual sources, actual receptors, exposure pathways, magnitude, duration, cumulative effects, uncertainty and secured mitigation for the development being authorised.

Appendix 17.1 largely undertakes the former. It applies generic field values to generic infrastructure, compares them with ICNIRP reference levels, and assumes that transformers and substations will be less significant because they will be enclosed and CE/UKCA marked.

It does not provide:

- East Pye-specific source modelling;
- receptor coordinates;
- predicted values at actual homes or public rights of way;
- field contours around substations or the BESS;
- ecological exposure calculations;
- monitoring or validation proposals; or
- enforceable performance limits.

The Applicant has therefore presented a high-level compliance note as if it were a full environmental assessment.

17.5 No scheme-specific EMF model

Chapter 17 relies on ‘typical’ field values sourced from EMFS.info. The figures adopted are:

- 95 µT directly above a generic 400kV underground cable;
- approximately 81–82 µT beneath a generic 400kV overhead line;
- approximately 10–10.6 kV/m beneath that overhead line; and
- a reduction below 5 kV/m within 15m.

Those figures do not constitute a model of East Pye.

The assessment does not disclose:

- the actual conductor configuration;
- maximum operating current and power flow;
- cable spacing, phasing and bonding;
- burial depth at each relevant section;
- the number of circuits within each corridor;
- cable arrangements at joint bays and terminations;
- overhead-line geometry following diversion;
- pylon type and conductor clearance;
- conductor sag and topographic effects;
- simultaneous operation of adjacent sources;
- worst-case operating and fault conditions;
- receptor coordinates; or
- predicted electric and magnetic field values at those receptors.

The report also assumes that the Project Substations, National Grid Substation and transformers will produce lower fields because they are enclosed and CE/UKCA marked. That is not a calculation. Product conformity marking does not quantify the field environment around a major 400kV substation, BESS or transformer compound.

The Applicant has compared generic infrastructure against generic limits. It has not modelled the development for which consent is sought.

This is now a specific Examination issue rather than simply a BEPS criticism. ExQ1 Q1.6.3 asks the Applicant to identify all scheme-specific information actually used in Appendix 17.1, including cable-design assumptions, current loads, infrastructure arrangements and receptor locations, and separately to identify any East Pye-specific field measurements, modelling or calculations. The answer to that question is critical. If the principal numerical results continue to derive from generic published examples rather than the actual authorised cable configurations and maximum operating conditions, compliance of those generic examples cannot by itself establish the field environment created by East Pye.

17.6 The 400kV underground cable result lies close to the cited public reference level

Chapter 17 predicts a magnetic field of 95 µT at 1m above ground directly over the centreline of a 400kV underground cable. The reference level used is 100 µT.

That is only 5 µT, or 5%, below the cited reference level.

The chapter nevertheless classifies the magnitude as ‘Low’ and the effect as ‘Minor and Not Significant’. That conclusion is not self-proving merely because 95 is numerically less than 100.

The Applicant has not explained:

- what precise cable arrangement produces the 95 µT figure;
- whether it represents one circuit or multiple circuits;
- whether maximum current loading was used;
- whether the figure covers joint bays, terminations or cable bunching;
- whether design tolerances and future replacement equipment were included;
- whether adjoining circuits may combine to exceed the reference level;
- what values are predicted at each public right of way, workplace and dwelling; or
- why no setback is required from underground 400kV cables despite the narrow margin.

The assessment also states that underground cable magnetic fields fall to approximately zero within 20m, but provides no East Pye-specific contours to demonstrate that result for the actual cable configuration.

A generic result only 5% below the public reference level used in the assessment cannot support a categorical no-significant-effect conclusion without scheme-specific modelling and sensitivity testing.

17.7 Overhead-line electric fields are acknowledged to exceed the reference level

The Applicant accepts that electric fields beneath a 400kV overhead line may reach approximately 10–10.6 kV/m. That is more than twice the 5 kV/m public reference level used in the assessment.

The entire conclusion depends on a claimed reduction below 5 kV/m at 15m.

That reliance is inadequately evidenced. The assessment provides:

- no receptor-by-receptor calculation;
- no map demonstrating that the setback is achieved throughout the Order Limits;
- no precise predicted value at 15m;
- no allowance for different pylon geometry, loading, conductor sag or topography;
- no clear definition of whether the 15m is measured from the conductor, centreline, pylon or easement;
- no secured DCO provision excluding sensitive uses within that distance; and
- no monitoring requirement to verify compliance after energisation.

South Norfolk Council has expressly challenged these omissions. It requires calculations demonstrating that EMF will be reduced below 4 kV/m, actual predicted values at relevant receptors, evidence supporting the claimed 10 kV/m

and below-5 kV/m figures, and calculations supporting the conclusion that the magnitude is Low and the effect Minor.

Those requests go to the heart of the assessment. Until they are answered, the 15m setback is an unsupported assumption, not demonstrated mitigation.

17.8 No measured baseline and circular treatment of existing infrastructure

Chapter 17 contains no measured EMF baseline. It states that the assessment is limited to desk-based analysis, that no site surveys have been undertaken, and that none are proposed. The existing baseline is derived from aerial and street-view imagery.

That material cannot establish electric or magnetic field strength.

The chapter then assumes that the existing 400kV overhead infrastructure has no significant effect because it already forms part of the baseline. That reasoning is circular. An existing source remains part of the exposure environment. Its presence before the Scheme does not demonstrate that its effects are negligible, safe or incapable of combining with new infrastructure.

The Scheme will connect into and alter that existing network. It includes diversion of the existing dual-circuit 400kV overhead line, a new National Grid Substation and up to four new pylons near Great Moulton. New conductors, changed line geometry, altered clearances and future power flows may materially change the field environment. The Applicant cannot treat the existing infrastructure as harmless and then rely on it as the receiving system for the Scheme without measuring or modelling the resulting combined exposure.

Baseline measurements should therefore be undertaken at representative dwellings, public rights of way, workplaces and ecological crossing locations. The same locations should be tested after energisation, with enforceable action where predicted levels are exceeded. Without measured baseline and verification data, the assessment remains assumption-led.

17.9 Human receptor sensitivity is understated

Chapter 17 classifies humans, pacemakers and implanted cardiac defibrillators together as receptors of only medium sensitivity because people routinely experience varying EMFs within a regulated environment.

That classification assumes the conclusion it is meant to assess. Routine exposure to EMF does not establish that every person, exposure duration or receptor circumstance has the same sensitivity. Nor does it justify treating implanted medical devices as equivalent to the general population.

The methodology does not distinguish:

- children or vulnerable residents;
- prolonged residential exposure;
- people with implanted medical devices;

- workers operating close to substations, cables or overhead lines;
- repeated use of public rights of way above or beside cable corridors; or
- agricultural and maintenance workers exposed over the operational life of the Scheme.

South Norfolk Council has independently challenged the classification and asked the Applicant to justify why human health is treated as only medium sensitivity.

The objection is not that harm below regulatory limits has been proved. It is that the sensitivity classification is inadequately reasoned and materially affects the significance outcome. By assigning all human receptors a medium sensitivity before calculating exposure at actual locations, the Applicant suppresses the potential significance of effects in advance.

The revised NPPF reinforces the need for receptor sensitivity to be considered expressly. National decision-making policy P3 requires development proposals to take account of likely effects, including cumulative effects, on health and living conditions and requires consideration of the sensitivity of the surrounding population, expressly identifying groups which may be particularly vulnerable, including children and older people. The NPPF does not establish a separate EMF exposure standard, and EN-5 remains the principal national policy on power-frequency EMF, but P3 reinforces BEPS's narrower methodological point: potentially vulnerable receptors should not simply disappear within a single undifferentiated 'medium sensitivity' population category.

17.10 Sensitive human receptors and receptor mapping

Chapter 17 acknowledges that limited parts of CRC2, CRC4 and CRC6 lie close to residential dwellings and that public rights of way and permanent workplaces exist within the Order Limits. It nevertheless provides no receptor schedule, no mapped exposure results and no predicted electric or magnetic field value at any identified receptor.

A complete assessment should map and evaluate:

- dwellings near CRC2, CRC4 and CRC6;
- residential receptors around Site 1B and Great Moulton;
- public rights of way crossing or following cable corridors;
- permanent workplaces;
- locations regularly used by children;
- receptors involving implanted medical devices where relevant;
- maintenance workers; and
- agricultural land users.

This is particularly important at Great Moulton. Norfolk County Council records that the selected National Grid Substation location brings the substation and additional pylons closer to the village and raises wider health and mental-health concerns for affected residents.

The Applicant cannot answer those concerns by asserting a general 15m separation. It must identify each representative receptor, specify the distance and geometry used, and provide the predicted electric and magnetic field at that location under the worst authorised operating condition.

17.11 Substations, transformers, inverters and the BESS are not quantified

Chapter 17 assumes that the Project Substations, National Grid Substation and transformers will produce lower fields than cables and overhead lines because the equipment will be enclosed and CE or UKCA marked. Appendix 17.1 repeats that assumption.

That is not an EMF assessment.

CE and UKCA marking concern product conformity and electromagnetic compatibility. They do not quantify public or ecological exposure around a major substation or BESS compound. Nor do they demonstrate the combined fields from transformers, switchgear, busbars, inverters, converters, cabling and auxiliary equipment operating together.

The chapter provides no:

- equipment source inventory;
- transformer, inverter or switchgear ratings;
- maximum operating currents;
- field contours around the National Grid Substation or Project Substations;
- BESS-specific modelling;
- predicted values at nearby receptors;
- combined-source assessment; or
- performance control for replacement equipment.

The BESS is particularly poorly addressed. It contains substantial power-conversion and electrical equipment, yet no separate EMF prediction is given for the batteries, inverters, transformers or associated cabling. The Scheme may operate for 60 years, during which equipment may be replaced several times, but no DCO limit requires replacement plant to meet a defined EMF performance standard.

ISH1 has since confirmed that important elements of the electrical design remain unresolved. The Applicant explained that the 132kV and 400kV Project Substations retain flexibility between air-insulated switchgear and gas-insulated switchgear and that the final technology would be selected only at detailed-design stage, taking account of matters including procurement and equipment availability. The Applicant stated that whichever option represented the reasonable worst case for a particular environmental receptor had been assessed. The ExA nevertheless asked for further explanation of how the alternatives had been considered, and BEPS pointed out that the reasonable worst case may differ between receptors and species.

That clarification strengthens rather than removes the need for an auditable EMF envelope. Where two materially different electrical configurations remain available for consent, the Applicant should identify which configuration is the EMF reasonable worst case, the electrical assumptions on which that conclusion rests, and whether the selected detailed design is required to remain below that assessed envelope. A general assertion that the worst case has been assessed

cannot substitute for identifying the source configuration and predicted field values.

The Applicant should provide source inventories, equipment ratings, maximum current assumptions, EMF contour plans and receptor-specific predictions for every major electrical compound. Equivalent limits must apply to both original and replacement equipment.

17.12 Ecological EMF assessment is missing or fragmented

The project-wide evidence establishes an ecologically sensitive receiving environment and material baseline uncertainty.

South Norfolk Council records ten bat species within the Order Limits and describes the site as nationally important for its bat assemblage. It identifies widespread barbastelle activity and states that 12 barbastelle maternity-colony Core Sustenance Zones overlap the Order Limits. It also requests further surveys of adjacent woodlands.

Natural England retains an amber issue concerning protected-species licensing, including roosting bats, water vole, otter and great crested newts. The River Tas evidence identifies a confirmed breeding population of white-clawed crayfish at Saxlingham Thorpe and challenges the Applicant’s aquatic baseline.

Despite that context, Chapter 17 contains no ecological receptor methodology. Its sensitivity categories, magnitude criteria and residual-effects table concern only people and equipment. There are no ecological field thresholds, habitat-specific contours, watercourse-crossing calculations or species-specific significance criteria.

The issue is not that EMF harm to every species has already been established. The issue is that PINS expressly required ecological receptors to be assessed, yet the Applicant has converted uncertainty into a no-significant-effect position without providing the analysis needed to support it.

That requirement is also consistent with the current EN-5. Paragraph 2.9.47 expressly recognises that electric and magnetic fields can have direct and indirect effects not only on human health but on ‘aquatic and terrestrial organisms’. The policy therefore does not support treating EMF solely as a human public-exposure issue. At the same time, EN-5 paragraphs 2.10.11–2.10.13 make clear that compliance with the current public-exposure guidelines is central to the human-health mitigation framework. These are different questions: demonstrating compliance with human public-exposure guidance does not itself constitute an ecological effects assessment.

A cross-reference to Chapter 8 does not cure that defect unless the Applicant identifies the relevant ecological receptors, quantifies their exposure and shows how the ecological findings informed the EMF significance conclusion.

17.13 Barbastelle bats and other bat receptors

The bat baseline is exceptional. Ten species have been recorded; barbastelle activity is described as widespread; and South Norfolk Council identifies 12 maternity-colony Core Sustenance Zones overlapping the Order Limits. These are not incidental receptors.

The Scheme places underground cables, substations, overhead-line works and other electrical equipment across a landscape structured by woodland, hedgerows and established bat commuting and foraging routes. Yet Chapter 17 contains no mapping of electrical infrastructure against roosts, Core Sustenance Zones or flight corridors, and no calculation of the fields within those habitats.

Earlier BEPS scoping evidence expressly raised EMF effects on bats and requested that they be assessed. The final ES has not provided a transparent species-specific response.

The Applicant should be required to:

- map all high-voltage infrastructure against known and potential roosts, Core Sustenance Zones, woodland edges and commuting corridors;
- calculate maximum electric and magnetic fields within those habitats;
- review the relevant scientific evidence through a suitably qualified bat ecologist;
- explain whether effects can reliably be excluded for each relevant species; and
- apply avoidance, rerouting or increased separation where uncertainty remains.

BEPS does not need to prove that a particular field strength will repel bats. The burden lies on the Applicant to show, through competent evidence, that the Scheme will not materially affect nationally important bat assemblages.

17.14 Fish, white-clawed crayfish and aquatic receptors

The River Tas evidence identifies a confirmed breeding population of white-clawed crayfish at Saxlingham Thorpe. It records repeated confirmation between 2020 and 2022 and challenges the Applicant’s statement that no records were found within the relevant search area. It also identifies potential downstream pathways and a possible population in Hempnall Beck.

Norfolk County Council states that the absence of signs during a walkover cannot confirm absence and requires robust biosecurity, pollution prevention and sediment controls because of the species’ vulnerability.

Chapter 17 provides no aquatic EMF assessment. It does not identify:

- high-voltage crossings of the River Tas, Hempnall Beck or connected watercourses;
- the cable burial depth or circuit arrangement at those crossings;
- magnetic field strength within the bed, banks or water column;
- exposure of fish, lamprey, crayfish or aquatic invertebrates;

- combined fields where multiple circuits cross; or
- whether deeper burial, avoidance or route relocation is required.

The methodology is fundamentally mismatched to these receptors. A human public-exposure limit measured at 1m above land cannot determine effects on organisms living in or on a riverbed immediately above buried cables. The Applicant must undertake crossing-specific aquatic modelling and ecological assessment before no significant effect can be concluded.

17.15 Agricultural animals and land users

Earlier scoping representations also requested consideration of animals using cable corridors and land beneath overhead lines. Chapter 17 does not address them.

The Applicant should clarify:

- whether livestock grazing is proposed anywhere within the operational Scheme;
- the exposure of livestock and wildlife using cable corridors;
- potential effects at water troughs, fences and other conductive infrastructure;
- whether induced or contact-current risks arise in any relevant configuration; and
- the exposure of agricultural workers entering operational areas.

This is a secondary issue, but it cannot simply be omitted where agricultural land remains accessible or in active use around live electrical infrastructure.

17.16 Construction and decommissioning are improperly scoped out

Chapter 17 scopes construction and decommissioning out because the new cables will not be energised during those phases. That is too broad.

Construction will occur in proximity to existing energised 400kV infrastructure. It will also involve commissioning, testing and staged energisation. During operation there will be maintenance and replacement works around live equipment. At decommissioning, Chapter 17 itself states that the National Grid Substation and Grid Connection Infrastructure will remain in situ.

The assessment therefore fails to consider:

- works near existing live overhead lines;
- commissioning and energisation stages;
- phased operation;
- maintenance and equipment replacement;
- partial decommissioning while retained infrastructure remains live; and
- worker exposure during those activities.

The categorical statement that there will be no construction or decommissioning EMF effect is not supported by the Scheme description.

17.17 Inadequate cumulative assessment

Chapter 17 treats cumulative effects as materially relevant mainly where cables occupy the same trench. It identifies one development near Tivetshall St Margaret and then discusses exposure from household appliances. Appendix 17.1 similarly reduces cumulative exposure to generic source addition and domestic appliances.

That is artificial and incomplete.

The cumulative assessment should consider:

- simultaneous fields from multiple East Pye circuits;
- underground cables, overhead lines and substations affecting the same receptor;
- the existing 400kV network together with its proposed diversion;
- the National Grid Substation and Project Substations;
- BESS and inverter compounds;
- nearby solar, BESS and grid projects;
- ecological receptors affected at several crossings or infrastructure locations; and
- cumulative exposure at homes, workplaces and public rights of way.

Norfolk County Council identifies an exceptional concentration of proposed electricity infrastructure in South Norfolk, including Tasway Energy Park and Norwich to Tilbury, alongside East Pye and other major schemes.

The Applicant must therefore assess the actual project and regional infrastructure environment. Discussion of vacuum cleaners and household appliances does not answer the cumulative question raised by multiple 400kV assets, substations, BESS infrastructure and overlapping energy projects.

17.18 Mitigation is assumed rather than secured

The mitigation case is little more than a series of assumptions. Chapter 17 relies on a 15m setback from 400kV overhead lines, insulation and sheathing around underground cables, the conducting effect of surrounding soil, CE or UKCA marking, and the assertion that no other mitigation is required.

That is insufficient for a 60-year NSIP containing multiple 132kV and 400kV circuits, substations, transformers, inverters, BESS equipment and diverted overhead infrastructure.

The chapter contains no EMF management plan, no receptor-specific exposure limits, no route-specific separation standards for underground cables, no ecological mitigation, no validation testing, no monitoring regime, no trigger levels and no remedial procedure. It also contains no control over replacement equipment during the operational life of the Scheme.

The 15m overhead-line setback is especially weak. It is treated as the principal design response to electric fields that the Applicant accepts may exceed the 5 kV/m reference level directly beneath the line, yet Chapter 17 does not identify

an explicit DCO requirement securing that distance. Nor does it define how the 15m is to be measured or prevent later detailed design from reducing it.

The reliance on cable insulation and soil is equally generic. It addresses external electric fields from underground cables, but does not resolve magnetic fields, combined fields from adjacent circuits, joint bays, terminations or the 95 µT result directly above a generic 400kV cable.

CE and UKCA marking do not cure these deficiencies. They concern equipment conformity and electromagnetic compatibility; they do not impose project-wide receptor limits or demonstrate that the completed East Pye system will avoid significant human or ecological effects.

The mitigation hierarchy has not been applied. Avoidance and rerouting have not been tested against actual exposure results because those results have not been produced. The Applicant has assumed that generic compliance will remove the need for mitigation, rather than demonstrating that the Scheme has first avoided and then minimised effects.

17.19 Internal errors and inconsistencies undermine confidence

Chapter 17 contains material internal inconsistencies.

It states that human receptors are of medium sensitivity, but Table 17.7 records them as high sensitivity. The same table describes both the magnitude and the effect as ‘Minor’, even though the chapter’s own magnitude categories are High, Medium, Low and Negligible.

The text refers to ‘measured’ field strength, although no site measurements were undertaken and none are proposed. The assessment is expressly desk-based.

EMF effects are described as temporary because they last only for the duration of the Scheme, despite an operational period of up to 60 years. The chapter also says it assesses construction, operation and decommissioning, while construction and decommissioning are in fact scoped out.

There are also discrepancies between Chapter 17 and Appendix 17.1. The chapter refers to approximately 81 µT and 10 kV/m for overhead infrastructure, while the appendix gives approximately 82 µT and 10.6 kV/m.

These are not harmless drafting points where they affect receptor sensitivity, magnitude and the final residual-effects conclusion. They show that Table 17.7 does not reliably apply or reproduce the chapter’s stated methodology.

17.20 Consequences for the significance conclusion

The conclusion that EMF effects will be ‘Minor and Not Significant’ depends on a chain of unsupported assumptions.

It relies on generic source data, not a scheme-specific model; no measured baseline; no actual receptor calculations; an unexplained medium sensitivity

classification for human receptors; omission of ecological receptors; assumed rather than quantified emissions from substations and the BESS; an artificial cumulative assessment; and mitigation that is neither fully defined nor secured.

The Applicant has therefore not demonstrated that effects are minor. That evidential question is now expressly before the Examination through ExQ1 Q1.6.3

At most, it has shown that selected generic examples of underground and overhead cables may fall below selected human public-exposure reference levels under assumed conditions. That does not establish the effects of the complete East Pye electrical system at actual homes, public rights of way, workplaces, bat corridors or aquatic crossing points.

Nor does it establish that effects remain acceptable where multiple sources operate together, equipment is replaced, line geometry changes, or ecological receptors experience exposure in circumstances wholly different from the human reference case.

The ‘Minor and Not Significant’ conclusion is therefore not robust, reproducible or fit to support the EIA.

17.21 Remedies sought

The Applicant should be required to provide a consolidated, scheme-specific EMF model covering every cable circuit, overhead-line diversion, pylon, substation, transformer, inverter, BESS element, joint bay and termination under maximum operational conditions.

That assessment should provide receptor-specific electric and magnetic field results for homes, public rights of way, workplaces, sensitive community locations and ecological receptors.

The human-health assessment should be corrected to justify receptor sensitivity, distinguish vulnerable groups and implanted medical devices, and respond directly to South Norfolk Council’s request for calculations demonstrating levels below 4 kV/m and actual predicted values at identified receptors.

A complete ecological EMF assessment should be provided for bats, fish, white-clawed crayfish and aquatic invertebrates, supported by cable-crossing-specific modelling.

The cumulative assessment should cover all interacting East Pye sources, the existing 400kV network and diversion, substations, BESS and inverter compounds, and relevant nearby energy infrastructure.

The DCO should secure minimum setbacks, maximum EMF limits, routing and burial parameters, equipment-performance standards, controls on replacement equipment, and an EMF management plan.

Baseline and post-energisation monitoring should be required, with independent verification, reporting, trigger levels and enforceable remedial action.

Until that evidence is supplied and tested, Chapter 17's conclusion of no significant adverse effect should be afforded no weight. If compliance and ecological safety cannot be demonstrated within the authorised design envelope, the relevant cable routes and electrical infrastructure must be relocated, redesigned or removed from the Scheme.

Summary: why the application should be refused on EMF grounds

The application should be refused because the Applicant has not demonstrated that East Pye Solar's extensive electrical infrastructure can operate for up to 60 years without unacceptable effects on human health or ecology.

Chapter 17 is not a project-specific EMF assessment. It is a high-level human-exposure screening exercise based largely on generic 'typical' cable values and public reference limits. It does not model the actual East Pye system of multiple 132kV and 400kV cable circuits, diverted overhead lines, new pylons, substations, transformers, inverters, BESS equipment, joint bays and terminations.

The assessment also fails to comply demonstrably with the Scoping Opinion. PINS required risks to both human and ecological receptors to be assessed, yet Chapter 17 limits its methodology, significance assessment and residual-effects table to human receptors and merely directs ecological issues elsewhere.

Even the human-health case is incomplete. There is no measured baseline, no receptor-by-receptor modelling, no proper assessment of children, vulnerable residents, implanted medical devices, workers or repeated use of public rights of way. South Norfolk Council has specifically challenged the Applicant's medium-sensitivity classification and requested actual calculations at receptor locations.

The numerical case is also weak. The Applicant predicts 95 µT directly above a generic 400kV underground cable against a 100 µT reference level, leaving only a 5% margin. It also accepts that electric fields beneath a 400kV overhead line may exceed the cited reference level by more than twofold, yet relies on an inadequately defined and apparently unsecured 15m setback.

Ecological effects remain unresolved. The Scheme affects a landscape of national importance for bats, including widespread barbastelle activity and overlapping maternity-colony Core Sustenance Zones, while the River Tas supports confirmed white-clawed crayfish. Chapter 17 contains no ecological EMF methodology, no species-specific thresholds, no cable-crossing modelling and no coherent assessment of aquatic or bat receptors.

Mitigation is assumed rather than secured. The Applicant relies on cable sheathing, conducting soil, CE/UKCA marking and a 15m setback, but provides no EMF management plan, no monitoring, no validation testing, no trigger levels, no ecological mitigation and no enforceable controls over replacement equipment during the 60-year lifetime of the Scheme.

The cumulative assessment is similarly inadequate. It largely confines cumulative effects to cables sharing a trench and then discusses household

appliances, while failing to assess the combined effects of multiple East Pye circuits, substations, BESS infrastructure, the existing 400kV network, the proposed diversion and nearby energy projects.

The Applicant has therefore not proved that EMF effects are minor or not significant. It has shown only that selected generic examples may fall below selected human reference levels under assumed conditions. That is not sufficient for a lawful or reliable EIA conclusion.

The application should be refused unless the Applicant first provides a complete scheme-specific EMF assessment, with actual receptor modelling, ecological analysis, cumulative assessment, secured limits and independent monitoring. If the authorised design envelope cannot demonstrate compliance and ecological safety, the affected cable routes, substations and overhead infrastructure must be redesigned, relocated or removed.

Chapter 18: Other Environmental Matters

18.1 Introduction and principal objection

The Applicant states that the purpose of Chapter 18 is to collate environmental topics which, in its view, do not warrant individual ES chapters because of either the brevity of the assessment or the asserted absence of likely significant effects. It covers Major Accidents and Disasters, Telecommunications/Utilities/Television, Glint and Glare, Waste and Materials and a Human Health Summary Statement. More significantly, paragraph 18.1.7 states that the majority of assessments in the chapter do not follow the methodology in ES Chapter 2, but instead use alternative, generally higher-level methodologies.

BEPS does not contend that every one of these matters necessarily required a separate ES chapter. The issue is whether the form and depth of assessment adopted are capable of supporting the conclusions reached.

That question is particularly important here because Chapter 18 combines matters of very different character and consequence: a National Gas high-pressure transmission pipeline; extensive existing electricity, water, sewerage and communications networks; existing and proposed 400 kV transmission infrastructure; BESS fire and environmental containment; glint and glare affecting homes, roads and six aviation sites; waste generated across a 60-year operational life and eventual decommissioning; and multiple pathways relevant to human health.

The final application does contain materially more information than the PEIR. However, important conclusions still depend upon future detailed design, future surveys, future consultation, future asset-owner approvals, management plans and protective provisions. In several cases the relevant statutory undertaker has itself identified matters that remained unresolved when the application entered Examination. The objection is that, in places, Chapter 18’s conclusion of no significant effect is more certain than the evidence on which that conclusion depends.

The principal issues addressed below are the compatibility of the Scheme with existing utilities and nationally important infrastructure; major accident and BESS interactions; glint and glare affecting residential, highway and aviation receptors; waste and materials over the complete project lifecycle; human health; combined effects between these topics; and, critically, whether the mitigation relied upon is sufficiently defined, agreed and secured.

18.2 Scope, methodology and the Scoping Opinion

In its Scoping Opinion, PINS did not require every matter now collected in Chapter 18 to become a standalone ES chapter, and BEPS does not seek retrospectively to re-open those scoping decisions.

For Major Accidents and Disasters, PINS agreed that the matters identified by the Applicant could be scoped out ‘on the basis of the information presented’. It did not require plume modelling or a quantified major-accident assessment. It did,

however, expect the Outline Battery Safety Management Plan to set out information on BESS fire risk and relevant mitigation, including firefighting and environmental containment. PINS separately required further consideration of the identified moderate-to-high UXO risk.

The position was materially different for utilities. PINS expressly found that insufficient evidence had been provided to scope out telecommunications, television reception and utilities. It required the ES to identify receptors through consultation and desk study; to locate and describe any necessary diversions; to identify mitigation; and to assess impacts where significant effects could arise. It specifically drew the Applicant's attention to representations from National Highways, HSE, Cadent and Anglian Water.

For glint and glare, PINS accepted an Other Environmental Matters summary supported by a detailed technical appendix rather than a standalone chapter. That acceptance was subject to the assessment considering construction and decommissioning as well as operation, explaining the methodology and likely extent of effects, identifying the use of professional judgement and identifying any significant effects in Chapter 18 itself.

PINS was not content to scope Waste and Materials out. It required assessment across all phases, including a detailed description of waste streams, expected quantities and appropriate monitoring. It likewise declined to permit minerals simply to be dismissed and required assessment of the loss of access to mineral resources over the development's lifetime. Lighting did not require a standalone assessment, but PINS expressly stated that it was not to be scoped out entirely and had to be considered in the relevant aspect chapters.

For human health, PINS accepted that a standalone chapter was unnecessary. That decision did not remove health from the EIA. PINS required the ES clearly to identify potential human-health impacts during construction, operation and decommissioning and to cross-reference their assessment in, for example, Landscape and Visual, Air Quality and Water Environment.

Two overarching parts of the Scoping Opinion are especially important. First, PINS stated that its Opinion was based upon the information then presented and that the ES must explain and justify matters ultimately scoped out. Secondly, PINS required effort to be made to agree mitigation with relevant consultation bodies and for the application to make clear how mitigation would be secured through the DCO or another legal mechanism. Where design flexibility remained, PINS required the maximum parameters relied upon in the assessment to be identified and justified.

The correct question for the Examination is therefore not whether the Applicant has reproduced the Scoping Report. It is:

Has the final application supplied sufficient, internally consistent and secured evidence to justify the conclusions now reached?

An earlier scoping decision cannot substitute for the final evidence where the design has developed, new information has emerged or the statutory undertaker responsible for affected infrastructure has not yet accepted the proposed interface.

Part A – Utilities and Infrastructure

18.3 Utilities and existing infrastructure: overview

The final ES now demonstrates the scale of the infrastructure constraint much more clearly than the PEIR did. Chapter 18 identifies multiple existing cables, pipelines and pylons within the Order Limits. Table 18.4 records extensive UK Power Networks overhead and underground assets, National Grid transmission infrastructure, Openreach, Gigaclear and Broadband for Rural North telecommunications assets, Cadent gas infrastructure, National Gas Transmission infrastructure and Anglian Water water, foul sewer, rising-main and final-effluent assets.

Two constraints are particularly substantial. Paragraph 18.3.8 confirms that the National Gas high-pressure transmission pipeline passes through Sub-sites 5A, 5B, 7B, 7E and 7F and CRC7. Paragraph 18.3.9 confirms that an existing dual-circuit 400 kV overhead transmission line runs through Site 1, with five existing pylons within the site. The Scheme itself additionally requires new high-voltage cables, project substations, a new National Grid Substation and up to three new pylons, with a maximum height of 61 metres.

That is a materially different proposition from simply demonstrating that utilities have been ‘mapped’. PINS required the consequences of interactions and diversions to be assessed where significant effects could arise.

Indeed, Chapter 18 itself accepts at paragraph 18.3.13 that, before mitigation, construction has the potential to cause damage to existing infrastructure, including ‘utilities failure’, and localised service disruption. The conclusion of no likely significant effect is then reached principally through reliance upon measures to be implemented later: detailed-design avoidance, provider consultation, ground-penetrating radar, protection zones, trenching or HDD at crossings, safe-working procedures and protective provisions.

Some of those controls are entirely appropriate. The difficulty is the sequence of reasoning. Chapter 18 repeatedly relies on detailed design to establish precisely how infrastructure will be avoided or crossed, while simultaneously relying on that future avoidance to conclude now that the effect is not significant. Paragraph 18.3.16 itself qualifies both protected-zone avoidance and infrastructure offsets with the words ‘where practicable’.

For a project whose Order Limits contain a national gas transmission main, an existing 400 kV transmission corridor and extensive local utilities, identifying an asset is only the first step. The Applicant must demonstrate that its authorised works can coexist with it on terms acceptable to the relevant undertaker and that the necessary protection is secured.

18.4 National Gas Transmission pipeline

The National Gas Transmission pipeline is the clearest illustration of the distinction between identification and resolution. The final ES now acknowledges that the high-pressure pipeline crosses Sub-sites 5A, 5B, 7B, 7E, 7F and CRC7.

That correction is important. But the pipeline is not simply another buried service.

In its formal scoping response, National Gas Transmission identified FM05 Yelverton–Stowmarket, associated freehold interests, cathodic-protection groundbeds and ancillary apparatus within or close to the Scheme. NGT explained that its existing easements provide continuing rights of access and restrict permanent and temporary structures, alteration of ground levels and storage of materials within the easement strip. It also expressly identified PV arrays, BESS, high-voltage cable crossings and parallelism and high-voltage pylon parallelism as installations capable of interfering with its cathodic-protection system. Such installations require assessment and approval by NGT and, where necessary, control measures.

The August 2026 NPPF now provides additional national decision-making policy directly relevant to this interface. Policy P5 addresses development involving or occurring within consultation zones around major-accident-hazard pipelines. It provides that development within such areas should only be supported where, following consultation with the relevant bodies, it is clear that the development will be safe for occupiers and users and will not impose constraints upon operation of the facility to which the consultation zone relates. The NPPF is not the primary policy framework for this NSIP, but this current national decision-making policy reinforces the need to demonstrate compatibility with the transmission pipeline rather than merely identify it on a plan or defer the engineering solution to protective provisions.

This makes the interface significantly wider than the risk of an excavator accidentally striking a pipe. The relevant questions include electrical interference, access, loading, levels, crossings, piling and excavation, construction compounds and roads, vegetation management and the ability of NGT to inspect, repair and renew its apparatus throughout the lifetime of the Scheme.

At Relevant Representation stage NGT maintained an objection pending adequate protection of its assets and interests. That position is important evidence of the maturity of the application at submission. Since then, the July 2026 Revision 2 draft DCO has incorporated a dedicated Part 5 of Schedule 14 for the protection of National Gas, including provisions requiring plans to be submitted and approved before specified works commence. That is a material improvement and BEPS does not suggest otherwise.

It does not, however, dispose of the technical issue. The Applicant's own *Potential Main Issues for Examination* identifies an Electrical Impact Assessment relating to the high-pressure gas main as work still requiring the pre-construction parameters, impact analyses, separation calculations, risk assessments and agreed mitigation measures, together with written confirmation from NGT that the assessment is satisfactory.

That admission is significant. Chapter 18 concludes at paragraph 18.3.28 that no adverse likely significant effects on utilities are expected during construction, yet the Applicant itself recognises that the electrical interaction with the national gas transmission asset still requires technical assessment and NGT confirmation.

The ExA should therefore require the Applicant to demonstrate, rather than assume, compatibility between FM05 and the final solar layout, high-voltage cables, roads, crossings, compounds and other electrical infrastructure. Any necessary exclusion zones, crossing arrangements, cathodic-protection measures and access requirements should be identifiable on the relevant plans and secured before the affected works can commence.

Chapter 18 identifies the pipeline constraint but does not itself demonstrate that all construction and operational interfaces have been resolved. The separate Chapter 16 objection addresses the Site 7 haul-road crossing, which the Applicant was unable to explain technically at ISH1 and agreed to take away for further consideration.

18.5 NGET overhead lines, substation land and connection uncertainty

A separate issue arises in relation to National Grid Electricity Transmission's existing transmission infrastructure and the proposed new National Grid Substation.

Chapter 18 records an existing dual-circuit 400 kV overhead line running through Site 1 with five existing pylons. The Scheme proposes to divert that line into the new National Grid Substation, remove part of the existing alignment and introduce up to three new pylons. Paragraphs 18.3.24–25 describe a ‘double circuit turn in solution’ which the Applicant says will improve operational efficiency and resilience.

NGET's position demonstrates why that description should not be treated as a finally settled engineering solution. Its Relevant Representation identifies its 4YM 400 kV Bramford–Norwich Main infrastructure and associated land interests within or close to the Order Limits and requires protection of access, safety clearances and its ability to inspect, maintain, renew and replace its apparatus. It also requires appropriate protective provisions where compulsory-acquisition or other DCO powers affect its interests.

There is then a distinct grid-connection issue. The Applicant has secured Gate 2 prioritisation for the solar component, but the BESS has Gate 1 prioritisation and no confirmed connection date. The Applicant's own Grid Connection Statement records this distinction.

More importantly, the detailed configuration is not settled. The Grid Connection Statement states that discussions with NGET remain ongoing concerning both the configuration and layout of the new National Grid Substation and the reconfiguration of the overhead transmission line. Although NGET had confirmed that sufficient physical space exists in the proposed area, the illustrative material remained subject to revision as micrositing and orientation continued to be discussed.

NGET's Relevant Representation goes further. It explains that obtaining DCO consent for a National Grid Substation does not itself impose an obligation on NGET to provide the Applicant's final connection through the consented

configuration. The ultimate transmission solution remains affected by the wider connections-reform process and NGET's network requirements.

That distinction matters. Chapter 18 assesses the environmental and utility consequences of a particular double-circuit turn-in arrangement. It should not be assumed that consent to construct that arrangement is the same thing as confirmation by NGET that this will be the arrangement ultimately required.

The ExA should therefore distinguish between three propositions: the existence of a contractual grid position; the grant of planning powers for a new substation and associated works; and NGET's eventual technical acceptance and delivery of the detailed transmission solution. The first does not automatically establish the latter two.

BEPS accordingly requests that the examination establish precisely which aspects of Work Nos. 4 and 5 are agreed with NGET; what design parameters remain capable of change; whether any such change remains within the environmental envelope assessed; and how NGET's existing apparatus, land rights and continuous access will be protected.

18.6 Other utilities

18.6.1 Water and sewerage infrastructure

Chapter 18 identifies an extensive Anglian Water network within the Order Limits. Table 18.4 records foul sewers, foul sewer rising mains, final-effluent infrastructure and water mains across numerous sheets of the Utilities Plan. PINS specifically drew the Applicant's attention to Anglian Water when refusing to permit utilities to be scoped out.

The relevant issue is not simply whether those pipes appear on Figure 18.1. Cable trenching, HDD, access construction, piling and other excavation must be demonstrated to be compatible with those assets, including required stand-offs and continued maintenance access. Where crossings or diversions are necessary, PINS required them to be located and described in the ES together with the necessary mitigation.

The conclusion of no significant effect should therefore be tied to identified crossings and enforceable asset-protection controls, rather than to an assumption that detailed design will subsequently avoid any conflict.

18.6.2 Gas distribution infrastructure

In addition to the NGT transmission main, Chapter 18 records both low-pressure and intermediate-pressure Cadent Gas infrastructure within the Order Limits. PINS specifically identified Cadent's representations as requiring attention.

The same principle applies. Future liaison and safe-working procedures are necessary controls, but they are not substitutes for identifying where authorised works intersect protected apparatus and what restrictions follow. Any required consent within easement strips, crossing design or stand-off requirement should be secured before works in the relevant locality commence.

18.6.3 Telecommunications and fibre

The Scheme also intersects a dense communications network. Chapter 18 identifies Openreach overhead and underground lines across most of the Scheme, Gigaclear infrastructure on multiple sites and Broadband for Rural North infrastructure in the northern part of the Scheme.

This issue is particularly concrete at Site 1. Paragraph 18.3.19 confirms that diversion of the existing 400 kV transmission line will require fibre-optic cables to be rerouted or extended. Yet the same paragraph states that the ‘full details’ of the necessary telecommunications diversions will be defined only at detailed-design stage, followed by further consultation with affected third parties.

That sits uneasily with PINS's specific direction that, where utility or telecommunications diversions are required, they should be ‘located and described in the ES’ together with required mitigation.

BEPS therefore considers that known diversions should not disappear into a generic post-consent design process. At minimum, the examination should establish their location, reasonable worst-case form, affected operator, environmental implications and mechanism for approval.

18.6.4 Utility diversions and crossings

Chapter 18 relies extensively on detailed-design avoidance, ground-penetrating radar, trenching and HDD where crossings are required. These are sensible construction techniques, but the environmental assessment must distinguish between an unknown buried service which might be encountered and a known strategic utility which the Scheme is already expected to cross or alter.

The Scheme includes a substantial underground cable network of up to 400 kV, internal roads, construction compounds and extensive engineering works. Where these intersect known gas, electricity, water, sewerage or telecommunications infrastructure, the crossing is part of the Scheme's engineering interface and should be assessed as such.

The Applicant's formulation that infrastructure will be located outside protected zones and provided with adequate buffers ‘where practicable’ is particularly important. If avoidance is not practicable, the ES and DCO must identify what happens instead. ‘Where practicable’ cannot itself function as mitigation.

Any relevant railway interface should likewise be explicitly addressed in the appropriate chapter or infrastructure assessment rather than lost between topics. The point is not to classify the railway as a utility, but to ensure that any cable, drainage, construction or access interaction with strategic rail infrastructure has an identifiable assessment and securing mechanism.

18.6.5 Security of protective measures

The ultimate issue is the status of the mitigation on which Chapter 18 relies. The July 2026 draft DCO now contains extensive protective provisions for NGET, National Gas, Anglian Water, Cadent and electronic communications operators.

That is relevant and should be acknowledged. But the presence of protective provisions in a draft Order is not, by itself, proof that every physical interaction has been technically resolved. PINS expressly required effort to agree mitigation with consultation bodies and clarity as to how it would be legally secured.

The examination should therefore establish, for each material statutory-undertaker interface: what infrastructure is affected; where the interaction occurs; whether avoidance is possible; what crossing, separation or protection is required; whether the undertaker agrees; and which precise DCO provision, Requirement, protective provision or separate agreement secures the solution.

That exercise is particularly important where Chapter 18 reaches a conclusion of no likely significant effect because subsequent detailed design and third-party agreement are expected to prevent the effect occurring.

The evidential weakness is not that mitigation will occur after consent. Detailed design necessarily does so in many NSIPs. It is that a conclusion of environmental insignificance should not depend upon an unresolved technical interface without an adequate envelope and an enforceable mechanism capable of ensuring the assumed outcome.

Part B – Major Accidents, Disasters and BESS Safety

18.7 Correct position on major accidents and disasters

At Scoping, the Planning Inspectorate did not require the Applicant to prepare a standalone Major Accidents and Disasters chapter, nor a quantified risk assessment, toxic-plume modelling or a particular form of BESS consequence model.

At Scoping Opinion ID 3.3.1, PINS considered the accident and disaster scenarios identified in the Scoping Report and agreed that they could be scoped out of the ES ‘on the basis of the information presented’. Its express qualification concerned battery safety. PINS noted the proposed Outline Battery Safety Management Plan and stated that information on BESS fire risk and relevant mitigation, including ‘fire-fighting and containment measures on the environment’, should be set out in that document. PINS separately agreed that BESS-fire emissions could be scoped out of the Air Quality assessment on the basis then advanced by the Applicant, including a proposed minimum 100 m separation from sensitive human receptors and the fire-safety measures to be secured through the oBSMP.

The final application submits a substantial, 161-page oBSMP containing a BESS fire-emissions assessment, fire and explosion controls, emergency-response principles, firefighting-water requirements and environmental-containment measures. BEPS therefore does not maintain the earlier consultation-stage criticism that a substantive battery-safety plan is absent. The final oBSMP substantially responds to the particular information PINS expected to see at application stage.

However, the Scoping Opinion was expressly based upon the information available at the time. The relevant question now is whether the final design envelope and the controls secured through the DCO provide sufficient certainty to support the continued conclusion that significant major-accident effects are unlikely. That question is important because several of the matters on which the oBSMP ultimately relies are not yet demonstrated for the actual BESS that will be constructed.

BEPS's objection is therefore deliberately narrower than its earlier PEIR objection. It is not that the Applicant has failed to prepare a battery-safety framework. It is that a material part of the system-specific safety case remains deferred until after consent.

18.8 BESS safety: improvement since consultation, but substantial matters remain deferred

The oBSMP is a significant improvement. It expressly recognises fire and explosion, chemical, electrical, stranded-energy and physical hazards; provides for battery-management, fire and gas detection and 24-hour remote monitoring; enables remote shutdown; sets principles for enclosure separation, access and firefighting; requires substantial onsite firefighting-water provision; provides a containment and drainage strategy; addresses defective and fire-damaged batteries; includes emergency-response requirements; and incorporates a BESS fire plume assessment. It also requires the selected system to undergo large-scale fire testing or equivalent full-scale destruction testing, with site-specific consequence modelling used to validate separation and demonstrate that loss can be confined to a single enclosure.

The oBSMP also anticipates a further suite of system-specific safety studies. These include HAZID and HAZOP, Fire Risk Analysis, Explosion Risk Analysis and DSEAR work, together with FMEA or LOPA and the selected-system fire and explosion testing. Those are appropriate controls. Their significance for the Examination, however, is that they have not yet been performed for the equipment that East Pye would actually install.

The underlying reason is clear from the oBSMP itself. The current concept is based on approximately 5 MWh BESS units, but the ‘exact technology and system chemistry type is still to be determined’. Lithium-ion technology is proposed, with NMC and LFP identified as possible chemistries. The plume assessment adopts an LFP concept, while the manufacturer, final enclosure architecture and final detailed arrangement remain to be selected.

The suppression philosophy is likewise not completely fixed. The oBSMP permits different approaches according to the selected system. A walk-in enclosure would require automatic water suppression; another system might incorporate different active suppression; alternatively, a system could be designed to burn out safely, provided full-scale testing demonstrates that the incident remains confined to one enclosure. The choice has obvious implications for water demand, stranded energy, thermal propagation, emergency-service intervention and firewater production.

The final detailed BSMP, selected-system LSFT evidence, site-specific consequence modelling, final layout and separation distances, final suppression strategy and system-specific ERP are therefore all future documents or future design-stage evidence. The oBSMP itself confirms that the final BSMP will be prepared before commencement of BESS construction and approved by the relevant planning authority in consultation with Norfolk Fire and Rescue Service and the Environment Agency.

The ExA has now expressly required the Applicant to confront this dependency. ExQ1 Q1.6.4 asks for a schedule identifying every future assessment, modelling exercise, test, survey, consultation activity, approval or management plan relied upon in reaching the present conclusions on major accidents, BESS safety, fire risk, pollution prevention and emergency response. For each item, the Applicant must explain its purpose, whether it is required to confirm the acceptability of the development, how it will be secured, what happens if its outcome differs materially from current assumptions, and why the ExA can nevertheless reach an informed conclusion before it has been completed.

That question goes to the central distinction in this section. The issue is not whether further safety work is expected at detailed design; that is normal. It is whether the outstanding work merely optimises an already demonstrated safe design or is required to establish whether the selected battery system, enclosure, separation, suppression philosophy, plume behaviour and firewater strategy are acceptable at all. Where the result of LSFT, propagation testing, consequence modelling or HAZID could require a different layout, greater separation, different containment or different emergency response, it is capable of determining the acceptable design envelope rather than merely refining it.

That is not an argument that detailed design cannot occur post-consent. It is an argument about the strength of the present conclusion. The oBSMP is an outline safety framework, not a completed manufacturer-specific safety case.

BEPS therefore submits that the DCO control must operate as a genuine pre-construction safety gateway. The final BSMP should not merely be ‘substantially in accordance’ with generic principles: it must demonstrate, for the selected technology, chemistry and enclosure, satisfactory LSFT/full-scale evidence, propagation control, final separation, fire and explosion consequences, final plume behaviour, firefighting and containment capacity, emergency access and a completed ERP agreed following consultation with NFRS and the Environment Agency. If the selected system cannot satisfy those parameters, the DCO should not permit BESS construction.

18.9 BESS plume modelling and off-site consequences

The final application now contains precisely the type of consequence evidence that was absent at consultation stage. Importantly, its results identify an off-site effect. This is not a hypothetical scenario advanced by BEPS; it arises from the Applicant's own modelling.

The BESS Fire – Emissions to Air Risk Assessment considers pollutants including hydrogen fluoride and carbon monoxide. It finds no exceedance of the relevant

Air Quality Assessment Levels at modelled residential receptors. It does not, however, find an absence of exposure beyond the BESS boundary. Under the sensitivity scenario, exceedances are predicted along three named public rights of way: Tivetshall St Margaret FP3 and Great Moulton Restricted Bridleways 18 and 19.

The maximum results at Tivetshall St Margaret FP3 are material. The predicted one-hour HF concentration is 1,024.5 µg/m³, equivalent to 125% of the relevant one-hour AQAL. The four-hour HF concentration reaches 1,599.3 µg/m³, or 196%. At eight hours, CO reaches 17,629 µg/m³, or 176% of its AQAL, while HF reaches 2,305.8 µg/m³, or 282%. Further exceedances occur at points on the Great Moulton bridleways. The Applicant emphasises that the eight-hour calculation is deliberately worst-case because it assumes peak emissions continuing for the full eight hours. That qualification is relevant, but it does not remove the fact that the Applicant has identified a credible emergency-management requirement beyond the compound boundary.

The result must also be understood in light of the modelling assumptions. The emissions source is derived from GridSolv fire testing of an approximately 1.5 MWh unit. East Pye's intended unit size is approximately 5 MWh; the sensitivity assessment therefore doubles the derived pollutant concentrations to represent the larger unit, while recognising that the relationship is not necessarily linear. The actual selected East Pye BESS has not yet been tested because it has not yet been selected.

The analysis also assumes complete propagation within one initiating enclosure but no propagation beyond that enclosure. That second assumption depends on future LSFT and site-specific consequence modelling establishing adequate equipment spacing for the final BESS. In other words, a central boundary condition of the present plume assessment is itself one of the matters still to be demonstrated at detailed design.

The assessment considers sensitive human receptors within a 1 km study area around the BESS, with the illustrative layout used to select six worst-case initiating locations. The Applicant's final design may remain safely within the modelled envelope, but that must be demonstrated once the actual unit, enclosure configuration, emission characteristics and layout are known. The present modelling should not be treated as manufacturer-specific validation.

The proposed mitigation for PRoW users particularly requires examination. The oBSMP provides that the operator will determine wind direction during a fire and ‘seek to close’ a PRoW or bridleway where necessary. It also proposes notification of potentially affected residents with advice to remain indoors and close windows. This raises an operational question that cannot be answered by dispersion modelling: how quickly can a public route actually be closed once an incident has commenced, by whom, and how are persons already on the route warned or removed?

That is especially relevant because the closest PRoW is approximately 50 m from the BESS and the Applicant's own modelling identifies Great Moulton and Tivetshall routes as potential exceedance locations. The final ERP should therefore identify closure authority, trigger levels, communications, physical

closure arrangements, warning of route users already within the affected area and coordination with the emergency services and highway authority.

The appropriate conclusion is that the Applicant's own modelling establishes a credible off-site emergency-management consequence, while the final technology-specific modelling and the operational mechanism for managing that consequence remain deferred.

18.10 Firewater, drainage and groundwater protection

The oBSMP contains substantial firewater controls. It commits to at least two firefighting-water tanks of not less than 230,000 litres each, capable of providing 1,900 litres per minute for four hours. The BESS drainage is intended to incorporate an impermeable membrane and automatic isolation activated by the fire alarm, with manual override as a secondary control. The final drainage design is intended to accommodate the 1-in-100-year rainfall event plus 45% climate allowance together with the 456 m³ firefighting-water volume. Retained water is to be sampled before release; contaminated water would instead be removed by tanker to an appropriately permitted facility.

Those are important commitments. The Environment Agency's Relevant Representation of 4 June 2026 nevertheless demonstrates why the final design cannot be treated as a formality. In EA20–EA25, the Agency raises outstanding questions not only about BESS firewater but also about firewater generated at the 132 kV and 400 kV Project Substations and National Grid Substation.

EA20 seeks sealed substation drainage capable of retaining a reasonable worst-case combination of firewater and rainfall, automatic isolation with manual backup, bunding of polluting plant such as oil-filled transformers and tanker removal of contaminated water. EA25 similarly asks the Applicant to make explicit that the entirety of the relevant BESS and substation drainage systems is impermeable and prevents both uncontrolled surface runoff and subsurface infiltration. It also asks how impermeable membranes will be protected against damage from activities such as piling. These concerns cannot be answered simply by pointing to the BESS firewater tanks, because a transformer or substation fire is a separate source and pathway. [Environment Agency RR, 4 June 2026, EA20 and EA25.]

EA23 addresses the post-incident period. The Agency requests clear arrangements for manual operation, testing and maintenance of isolation systems, appropriate analysis of captured firewater and cleaning of the drainage system before reopening. It specifically warns that obtaining any necessary discharge permit may take substantial time; further rainfall during that period could consume the available storage and create a pollution risk. The Agency therefore encourages tankering potentially contaminated firewater off site. [EA RR, EA23.]

The oBSMP now expressly provides automatic isolation with manual override and specifies post-fire sampling and tanker removal where contamination is identified. BEPS therefore does not maintain that these controls are absent. The residual question is whether their final hydraulic capacity, redundancy and operational arrangements adequately address the post-fire conditions identified by the regulator.

EA24 identifies a further pathway which is easily overlooked. Firewater may be removed while contaminants remain trapped within the gravel or aggregate drainage layer. The Agency requires arrangements for removal, cleaning or replacement of contaminated drainage components, management of contaminated cleaning water, protection and inspection of the impermeable liner during remediation and consideration of separately isolatable BESS drainage zones. It notes that serious contamination could require temporary local removal of BESS units to remediate the drainage medium. [EA RR, EA24.] Containment therefore cannot be judged only by whether the initial firewater remains behind a closed valve: it must remain effective throughout recovery and remediation.

The groundwater setting reinforces the need for that certainty. EA34 states that the south-western part of the Order Limits containing the BESS, National Grid Substation and Project Substations is within Source Protection Zone 3 and approximately 500 m from SPZ1 of a public water-supply abstraction. It also asks for private groundwater abstractions to be treated as high-sensitivity receptors. EA26 requires the eventual ERP to include arrangements for notifying downstream surface-water or groundwater abstractors where an incident could affect their supplies. [EA RR, EA26 and EA34.]

There is also a subsurface pathway. The final design permits piles to depths of up to 12 m for BESS and substation infrastructure. EA36 considers that deep foundations and trenchless works can create preferential pathways through superficial deposits into the Principal Aquifer and requires Foundation Works Risk Assessments informed by local ground investigation for all BESS and substation structures, together with hydrogeological risk assessment for relevant trenchless works. (NSIP Documents) [EA RR, EA36.]

The regulatory position is therefore more nuanced than either ‘there is no containment’ or ‘containment has resolved the issue’. There is a credible outline strategy, but the Environment Agency has identified material details that determine whether that strategy will work in the final development.

BEPS submits that those matters should be secured as pre-construction design requirements and should cover both the BESS and substations. In particular, the final drainage and BSMP documentation should demonstrate complete impermeability, verified storage capacity, isolation redundancy, post-fire testing and disposal, contaminated aggregate remediation, protection of liners, rainfall during delayed disposal, protection of public and private abstractions, and the relevant Foundation Works Risk Assessments.

18.11 BESS construction, replacement and decommissioning safety

BESS safety is not limited to the operational period between commissioning and a hypothetical fire. The Scheme creates repeated periods of installation, replacement and removal during its 60-year life.

The oBSMP contains an important construction commitment: BESS installation is not to commence until practical emergency provisions are in place, expressly including filled firefighting-water tanks, together with a construction ERP coordinated with relevant stakeholders and emergency services. The

Environment Agency asks that this principle be made more explicit for pollution controls by requiring sealed drainage and the penstock/isolation system to be operational before battery equipment is installed. [EA RR, EA21.] BEPS supports that requirement. A firefighting system is of limited environmental value if batteries arrive before the system needed to contain its runoff is operational.

The scale of replacement is also material. Chapter 4 states that the BESS could be replaced up to five times during the operational phase. That potentially creates five substantial cycles of removal, transport and reinstallation of battery equipment in addition to ad hoc replacement of defective components. (NSIP Documents) It should therefore be treated as a recurring hazardous-materials and emergency-planning issue rather than an incidental maintenance activity.

The oBSMP does contain sensible controls for defective batteries. A defective module is to be disconnected, subjected to a specific removal risk assessment, placed in an approved protective container and moved to a dedicated safe location pending inspection; replaced components are intended to be recycled. Following a fire, the oBSMP requires a post-incident recovery plan addressing reignition and removal and disposal of damaged equipment, with a fire watch retained until all potentially damaged batteries have been removed.

The Environment Agency nevertheless identifies the remaining gap. EA22 seeks clearer arrangements for how damaged and end-of-life batteries will be removed and where they will be stored between removal and lawful off-site disposal. EA21 further asks the Applicant to confirm that batteries will be removed before fire-protection and surface-water-containment systems are decommissioned. Those are straightforward but important sequencing requirements.

The oBSMP presently states only that safe BESS decommissioning will be addressed before decommissioning in accordance with the decommissioning management arrangements. That is appropriate for details six decades away, but the controlling principle can and should be fixed now: containment, emergency access, monitoring and firefighting capacity must remain operational until the final battery and any fire-damaged or defective equipment have been made safe and removed.

That principle should apply equally during each major battery replacement. A system designed to protect a fixed operational BESS must remain effective when large numbers of batteries are being disconnected, moved, temporarily stored and transported.

Part C – Other Major-Accident and Infrastructure Interactions

18.12 Site 1: aviation, transmission and receptor interaction

The final application raises a series of interrelated safety pathways at Site 1 which should be examined together when testing whether the earlier MA&D scope-out remains robust in the final design.

BEPS does not suggest that the coexistence of aviation, 400 kV infrastructure, the BESS, the railway and nearby communities proves that a compound or ‘domino’ accident will occur. The issue is different. The final Scheme places several substantial infrastructure and operational constraints within the same locality, and some of the evidence on their interaction remains disputed. A conclusion of no significant safety effect should therefore rest on a resolved final configuration rather than consideration of each feature in isolation.

18.12.1 Tibenham and emergency landing constraints

The Applicant has now undertaken a specific EFATO and Glider Launch Failure assessment for Tibenham. APP/7.27 records that Site 1A and Site 1B are approximately 1.59 km from the nearest runway threshold and are most relevant to operations from runway 08/26. It calculates that the Scheme occupies 6.46% of the land within its 60-degree emergency-landing sector and 4.30% within its 90-degree sector, leaving 77.64% and 83.32% respectively classified as suitable under the Applicant's methodology. (NSIP Documents)

That analysis is useful, but the methodology itself requires caution. APP/7.27 expressly states that there is ‘no known guidance in the United Kingdom or internationally’ specifically governing the EFATO and GLF effects of solar development and that CAST Advice Note 5 does not prescribe a methodology. (NSIP Documents) The report then relies in part upon the proposition that East Pye would occupy ‘less than 10%’ of the assessed land. No cited aviation standard in that passage establishes 10% as an accepted safety threshold. It is therefore an assessment conclusion, not a regulatory test. (NSIP Documents)

The disagreement is also not historic. The Applicant's own Position Statement on Aviation [EXAM/8.4] records that Norfolk Gliding Club considers the mitigation inadequate in relation to emergency landing, glint and glare and operational effects, that GAAC similarly considers aviation safety insufficiently addressed, and that NGC objects to the inclusion of Site 1. The Applicant maintains the opposite view and the parties are seeking to narrow the dispute through the Statement of Common Ground process. [EXAM/8.4, §§4.1–5.2.]

There is a particularly useful comparator within East Pye itself. At Seething, the Applicant removed solar panels from the eastern part of Sub-Site 10B to preserve forced-landing options following EFATO from runway 24. Its Policy Compliance Document expressly identifies that removal as embedded mitigation, and EXAM/8.4 states that the Applicant is willing to amend the design where assessment demonstrates a significant increase in EFATO or GLF risk. (NSIP Documents)

That makes the outstanding Tibenham dispute a proper examination matter. Where the aerodrome operator continues to dispute emergency-landing safety and the Applicant's consultant acknowledges the absence of a prescribed EFATO/GLF methodology, the ExA should not treat a consultant-derived percentage as the equivalent of an agreed safety threshold. The issue should be resolved through operator-specific evidence and, if necessary, physical design mitigation of the type already adopted at Seething.

18.12.2 Proposed electrical infrastructure

The final Site 1 configuration must also be described accurately. The new National Grid Substation is within Sub-Site 1B. A separate 400 kV Project Substation is also proposed within Sub-Site 1B. The National Grid Substation would connect to the existing Norwich Main–Bramford 400 kV overhead transmission line through a double-circuit turn-in arrangement. The Scheme allows up to four new pylons and a temporary pylon during the diversion works; the maximum authorised new-pylon height is 61 m.

These are not minor features within an otherwise flat solar array. The 400 kV Project Substation has a maximum busbar height of 13 m, the National Grid Substation up to 15 m, and the grid works introduce major fixed electrical plant, transformers, gantries and new overhead-line structures.

BEPS does not assert without evidence that those structures make aviation operation unsafe. The relevant examination question is whether APP/7.27's mapped ‘proposed development’ and emergency-landing analysis fully represent the final combined obstacle envelope now authorised at Sub-Site 1B, including the Project Substation, National Grid Substation and final overhead-line/pylon arrangement, rather than merely the solar-array land take.

The same infrastructure has a separate firewater dimension. Oil-containing transformers and substation plant are potential sources of contaminated runoff in a fire, which is why the Environment Agency's EA20 and EA25 representations expressly address substation firewater and not merely the BESS. The final Site 1 safety case therefore needs to join together the aviation, electrical and environmental constraints of the actual final layout rather than treating them as unrelated technical chapters.

18.12.3 Norwich–Tilbury and railway context

BEPS does not allege that East Pye, Norwich–Tilbury and the Norwich–Diss railway create an established domino-accident sequence. That would go beyond the evidence.

The railway has in fact been considered in the BESS plume assessment. Five Norwich–Diss railway receptors were modelled for smoke visibility, at approximately 0.99–1.17 km from the modelled BESS source locations, and the Applicant concluded that predicted visibility remained well within safe stopping distances. The objection should therefore not be framed as an omitted railway plume assessment.

The wider point is cumulative operational context. Site 1 already contains a 400 kV transmission corridor which East Pye proposes to reconfigure; the Scheme adds solar development, BESS and two major substation functions in the same wider locality; the Norwich–Diss railway forms another fixed strategic corridor; and Norwich–Tilbury represents further major electricity-network development in the region. Chapter 18 itself confirms the existing 400 kV line and five pylons through Site 1.

For aviation in particular, progressively converting open rural land into fixed energy and transport infrastructure can alter the practical availability of emergency options even where no single item constitutes a prohibited obstacle. The appropriate question is therefore whether the final cumulative physical environment around Tibenham has been considered in the operational safety dialogue with NGC, rather than whether BEPS can prove a compound accident scenario in advance.

18.12.4 Great Moulton residential receptors

The Applicant's own evidence provides a useful limit to this objection. The BESS is approximately 200 m from the nearest residential property, and the plume assessment predicts no relevant AQAL exceedance at the modelled residential receptors. BEPS should not suggest otherwise.

However, absence of a modelled residential AQAL exceedance is not the same as absence of an emergency-planning relationship with the surrounding community. The oBSMP itself provides for notification of potentially affected residents, including advice to remain indoors and close windows during a BESS fire. It also identifies exceedances on Great Moulton Restricted Bridleways 18 and 19 and contemplates their temporary closure.

The final ERP therefore needs a practicable community-response protocol. That should identify the geographic warning area, responsibility for issuing warnings, communication with residents and route users, emergency-service coordination and the relationship between shelter-in-place advice, any evacuation decision and highway/PRoW controls.

The issue is one of preparedness, not an assertion that Great Moulton would necessarily be exposed above health standards.

18.12.5 Water environment consequences

Site 1 also demonstrates why accident consequences cannot be considered solely in terms of fire and air emissions. The Environment Agency's final representation states that the south-western Order Limits containing the BESS, National Grid Substation and Project Substations are within SPZ3 and approximately 500 m from SPZ1 of a public drinking-water abstraction. It requires public-water-supply SPZs to be properly included in the assessment and private groundwater abstractions to be treated as high-sensitivity receptors. [EA RR, EA34.]

The Environment Agency also requires Foundation Works Risk Assessments for BESS and substation structures because deep foundations may create preferential pathways into the Principal Aquifer. The Scheme's design envelope permits piling to 12 m for both BESS and National Grid/Substation infrastructure. (NSIP Documents) [EA RR, EA36.]

This does not mean that Schedule 4 automatically requires a separate quantified hydrogeological major-accident model. It means that the environmental consequences relied upon in maintaining the MA&D scope-out must remain consistent with the final groundwater, drainage and foundation design. Chapter 9

and the Environment Agency process are therefore integral to the safety conclusion reached in Chapter 18.

18.13 Site 5: gas, electricity, water and sensitive receptors

Site 5 presents a different form of interaction. It is not principally a BESS location. It is a locality where a high-pressure National Gas transmission pipeline, a proposed 400 kV Project Substation, solar infrastructure, water receptors, nearby homes and a nursery, PRoWs and ecological receptors occupy the same wider area.

BEPS does not submit that this proves that a cascading or ‘domino’ accident will occur. The stronger case is that multiple high-consequence infrastructure types and sensitive receptors occupy the same locality, so their interfaces must be demonstrably resolved and secured before a conclusion of negligible or non-significant risk is accepted.

18.13.1 High-pressure gas/electricity interface

Chapter 18 now confirms that the high-pressure National Gas pipeline passes through both Sub-Site 5A and Sub-Site 5B, as well as other parts of the Scheme. Chapter 4 simultaneously places one of the Scheme's three 400 kV Project Substations within Sub-Site 5A. That substation may include transformers and switchgear, has a maximum busbar height of 13 m and can use piled foundations to a maximum depth of 12 m.

National Gas's consultation evidence identifies the relevant asset as Feeder Main FM05 Yelverton–Stowmarket together with cathodic-protection infrastructure and ancillary apparatus. It records easement restrictions on structures, ground-level changes and storage, requires continuing access and expects protective provisions where Scheme powers affect the apparatus. (NSIP Documents)

The final ES states that buffers and easements will reduce interaction and that detailed works will be undertaken in consultation with NGT. That is relevant mitigation. It does not itself answer every engineering interface created by the combination of a 400 kV substation, cables, access infrastructure and a transmission pipeline.

The ExA should therefore require a clear final demonstration of the separation between the Site 5 Project Substation and FM05; the relationship of foundations, piling and earthworks to the pipeline easement; access for NGT inspection and emergency repair; cable crossings; earthing and any required electrical-interference/cathodic-protection assessment; and confirmation from NGT that the final arrangements are acceptable. The case is not that coexistence is impossible. It is that it must be engineered and agreed, not assumed.

18.13.2 Hempnall Beck and wider chalk-stream pathways

For accuracy, this subsection should be headed by reference to **Hempnall Beck rather than the River Tas**. The final Water Environment chapter identifies

Hempnall Beck as the main-river chalk stream flowing between Site 7 and Sites 4–6. An ordinary-watercourse tributary runs adjacent to the western boundary of Sub-Site 5B, and both 5A and 5B fall within the Hempnall Beck WFD water body. (NSIP Documents)

That creates a direct receiving-water context for Site 5. Construction pollutants, sediment, transformer oils and contaminated firewater are therefore relevant pathways, particularly because a major 400 kV Project Substation is proposed within 5A. The issue should be considered through Chapter 9, the final drainage design and the Environment Agency's requirements rather than by asserting an unsupported major-accident chain.

The Environment Agency's EA20 and EA25 representations are directly relevant: substation drainage must prevent uncontrolled release of firewater and oil-contaminated runoff, and impermeability must extend to the drainage system as a whole. EA36 additionally identifies the proposed Project Substations at Sites 4, 5, 7 and 10 as areas of particular concern for deep-foundation interaction with the Principal Aquifer. [EA RR, EA20, EA25 and EA36.]

Site 5 therefore requires an integrated surface-water and groundwater solution. A firewater system which protects the surface watercourse but permits infiltration through damaged or inadequately assessed foundations would not resolve the pathway.

18.13.3 Private water supplies

PINS expressly noted at scoping that private water supplies existed within 250 m of the Scheme and that their accurate locations and abstraction details were not then known. It required the ES to identify and assess private supplies and their protection zones wherever significant effects could arise.

BEPS should not state, without final verified data, that a particular Site 5 well would necessarily be contaminated by a substation or pipeline incident. The examination point is instead that the final receptor schedule must demonstrate which private abstractions could be influenced by the Site 5 works and how they are protected.

That question is reinforced by the Environment Agency's final position that private groundwater abstractions should be treated as high-sensitivity receptors and that accidental contamination of public and private water supplies must form part of the water assessment. [EA RR, EA33–EA34.]

Where a private supply lies within the relevant hydrogeological influence area, the protection package should identify baseline water quality, monitoring and incident-response triggers and a contingency supply or remediation mechanism. That is particularly important where the possible source is not routine runoff but an accidental transformer-oil or contaminated-firewater release.

18.13.4 Nearby residential and vulnerable receptors

Site 5 is not an isolated infrastructure compound. The Applicant's own baseline records an isolated dwelling adjacent to the eastern boundary of Sub-Site 5B,

another approximately 100 m north-west of 5B and a dwelling approximately 60 m north of 5A. It also records commercial premises and a nursery to the north.

The noise baseline specifically identifies Jack in the Box Nursery alongside dwellings on Bungay Road and The Street, Beech Farm, Church Farm House and other receptors around Site 5. South Norfolk Council went further during consultation, stating that the nursery should be treated as a high-sensitivity receptor because of the sensitivity of its occupants rather than merely as a medium-sensitivity commercial property.

Those facts do not establish an unacceptable major-accident risk. They do mean that the Site 5 safety and emergency-access arrangements cannot be assessed as if the substation and pipeline interface were remote from people. Final access, construction controls, electrical and pipeline protection, pollution response and any emergency arrangements need to recognise the actual nearby receptor pattern.

18.13.5 Ecological receptors

Site 5 also lies within an environmentally sensitive receiving environment. The Applicant's baseline identifies Fritton Common SSSI approximately 630 m south of Sub-Site 5B, while the Environment Agency specifically identifies Fritton Common as a groundwater-dependent terrestrial ecosystem. [EA RR, EA27.] Hempnall Beck is itself a chalk stream and WFD water body. (NSIP Documents)

Care is required over white-clawed crayfish. The authoritative evidence presently relied upon by PINS is that Environment Agency records show white-clawed crayfish on the **River Tas**, and PINS required surveys at relevant locations when works affecting watercourses are known. That evidence should not be converted into an assertion that crayfish have been demonstrated within Hempnall Beck or at Site 5 unless the latest survey evidence establishes that fact.

The proper Site 5 argument is therefore based on known chalk-stream, groundwater and designated-site sensitivity. If later survey evidence establishes additional protected-species receptors, they must be added to that assessment; BEPS should not pre-judge the result.

18.13.6 Emergency access and containment

The significance of Site 5 lies in the combination of constraints. Emergency or maintenance access must remain available to National Gas; the Project Substation requires safe operational and emergency access; the development must protect nearby dwellings and the nursery; polluted runoff must be prevented from reaching Hempnall Beck, groundwater or abstractions; and any containment and foundation design must be compatible with both the gas pipeline and the underlying aquifer.

These are not theoretical concerns invented by objectors. The final application confirms the gas pipeline through 5A and 5B, the 400 kV Project Substation in 5A and the nearby water and human receptors. National Gas requires protected access and easement compliance, while the Environment Agency requires

further certainty over substation firewater, impermeable drainage and deep foundations. (NSIP Documents) [EA RR, EA20, EA25 and EA36.]

The Examination therefore does not need to determine that a gas rupture, transformer fire or combined event is likely. It needs to be satisfied that the interfaces have been eliminated or controlled through a final, enforceable design.

The strongest objection at Site 5 is not that a domino accident has been shown to be inevitable. It is that a high-pressure national gas transmission asset, 400 kV electrical infrastructure, sensitive groundwater and surface-water receptors, nearby homes and a nursery occupy the same locality. A conclusion of no significant effect is only robust if those interfaces are demonstrably resolved and secured, rather than left to future detailed design and operator agreement.

Part D – Glint and Glare

18.14 Glint and glare: methodology and reasonable worst case

The final Glint and Glare Assessment [AS-026–AS-029] is materially more developed than the preliminary assessment. It models both technologies which the Scheme may deploy: fixed panels and single-axis tracking (‘SAT’) panels. That is necessary because the Applicant has not committed to a single panel technology across the Scheme and the reflection geometry differs materially between a fixed south-facing array and a tracker which changes angle through the day.

For modelling purposes, fixed panels are assumed to face due south at an azimuth of 180 degrees, with a 25-degree elevation angle and assessed centre height of 1.95 m, within an overall height range up to 3.5 m. SAT panels are modelled with a north-south tracking axis orientation of 180 degrees, a ±60-degree range of movement, a zero-degree resting angle and assessed centre height of 2.45 m, with maximum panel height up to 4.5 m at greatest inclination. The SAT modelling also incorporates an approximation of backtracking. The report states that this simplification is generally conservative because flatter panels can create reflections over a wider range of ground-level azimuths. [AS-026, §§2.2–2.3.]

The assessment uses a 50 m reflector resolution across the identified panel areas. Ground-based receptors are generally identified within 1 km; aviation receptors are considered within 15 km. Road receptors are normally spaced approximately 100 m apart and modelled at an eye height of 1.5 m. Dwellings are modelled at 1.8 m, intended to represent ground-floor eye level. Aviation modelling combines Pager Power geometric calculations with the Forge/Sandia glare-intensity methodology. [AS-026, §§2–5.]

The assumed panel surface is also important. The assessment models ‘smooth glass with an anti-reflective coating’. EN-3 itself recognises that the reflective qualities of panels may depend upon panel specification and states that anti-

reflective coating may need to be secured for the lifetime of a permission. The assessment also reproduces EN-3 paragraph 2.10.98, which states that panels, frames and supports may need to be considered for their combined reflective quality, but the quantitative assessment is principally an assessment of reflection from the panel surfaces. The final specification should therefore secure the material characteristics relied upon in the modelling, including the anti-reflective treatment and any material tracking parameters.

The visibility assessment then introduces a further layer of judgement. The bare-earth geometric modelling does not itself include buildings or vegetation. Pager Power subsequently reviews Google Earth, Street View, terrain information, the landscape strategy and available site photography to decide whether a geometrically possible reflection will actually be visible. The report expressly acknowledges that the imagery ‘may not be up to date’ and ‘may not give the full perspective’ from the receptor. [AS-026, Appendix E.] That qualification matters because extensive conclusions of ‘no impact’ depend not on the absence of a reflection, but upon an assumption that intervening vegetation or buildings will prevent it being seen.

Construction and decommissioning are not separately modelled. The report treats full operation as the reasonable worst case on the basis that panels will be installed gradually during construction and removed gradually during decommissioning, so the reflecting area can only be equal to or smaller than during operation. That is reasonable as regards panel numbers, but it does not automatically address differences in screening. Where the operational conclusion relies upon proposed vegetation, an early installed panel may exist before that vegetation has matured; likewise decommissioning sequencing may alter established screening relationships. PINS specifically required construction and decommissioning to be considered, not simply assumed to be no worse because fewer panels are present. The Applicant's original Scoping Report itself acknowledged likely significant effects to roads, dwellings and aerodromes and proposed that those effects be addressed through the detailed assessment.

BEPS therefore does not contend that the Applicant has failed to model both fixed and tracking technology. It has. The unresolved issue is whether the DCO and associated controls constrain the eventual Scheme to the actual parameters on which that modelling depends. The correct examination question is:

Does the assessment genuinely encompass every panel technology, orientation, tracking regime, surface specification and layout which the DCO would permit, and are the assumptions which make the model acceptable secured for the operational life of the Scheme?

If not, the assessment describes one modelled configuration rather than the full consented envelope.

18.15 Residential glint and glare

The scale of the residential assessment should not be understated. The revised assessment considers 482 dwelling receptors within 1 km of the Scheme. In residential areas containing several rows of properties, however, only the outer dwellings are assessed on the assumption that they will obscure those behind; in some locations one receptor point also represents several separate addresses.

All dwelling modelling is undertaken at 1.8 m to represent the ground floor, with upper-storey visibility considered subsequently through professional judgement. [AS-026, §4.5.]

The Applicant's geometric model predicts reflections towards all 482 assessed dwellings. It then concludes that existing vegetation, buildings or terrain will significantly obstruct views at 414, reducing the predicted effect to ‘no impact’. For the remaining 68 dwellings, unmitigated reflections are capable of occurring for more than three months per year, although for less than 60 minutes on any particular day. [AS-026, Executive Summary and §5.4.]

Of those 68 dwellings, 22 are said to benefit sufficiently from existing vegetation, buildings or terrain that only marginal upper-floor views may remain. Those are classified as low impact. The remaining 46 rely upon the Scheme's proposed landscape mitigation to obscure the reflecting panels at ground-floor level, again with marginal upper-floor views acknowledged. Once that future planting is taken into account, these too are classified as low impact and no further mitigation is recommended.

That is a major change in conclusion produced by screening, not by the disappearance of the underlying reflection. At 46 dwellings the Applicant's own model finds a duration which would otherwise trigger further assessment and possible mitigation; it reaches the low-impact conclusion because vegetation which does not yet perform the required screening function is assumed to do so.

Three matters therefore require examination.

First, the timing of that mitigation matters. A hedge or tree belt that may screen a panel at Year 10 or Year 15 does not remove an effect when panels first become operational. The assessment should identify when each relied-upon planting belt becomes sufficiently high and dense to deliver the screening assumed by the glint-and-glare assessment, and what effect remains before that date.

Secondly, screening must work when glare can actually occur. Deciduous vegetation cannot simply be treated as an opaque barrier throughout the year. The assessment should demonstrate that the seasonal state of vegetation has been reconciled with the dates and times when reflections are predicted. Gaps at gateways, accesses and within hedgerows also matter.

Thirdly, 60 years is a long period over which to assume the continued effectiveness of vegetation. Existing screening may be outside the Applicant's ownership or control; trees fail, hedges are cut, diseased vegetation is removed and highway visibility requirements can require alteration. Any vegetation necessary to achieve a no-impact or low-impact conclusion needs a binding retention, management and prompt replacement obligation capable of preserving its screening function throughout operation.

The treatment of upper storeys also requires care. The methodology gives greater significance to the ground floor because it is characterised as the ‘main living space’. That does not make bedrooms, first-floor living areas or other windows irrelevant. The Applicant expressly acknowledges marginal upper-storey views at a number of receptors. Where the conclusion depends on proposed

planting obscuring only ground-floor views, the residual upper-floor effect should be stated transparently rather than lost within a generic low-impact category.

Finally, the assessment's dependence on imagery should be weighed against its own limitation. The same report which concludes that existing vegetation significantly obstructs views at hundreds of dwellings acknowledges that its Street View and satellite material may be outdated and may not provide the full receptor perspective. Where screening is decisive to the conclusion, it should be capable of verification and securing.

The apparent inconsistency in the earlier assessment between the Executive Summary and individual dwelling tables over whether reflections were geometrically possible towards every dwelling appears to have been corrected in Revision 2. BEPS therefore does not rely upon that earlier drafting issue. The substantive issue remains: the Applicant predicts reflections towards a very large residential receptor population and achieves its final low/no-impact conclusion principally through existing and future screening.

18.16 Roads and driver safety

Road glare requires separate treatment from residential amenity. A fleeting reflection which might be tolerable at a dwelling can have a different consequence where it occurs within the primary field of view of a moving driver at a junction, bend or access.

The Applicant recognises that distinction. Its methodology treats the primary horizontal field of view as 50 degrees either side of the direction of travel. Where a reflection is within that field, Pager Power considers whether it is directly ahead, the separation from the panels, whether elevated drivers may be affected, whether exposure would be fleeting because of gaps in screening and the position of the Sun. A reflection which remains significant after those factors is classified as moderate and mitigation is recommended. [AS-026, §5.3.]

The significant weakness is that detailed modelling is restricted to the A140 and B1527. The assessment expressly says that technical modelling is ‘not recommended for local roads’ because traffic densities are likely to be relatively low, and assumes that any effect upon users of those roads would be low impact in the worst case. [AS-026, §4.4.] Traffic volume is not, however, a substitute for assessment of accident consequence to an individual driver, cyclist, equestrian or pedestrian.

18.16.1 A140

The A140 requires particular scrutiny. It is a principal north-south arterial road through the Scheme and ES Chapter 11 identifies it as one of the Scheme's key construction-traffic routes. At Site 4, solar development would flank both sides of the A140. Drivers would therefore pass through a solar landscape rather than merely past a single remote field.

The glint-and-glare assessment finds geometrically possible reflection from fixed and SAT panels over 4.2 km of the A140. For receptors A15–A42, those reflections occur within the driver's primary field of view. The conclusion is

nevertheless ‘no impact’ throughout because existing vegetation, buildings and terrain are predicted to prevent views of the reflecting panels. [AS-026, Table 6.]

That is a strong conclusion resting on a screening assumption. Site 4 illustrates why it deserves testing. The road runs broadly north-south; fixed south-facing panels and east-west-moving SAT surfaces produce different reflection geometries; panels would lie on both sides of the carriageway; and the Scheme may ultimately use either technology or a combination. The assessment does model both fixed and SAT panels, but only within its stated azimuth, tilt, tracking, height and backtracking assumptions. Those parameters must therefore represent and constrain what is eventually installed.

Screening also needs to work from the actual driving position. The assessment models a standard road-user eye height of 1.5 m. It says elevated drivers are considered ‘where appropriate’, but its supporting footnote associates such consideration particularly with dual carriageways and motorways. The A140 here is a single carriageway. That is material because Chapter 11 shows that the A140 is a key HGV route for East Pye and already carries substantial heavy-goods traffic. A hedge which screens a 1.5 m receptor does not necessarily screen an HGV, coach, bus, tractor or emergency-vehicle driver.

The Applicant should therefore demonstrate the Site 4/A140 result for the highest reasonably foreseeable driver eye position as well as the standard car receptor. If existing vegetation is indispensable to the no-impact conclusion, its continuity, seasonal performance, ownership and long-term retention should also be demonstrated.

18.16.2 B1527

The assessment identifies geometrically possible reflections across 7.9 km of the B1527. Existing vegetation, buildings and terrain are relied upon to screen approximately 5.8 km. For remaining sections, including approximately 1.3 km where reflections would otherwise lie within the road user's primary field of view, proposed landscape mitigation is relied upon to remove the effect. [AS-026, Executive Summary and Table 6.]

Again, the final classification does not mean that the model found no reflection. It means that the reflection is assumed not to be visible once landscaping is taken into account.

The B1527 is also one of the principal east-west construction routes identified in Chapter 11 and passes through settlements and past sensitive uses. It is therefore insufficient to demonstrate only that eventual planting may hide panels. The Applicant should identify the effect during the period before planting performs the required optical-screening function and ensure that road-safety mitigation is effective when panels first become capable of reflecting sunlight.

18.16.3 Minor country roads

The decision not to undertake technical modelling of local roads should be revisited.

East Pye is interwoven with minor rural lanes. These are not simply roads carrying fewer cars. They are generally narrower, frequently have bends, constrained forward visibility and limited refuge, and are shared by local residents, agricultural traffic, cyclists, pedestrians and equestrians. They will also experience additional Scheme traffic during construction and decommissioning.

The methodology's proposition that any reflection on a local road is low impact ‘in the worst case’ because traffic density is low confuses frequency of exposure with consequence. A glare event does not become safer for the person experiencing it because fewer other vehicles use the road.

This is particularly relevant to horse riders. A sudden reflection experienced by a horse and rider on a narrow road or confined lane is qualitatively different from residential amenity. BEPS raised this point at scoping. The final assessment should explain why such users require no receptor-specific consideration.

18.16.4 Driver height

The 1.5 m eye-height assumption is a conventional car-driver approximation, but it is not representative of all users of these roads. East Pye's own Transport and Access chapter identifies the A140 and B1527 as key construction arteries and models HGV flows on both.

The importance of this is straightforward. The report's no-impact conclusions depend heavily on hedges and other screening. A higher cab may see over vegetation that blocks a car driver's view. The assessment cannot simultaneously rely on vegetation as decisive mitigation and dismiss the vertical position from which that mitigation is viewed.

Elevated HGV, bus, coach, agricultural and emergency-vehicle receptors should therefore be tested at those road sections where vegetation changes the conclusion from geometrically possible glare to no impact.

18.16.5 Junctions, accesses and decision points

The consequence of glare is also context-dependent. A driver negotiating a junction, making a right turn across traffic, entering or leaving a Scheme access, approaching a bend or responding to construction traffic has a different visual workload from a driver progressing along an uncomplicated straight road.

The methodology recognises direction of travel but the final road conclusions do not transparently identify whether junctions and Scheme access points have been treated as higher-risk decision locations. That matters particularly along the A140 and B1527, where the Scheme introduces or uses numerous construction accesses.

The ExA should require confirmation that each material junction and access within the modelled glare corridors has been separately checked rather than assuming that a 100 m sequence of general receptor points captures the additional road-safety consequence.

18.16.6 Existing screening

The road assessment's conclusion depends on existing screening to an exceptional degree: the full 4.2 km assessed length of the A140 is said to be screened, together with most of the B1527.

That should be tested against the report's own caveat that Street View, satellite and other imagery may be outdated and may not provide the full perspective at a receptor. Vegetation is also not static. Seasonal leaf loss, ordinary management, disease, highway visibility works, gaps at entrances and long-term failure can all alter line of sight.

Where existing vegetation is necessary to achieve ‘no impact’, it has become functional mitigation whether or not it was planted by the Applicant. The Scheme should therefore identify and secure retention of the vegetation upon which the assessment relies, or demonstrate an alternative control if it is lost.

18.16.7 Proposed planting

The same point is stronger where the assessment relies on vegetation which has not yet grown.

The assessment treats proposed landscape mitigation as capable of converting potentially relevant B1527 reflections into no impact and 46 residential effects into low impact. What matters for highway safety is not that a hedge is shown on a landscape plan, but when that hedge becomes an opaque visual screen at the relevant eye height.

The Applicant should identify the effective mitigation year and assess the period before it. Where glare would otherwise require mitigation, operation should not be permitted to commence on the assumption that future vegetation will eventually solve the problem.

18.16.8 Journey-level repeated exposure

Finally, the assessment is principally receptor-point based. Road points are approximately 100 m apart and each is assigned an impact classification.

That does not answer the whole question for a moving driver. East Pye would place multiple separate solar fields alongside roads over substantial distances. A driver may pass from one reflecting field to another, experience intermittent glare through gaps in screening, or encounter different arrays on opposite sides of the same road. At Site 4, the A140 is physically flanked by development.

The relevant safety experience is therefore a journey as well as an isolated coordinate. The Applicant should demonstrate that repeated or sequential exposure along a route does not materially alter the conclusion derived from separately classified receptor points.

18.17 Aviation glint and glare

The aviation results are more significant than the overall ‘no significant effect’ conclusion suggests.

Revision 2 assesses six unlicensed aerodromes: Seething, Long Stratton, Hardwick, Topcroft Farm, Nut Tree Farm and Norfolk Gliding/Tibenham. It finds glare with ‘potential for temporary after-image’, classified as yellow glare, towards approach paths and/or final sections of visual circuits at every assessed aerodrome. For Norfolk Gliding Airfield, yellow glare is geometrically possible towards all six runway-threshold approach assessments and the final circuit sections. [AS-026, Table 4.]

The predicted annual durations are substantial and differ materially between fixed and tracking technology. For SAT panels, the maximum annual yellow-glare duration is stated as 22,711 minutes at Seething, 11,304 minutes at Hardwick, 2,993 minutes at Topcroft and 10,094 minutes at Norfolk Gliding Airfield. At Tibenham the equivalent fixed-panel result is 4,774 minutes. The Applicant expresses these as percentages of assumed annual daylight hours and emphasises that exposure is contingent upon clear weather and an aircraft being in the affected position at the relevant time. [AS-026, Table 5.]

Those qualifications are relevant. They do not make the underlying finding disappear.

Pager Power's assessment of yellow glare relies upon several mitigating considerations: the Sun would generally be low and within the same view; the predicted glare only marginally exceeds the green/yellow threshold; traffic volumes are lower than at major licensed aerodromes; circuit exposure may be fleeting; clear conditions are needed; and pilots already employ methods to manage direct sunlight. The report therefore concludes that yellow glare ‘could potentially be operationally accommodated, subject to consultation with the airfields.’ [AS-026, §5.2.4.]

The words ‘subject to consultation’ are important. Pager Power's own significance framework defines a moderate effect as one which may be acceptable but for which ‘consultation and/or further analysis should be undertaken to determine the requirement for mitigation’. [AS-026, Appendix D.] It is therefore not enough to identify a moderate effect and then treat operational accommodation as an established mitigation where the affected operator has not accepted it.

Tibenham demonstrates the problem most clearly. Following receipt of Norfolk Gliding Club's specific circuit information, Revision 2 models 38 circuit and approach paths for powered and gliding aircraft at minimum and maximum heights. It predicts moderate effects for the 08 left-hand powered circuit and for the 08, 08S and 08L left-hand glider circuits at both minimum and maximum assessment heights. In each case reflecting panel areas are described as within the pilot's field of view and in line with the pilot's bearing. The conclusion is that the effect ‘could be operationally accommodated, subject to consultation with Norfolk Gliding Club.’ [AS-029, Appendix J.]

That consultation has not produced agreement. Norfolk Gliding Club, as owner and operator of Tibenham Aerodrome, expressly disputes the adequacy of the glint-and-glare assessment, objects to Site 1 and says that no satisfactory mitigation has been offered. GAAC similarly objects on aviation-safety grounds and questions the adequacy of engagement and site-specific assessment.

The Applicant's September Aviation Position Statement [EXAM/8.4] confirms that this disagreement remains live. It records that NGC considers mitigation insufficient in relation to emergency landing, glint and glare and operational effects, that GAAC considers aviation safety inadequately addressed, and that NGC objects to Site 1. It nevertheless maintains that the glare can be operationally accommodated and proposes no separate aviation monitoring regime. Instead, it relies on the ability at detailed design to alter panel configuration, azimuth, fixed-panel tilt or SAT backtracking angle.

That position exposes the remaining issue. If the current assessment already demonstrates acceptability, there should be no need to reserve potentially material changes to panel geometry as later mitigation. If changes to azimuth, tilt or tracking are necessary to make Tibenham safe, those changes should be defined, assessed and secured before consent, not left to a future management plan.

The CAA material reproduced by the Applicant points in the same direction. The assessment records CAA advice that developers should provide safety-assurance documentation, including risk assessment, concerning the full potential impact of a solar installation on aviation interests. [AS-026, Appendix A.] Where the aerodrome operator remains in substantive disagreement about the effect on its actual circuits, a consultant's prediction of operational accommodation cannot substitute for resolution of that safety dispute.

BEPS does not submit that yellow glare automatically establishes an unacceptable aviation risk. It submits that the Applicant has identified yellow and, for specific Tibenham circuits, moderate effects; the methodology itself calls for consultation/further analysis at that level; and the aerodrome operator continues to reject the proposition that the effect has been satisfactorily resolved.

18.18 Wider aviation safety at Tibenham

Glint and glare is only one component of the Tibenham objection. NGC's concerns also encompass emergency landing following engine failure, glider and aerotow launch failure, thermal effects, bird strike and the progressive loss of open land within a low-level circuit environment.

The Applicant responds principally through the High Level Investigative Report [APP-222]. That report is useful, but its limitations should be understood.

18.18.1 EFATO and glider launch failure

APP-222 assesses Site 1 against Engine Failure After Take-Off (‘EFATO’) and Glider Launch Failure (‘GLF’). It confirms that the closest panels in Sites 1A and 1B are approximately 1.59 km from the nearest Tibenham runway threshold. It

assesses 60-degree and 90-degree sectors extending 2 km east from threshold 26.

The Applicant calculates that East Pye would occupy 6.46% of the land in the 60-degree sector and 4.30% in the 90-degree sector, leaving respectively 77.64% and 83.32% classified as suitable for emergency landing once baseline unavailable land is also taken into account. [APP-222, Table 1.]

Those figures are evidence of a real loss of potential landing land. The dispute is whether that loss is acceptable.

APP-222 itself states that there is ‘no known guidance in the United Kingdom or internationally’ specifically governing the EFATO and GLF effects of solar development and that CAST Advice Note 5 does not prescribe a methodology. Its conclusion then gives weight to the fact that East Pye occupies ‘less than 10%’ of the relevant sectors. [APP-222, §§2–3.] The report does not identify a regulatory or published aviation-safety standard establishing 10% as an accepted threshold. It is therefore a consultant-derived evaluation, not a recognised safety limit.

That distinction matters where the operator responsible for the aerodrome rejects the conclusion.

18.18.2 Aerotow failure

NGC raises a more specific operational scenario: an aborted aerotow launch may require both the tow aircraft and the glider to land separately in an emergency.

APP-222 assesses EFATO and GLF as generic emergency-landing constraints, but it does not expressly model an aborted aerotow involving two aircraft simultaneously requiring suitable landing options. The Applicant's Position Statement records NGC's concern but responds by referring back to APP-222's overall calculation of available land.

Where this is an identified operational scenario at a mixed powered/gliding airfield, the ExA should establish whether the generic percentage-land methodology actually captures it. If it does not, the scenario should be separately addressed.

18.18.3 Forced landing and low-altitude consequence

The relevance of Site 1 is not simply that pilots might prefer an unobstructed view. NGC's evidence is that an EFATO or launch failure occurs at low level, when options narrow quickly and the consequences of an unsuccessful forced landing are potentially severe.

APP-222 acknowledges the principle. It derives its sector from advice that pilots should generally avoid turns greater than 45 degrees following EFATO and considers GLF to extend from take-off to approximately 300 ft. It also accepts that new obstacles should be considered in emergency planning. [APP-222, §3.]

The planning question is therefore not whether every conceivable emergency landing field must remain permanently untouched. It is whether the avoidable

loss of part of the established emergency-landing environment has been reduced as far as reasonably practicable where the operator says that land has safety value.

18.18.4 Thermal effects

APP-222 separately considers thermal updrafts. It acknowledges that the proposed arrays would sit beneath portions of powered and glider downwind/base circuits for runways 03 and 33. NGC's supplied circuit data indicate powered aircraft generally at 500–800 ft for the downwind/base turn, gliders starting downwind at around 800 ft, completing the diagonal/base turn around 600 ft and making the final turn around 400 ft.

Pager Power concludes that solar-generated thermals would be weak and localised and that vertical separation from aircraft would make the effect negligible. [APP-222, §4.]

This is not, however, a site-specific computational thermal-plume study. It is a qualitative assessment based on general assumptions concerning panel temperature, the relative strength of solar and natural thermals and expected circuit heights. APP-222 acknowledges that no solar-specific aviation guidance exists for these effects.

Given that NGC is a gliding operator and specifically disputes the conclusion in relation to training and circuit operations, its operational evidence should be resolved through the SoCG process rather than dismissed simply because the Applicant's consultant reaches a qualitative contrary view.

18.18.5 Turbulence and wind shear

The same caution applies to turbulence. APP-222 states that there is no known guidance or case material dealing specifically with turbulence or wind shear from solar arrays. It therefore borrows from CAA wind-turbine guidance and Pager Power's experience of building effects, applying a worst-case buffer of 20 times the maximum 4.5 m panel height, or 90 m. It concludes that the vertical separation from aircraft makes any effect negligible. [APP-222, §5.]

The assessment is plainly useful contextual evidence, but it is not a recognised solar-aerodrome standard. Its conclusion should be weighed accordingly.

18.18.6 Bird strike and the ‘lake effect’

Bird strike is not assessed in APP-222. The Applicant addresses it in EXAM/8.4, responding to NGC's concern that panels could create a perceived ‘lake effect’. Its position is that East Pye may increase nesting opportunities for agricultural passerines such as yellowhammer, which are not considered a significant bird-strike risk; no wetlands are proposed which would attract higher-risk birds such as gulls or Canada geese; and evidence that waterbirds are attracted to terrestrial solar arrays is said to be limited.

That is a reasoned position, but it is a qualitative response rather than a site-specific aviation bird-strike risk assessment. If NGC maintains this matter as an

operational safety concern, the final position should be recorded transparently rather than treating it as resolved by assertion on either side.

18.18.7 Training circuits and obstacle environment

APP-222 confirms that portions of East Pye would lie directly below parts of Tibenham's powered and glider circuits. That is especially relevant to student pilots because circuit work necessarily occurs close to the ground and close to the aerodrome.

There is also a wider issue over what has actually been included in the emergency-landing calculation. Section 1.1 of APP-222 describes the development under consideration as solar panels and BESS within Site 1. It does not expressly demonstrate in the EFATO percentage calculation how the Project Substation, National Grid Substation, altered 400 kV overhead-line infrastructure, pylons, gantries or temporary construction obstacles have been treated.

The ExA should therefore require confirmation that the emergency-landing and obstacle assessment represents the complete final Site 1 environment rather than only solar-array land take.

18.18.8 Overall position at Tibenham

The important fact is that this is not an objection which has been overtaken by the final application. EXAM/8.4 expressly records that NGC objects to Site 1 and considers further aviation mitigation necessary. The Applicant disagrees and says no significant effects are predicted. The matter remains under discussion through a Statement of Common Ground.

Consent should not convert that unresolved disagreement into an assumption in favour of the Applicant. Where safety is the issue, the Examination should establish the factual basis of the dispute and require avoidance or specific mitigation where the Applicant cannot demonstrate compatibility with the established aerodrome operation.

The revised NPPF also introduces a relevant national decision-making principle through policy P4. Existing businesses, community facilities, public services and other established activities should not have unreasonable restrictions placed upon their current or permitted operation because later development is approved nearby, and new development should be capable of being integrated effectively with existing activities and infrastructure. The policy expressly includes sports clubs among the existing activities to which the principle applies. That does not determine the aviation-safety question at Tibenham, which remains a matter for the evidence and the applicable aviation and energy policy framework, but it reinforces the need to assess the Scheme against the Gliding Club’s established operational environment rather than assuming that the operator can subsequently accommodate the Scheme.

18.19 Seething as a mitigation comparator

Seething is important because it demonstrates that physical avoidance is both possible and already accepted by the Applicant where aviation assessment identifies a constraint.

APP-223 examined forced-landing options from Seething runway 24 and approach to runway 06. It found that an earlier East Pye layout would constrain forced-landing choices for aircraft experiencing EFATO between approximately 100 and 300 ft on departure from runway 24. It therefore recommended amendment of the solar boundary beneath and to the left of the climb-out path to provide additional landing space as close as possible to the runway heading. The Applicant accepted the recommendation and altered the Site 10B panel deployment boundary. [APP-223, §§3.8–3.10.]

The same process was applied to aircraft experiencing engine failure on approach to runway 06. Potential constraint was identified; further amendment was recommended; the Applicant accepted it. APP-223 consequently concludes that the revised Scheme would no longer constrain forced-landing options from either runway 24 departure or runway 06 approach. [APP-223, §§4.8–5.6.]

EXAM/8.4 expressly describes the removal of panels in eastern Site 10B as ‘embedded mitigation’ and says the Applicant is willing to amend the Scheme where an assessment demonstrates a significant increase in EFATO or GLF risk.

That creates an obvious comparison with Tibenham.

At Seething, the response to identified emergency-landing constraint was avoidance: remove panels and preserve the landing option.

At Tibenham, the Applicant accepts that Site 1 removes 6.46% of the assessed 60-degree emergency sector but concludes that this is not significant because sufficient land remains. No equivalent physical mitigation is presently proposed, despite the aerodrome operator objecting to Site 1.

The two airfields are not identical and BEPS does not contend that identical mitigation automatically follows. But the difference in approach requires an evidence-based explanation. That is especially so because APP-222 accepts that no recognised methodology or accepted percentage-loss threshold exists for solar development and EFATO/GLF at Tibenham.

The ExA should therefore ask a straightforward question:

Why is the mitigation hierarchy applied by removing panels where Seething's forced-landing options are constrained, but not applied at Tibenham where a quantified loss of emergency-landing land is accepted and the aerodrome operator continues to dispute its safety?

‘Operational accommodation’ should not become the default simply because physical avoidance would reduce the developable area.

18.20 Cumulative glint, glare and aviation effects

The Applicant's cumulative assessment is expressly described as ‘high-level’. That description is accurate.

Appendix 18.1 considers one existing solar development west of East Pye, identified in EXAM/8.4 as the existing Tasburgh solar development. Shared receptors are limited to dwellings 4–52, 67 and 89 and road receptors A11–A36 and B1–B16. Because those shared ground receptors are predicted to experience no impact from East Pye, the report concludes that no cumulative effect arises. [AS-026, §6.]

At aviation receptors, it concludes that East Pye and the existing development are adjacent and therefore are not expected to produce reflections at materially different times. Cumulative glare is consequently said not to exceed the geometric result already assessed for East Pye. No combined circuit-by-circuit time-series modelling is presented. [AS-026, §6.]

The Applicant had itself accepted at scoping that cumulative glint-and-glare effects were possible and would be assessed. The final question is whether this high-level exercise is adequate to discharge that undertaking.

18.20.1 Cumulative road exposure

For road users, cumulative effect should not be confined to two solar farms producing a reflection at exactly the same coordinate at exactly the same time.

East Pye itself creates repeated roadside solar exposure over extensive lengths of the A140, B1527 and numerous local roads. A driver experiences the route sequentially. At Site 4, arrays lie on both sides of the A140. The assessment nevertheless assigns separate classifications to approximately 100 m receptor points and does not quantify the repeated journey-level exposure which could result from successive panel fields, intermittent vegetation gaps or changes in panel aspect.

That is an important distinction. A sequence of individually classified low or screened locations does not necessarily answer whether the route as a whole creates a distracting visual environment.

The cumulative assessment should therefore address both intra-Scheme sequential exposure and any existing or approved solar schemes sharing the same road corridors.

18.20.2 Cumulative residential exposure

For residential receptors, the high-level assessment concludes that the homes shared with the existing Tasburgh development receive no East Pye impact and therefore no cumulative impact.

That may be correct for those identified receptors. It does not establish a general cumulative residential conclusion for every surrounding solar development.

Where a dwelling can receive reflections from more than one development, the relevant question may include aggregate annual exposure and reflections occurring at different times or from different directions. Two effects do not cease to be cumulative merely because they do not occur simultaneously.

The Applicant should therefore demonstrate that all existing and approved solar developments capable of sharing residential glare receptors have been identified, and where relevant quantify the combined exposure rather than rely solely upon separate scheme classifications.

18.20.3 Cumulative aviation glare

The cumulative aviation conclusion is particularly narrow. The assessment says that because East Pye and the existing Tasburgh installation are adjacent, they will not produce reflections at materially different times and therefore cumulative glare will not exceed the East Pye geometric result.

That is an assumption rather than a reported combined glare model.

It is also reached against a baseline in which East Pye alone already generates yellow glare towards all assessed aerodromes and specific moderate effects on Tibenham's 08 circuits. Where the aerodrome operator disputes the operational acceptability of those effects, the cumulative assessment should not simply assume that an adjacent reflective development adds nothing operationally material.

At minimum, the Applicant should show that the combined reflecting area does not increase duration, angular extent or pilot workload along the affected Tibenham circuits.

18.20.4 Cumulative operational aviation constraints

The more fundamental deficiency is that the Applicant has treated cumulative aviation largely as cumulative glare.

EXAM/8.4 states that no specific cumulative aviation effect with Norwich to Tilbury has been identified because the principal aviation effect of Norwich to Tilbury arises from pylons, whereas the ‘main concern’ for East Pye is glint and glare. That reasoning is too compartmentalised.

Cumulative effects can arise through different mechanisms acting upon the same receptor. For Tibenham, the identified issues are not confined to glare. They include availability of emergency-landing land, fixed and temporary obstacles, circuit operations, thermal concerns and the wider low-level flying environment. A pylon does not need to produce glare in order to contribute to the cumulative operational constraint on an aerodrome.

The same applies to other solar and energy infrastructure. The proper question is not merely whether two developments produce identical effects. It is whether the combined development environment materially reduces the operational flexibility or safety margin of the same aviation receptor.

The Applicant should therefore assess Tibenham cumulatively in terms of the complete operational environment: East Pye solar arrays, Site 1 BESS and substation infrastructure, existing and altered NGET infrastructure, relevant existing or approved solar development and, where the evidence demonstrates a shared aviation receptor, Norwich to Tilbury or other major infrastructure.

BEPS does not contend that this cumulative assessment must inevitably demonstrate an unacceptable aviation effect. It contends that dismissing a pylon scheme because pylons are ‘separate’ from glint and glare answers the wrong question.

The cumulative test is the effect upon the receptor, not whether every contributing development produces the same physical mechanism.

The evidence therefore supports a narrower but substantial conclusion. The Applicant has undertaken considerable glint-and-glare modelling, but its conclusions remain unusually dependent upon assumed screening, future landscape maturity, a prescribed set of panel parameters, professional judgement and, for aviation, operational accommodation which the principal affected aerodrome operator has not accepted. Those matters should be resolved and secured through design before the ExA treats the residual effect as insignificant.

Part E – Waste and Materials

18.21 Waste and materials: methodology and baseline

The final Waste and Materials assessment is substantially more complete than the PEIR and should be assessed on that basis. At scoping, the Applicant sought to remove Waste and Materials from detailed assessment on the basis of the waste hierarchy and a future Site Waste Management Plan. PINS expressly declined to agree, finding insufficient information on expected waste arisings and requiring an assessment across all phases, including detailed waste streams, expected quantities and monitoring.

Chapter 18 now provides that assessment. It adopts the ISEP/IEMA materials and waste methodology and uses three principal geographical baselines: the East of England for inert and non-hazardous waste; England for hazardous waste and WEEE; and the East of England or UK for construction materials depending on the material concerned. The assessment applies the waste hierarchy and assumes extensive reuse, recycling and recovery before landfill disposal. It also quantifies construction, replacement and decommissioning waste to a degree which was absent from the PEIR. (APP/6.1.18, §§18.5.13–18.5.21.)

The baseline nevertheless contains an important weakness. Chapter 18 records 52.6 million m³ of inert and non-hazardous landfill capacity in the East of England in 2024, but only 9.17 million m³ of hazardous merchant landfill capacity across England. It notes that national hazardous landfill void capacity fell by 50.3% between 2019 and 2024 and accordingly classifies that receptor as of ‘very high’ sensitivity. For Norfolk specifically, Chapter 18 records approximately 3.755 million tonnes per annum of permitted waste-management capacity, of which

approximately 1.1 million tonnes relates to inert/C&D waste. (APP/6.1.18, §§18.5.37–18.5.46.)

The difficulty lies in the future baseline. Paragraph 18.5.53 accepts that there is no reliable public information demonstrating landfill capacity at the time East Pye will generate its later waste streams and that forecasting could suggest no remaining void space. Rather than treating that uncertainty conservatively, the assessment assumes that new capacity will be approved if required and therefore holds future landfill capacity constant at today's level. It makes an equivalent assumption for future material availability. (APP/6.1.18, §§18.5.53–18.5.54.)

Norfolk County Council, as the minerals and waste planning authority, expressly disagrees. Its Relevant Representation states that much of Norfolk's geology is unsuitable for hazardous or non-hazardous landfill and that it cannot be assumed that additional landfill capacity will simply be capable of approval. NCC welcomes the improved waste information but repeats that this assumption is not secure. (NCC Relevant Representation, 10 June 2026, §§4.88–4.90.)

That is important because some of the Applicant's most consequential waste streams arise not during initial construction but decades later. A baseline cannot be made robust merely by assuming that any capacity which disappears will necessarily be replaced.

18.22 Construction material demand

The Scheme is materially intensive. Chapter 18 estimates approximately 22,100 tonnes of steel, 18,300 tonnes of concrete and 157,000 tonnes of aggregate for construction. Against present annual supply it calculates those quantities as approximately 0.14%, 0.51% and 0.30% respectively and concludes that effects on material availability are slight adverse and not significant. (APP/6.1.18, §§18.5.48–18.5.51 and Table 18.17.)

Those percentages provide useful context, but they represent only part of the Scheme's resource demand. Chapter 18 expressly limits its quantified material-availability assessment principally to steel, concrete and aggregate. It acknowledges that PV panels, electrical equipment and other components will largely be prefabricated and purchased on national or international markets, and states that tracing component design, constituent materials and sourcing locations would be ‘disproportionately burdensome’. Material availability during operation, replacement and decommissioning is not assessed further. (APP/6.1.18, §18.5.13.)

The result is therefore not a whole-life materials assessment. It does not quantify the constituent material demand embodied in the PV modules, BESS units, transformers, inverters, switchgear and extensive cabling in the same way that it quantifies aggregate, concrete and steel. Nor does it establish the geographical source or concurrent demand for those components.

For earthworks, the assessment assumes a cut-and-fill strategy which will reuse excavated materials and therefore minimise imported fill. That is appropriate where achievable. It remains an assumption that should be reconciled with the

final detailed design and ground conditions rather than treated as a guaranteed outcome.

Cumulative demand also matters. Chapter 18 models other energy DCO schemes as requiring up to approximately four times East Pye's material requirement but concludes that combined demand would remain below 10% of current annual availability. That calculation again relies upon today's supply baseline. For schemes potentially constructed in overlapping periods, the relevant question is whether the required grades, quantities and delivery capacity will exist when required, not merely whether the theoretical present regional annual production figure is larger.

18.23 Construction waste and soil arisings

Chapter 18 estimates approximately 37,600 m³, or 3,890 tonnes, of identified construction waste. The overwhelming majority is packaging: approximately 29,400 m³ associated with PV panels, 6,720 m³ associated with mounting structures and 1,420 m³ of cable-drum material. It also estimates approximately 15,100 m³ of construction sewage requiring tanker removal. (APP/6.1.18, §§18.5.82–18.5.85 and Table 18.16.)

That figure is not, however, the total volume of material disturbed by construction. Excavated soil is expressly excluded from the construction-waste calculation because the assessment assumes that it will be reused on site wherever feasible and will therefore not become waste. Paragraph 18.5.84 goes further, anticipating that material removed during cable trenching and creation of working, laydown and compound areas will be reinstated, with no or only small volumes requiring import or export.

The following paragraphs qualify that assumption. Surplus material cannot be ruled out and contaminated or otherwise unsuitable soil may require off-site treatment or disposal. (APP/6.1.18, §§18.5.84–18.5.87.) The headline figure of 37,600 m³ should therefore not be read as a complete mass balance for all excavation generated by this geographically extensive Scheme.

Nor does Table 18.16 identify a separate quantity for HDD drilling arisings or drilling-related material. Given the extent of underground cabling and trenchless crossings, the final SWMP should quantify those streams where they cannot be reused as excavated material.

This matters for transport as well as waste capacity. Every tonne which cannot be reused generates an outward movement and, potentially, a replacement inward movement. Chapter 11 assumes that construction logistics will minimise imports and exports. The waste assessment should therefore identify the maximum credible off-site quantity of excavated or drilling material so that the traffic assessment and waste-capacity assessment are based upon the same envelope.

The weakness is not the policy of reusing soil; that is plainly preferable under the waste hierarchy. It is the use of assumed reuse to remove a potentially substantial material stream from the quantified waste total before the final ground conditions and detailed earthworks balance are known.

18.24 Operational replacement waste

The operational phase is not a low-waste period when viewed over the full 60-year life of the Scheme.

Chapter 18 assumes an annual PV failure rate of 0.05%, producing up to approximately 16.4 tonnes of WEEE each year, before planned wholesale replacement is considered. It then assumes one replacement of the PV panels, one replacement of transformers where required, and up to five BESS replacement events. (APP/6.1.18, §§18.5.108–18.5.112.)

The Applicant's own peak replacement scenario is substantial. At approximately Year 30 it estimates:

- 29,400 m³, or 2,370 tonnes, of PV-panel packaging;
- 14,400 m³, or 32,700 tonnes, of PV-panel WEEE;
- approximately 293 tonnes of the PV stream characterised as hazardous, including heavy metals; and
- approximately 22,300 m³, or 20,700 tonnes, of BESS equipment.

The combined WEEE and BESS stream in that peak scenario is approximately 36,700 m³, or 53,400 tonnes. (APP/6.1.18, Table 18.19 and §18.5.117.)

Chapter 18 nevertheless reaches a slight adverse, non-significant conclusion by assuming that more than 95% of those component parts will be recyclable or recoverable and applying Best Available Treatment Recovery and Recycling Techniques. On that assumption, only approximately 1,830 m³, or 2,670 tonnes, of the WEEE/BESS stream reaches hazardous landfill. (APP/6.1.18, §§18.5.111–18.5.119.)

That distinction is critical. The Scheme does not generate only 2,670 tonnes of relevant waste. It may generate approximately 53,400 tonnes of WEEE and battery material in a peak replacement year; 2,670 tonnes is the residual after applying an assumed future recovery performance.

Routine lubricants, oils and individual machinery parts are described as negligible, while no separate large-scale operational replacement scenario is quantified for extensive cabling. The final Operational SWMP should therefore contain an auditable lifecycle replacement schedule rather than relying solely on the generic proposition that equipment is recyclable.

The ExA has now requested further evidence on precisely these assumptions. ExQ1 Q1.2.7 asks whether replacement PV panels and BESS units would have the same specification as those initially installed and, if not, how changes in technology, footprint or specification would be controlled through the DCO. ExQ1 Q1.16.3 separately requires justification of the principal assumptions underlying the construction, replacement and decommissioning waste forecasts, including PV and BESS replacement rates, recovery rates and recycling rates. Q1.16.4 then asks what confidence can presently be placed in the replacement and decommissioning conclusions and requires identification of assumptions concerning future recycling infrastructure, treatment capacity and waste markets.

These questions are important because the waste conclusion depends on two different future assumptions: what equipment will actually be replaced, and what waste-management infrastructure will exist when that replacement occurs. A future technology may improve material efficiency or recyclability, but it may also change mass, chemistry, containment, transport classification or treatment requirements. The assessment should therefore be controlled by a defined reasonable worst-case replacement envelope rather than by assuming that future technology change will necessarily reduce the effect.

18.25 Battery waste and fire-damaged material

The battery-waste issue is more acute because the Scheme may replace the BESS up to five times. That creates repeated large-scale movements of battery equipment rather than a single end-of-life event.

The Environment Agency's Relevant Representation identifies precisely this gap. At EA22 it states that inadequate detail is provided concerning damaged and end-of-life batteries, expressly noting the possibility of up to five BESS replacements. It requires clarity as to how batteries will be removed and where they will be stored after removal pending lawful off-site disposal. (Environment Agency Relevant Representation, 4 June 2026, EA22.)

That concern is not answered simply by stating that battery materials are recyclable. A defective, leaking, thermally damaged or fire-damaged battery is not necessarily equivalent to an undamaged end-of-life unit entering an ordinary recycling stream. The oBSMP provides procedures for making defective units safe and removing them in appropriate containers, but Chapter 18 does not demonstrate that fire-damaged equipment would achieve the same >95% recovery assumption used in the ordinary waste assessment.

The distinction extends beyond the batteries themselves. EA24 warns that contaminants from a BESS or substation fire may remain within the aggregate drainage layer even after firewater has been removed. It requires arrangements for cleaning or replacing contaminated drainage components, managing contaminated washwater and protecting the impermeable liner during remediation. That potentially generates an additional incident-related hazardous waste stream which is not represented by the normal replacement figures.

The same applies to temporary storage and transport. The final arrangements need to distinguish ordinary end-of-life batteries from damaged, defective and fire-affected units and identify suitable containment, segregation, storage, specialist transport and receiving facilities. The existence of a future recycling market does not answer where an unsafe battery can lawfully and safely be held tomorrow if it has to be removed urgently today.

18.26 Decommissioning waste

Decommissioning produces the largest single waste stream in the assessment.

The Applicant estimates approximately:

- 143,000 m³, or 235,000 tonnes, of inert and non-hazardous C&D material;
- 43,400 m³, or 55,400 tonnes, of WEEE and BESS material, treated conservatively as hazardous for the assessment; and
- 21,300 m³, or 11,400 tonnes, of large electrical installations.

Within those totals are approximately 14,000 tonnes of metal mounting structures, 157,000 tonnes of aggregate/substrate, 60,400 tonnes of concrete foundations, 3,090 tonnes of cabling, 32,700 tonnes of PV-panel WEEE and 22,700 tonnes of BESS batteries and associated equipment. (APP/6.1.18, Table 18.20 and §18.5.135.)

Chapter 18 itself describes this as a ‘large quantum’ of waste. More importantly, it calculates that decommissioning East Pye alone would generate an annualised C&D stream equivalent to approximately 10.7% of Norfolk's present C&D waste-handling capacity. It describes that as a ‘substantial amount’ and a ‘major magnitude impact’ on Norfolk C&D handling capacity. (APP/6.1.18, §18.5.136.)

The ultimate conclusion nevertheless becomes slight adverse and not significant because the assessment assumes that aggregate and concrete will largely be recovered and that only a small proportion will reach landfill. Again, the finding depends upon successful recovery rather than upon a small underlying waste stream.

The assessment also does not represent complete physical removal of everything constructed for East Pye. The National Grid Substation and Grid Connection Infrastructure are expressly excluded from Scheme decommissioning and would remain. Cable removal is assumed in the waste calculation as the assessment worst case, but Chapter 18 acknowledges that the actual approach will depend on future policy and good practice. (APP/6.1.18, §§18.5.120–18.5.127.)

That distinction should remain explicit. ‘Decommissioning’ does not mean that the entire development necessarily disappears and the land is returned without residual infrastructure.

18.27 Recycling assumptions and future capacity

The decisive weakness in the long-term waste case is the repeated conversion of technical recyclability into assumed future treatment capacity.

Chapter 18 states that specialist regional or national PV recycling facilities are ‘expected to develop’ in response to future demand. It records current claims that 90–99% of glass and semiconductor material can be recycled or recovered, describes the UK lithium-ion recycling sector as developing, and reports an 80% recovery rate. It then anticipates that further private-sector facilities will emerge as the PV waste stream grows. (APP/6.1.18, §§18.5.103–18.5.106.)

Those propositions may prove correct. They are not evidence of secured capacity.

The same issue arises at decommissioning. Chapter 18 accepts that there are no reliable county recycling or landfill capacity forecasts for the earliest anticipated

decommissioning date of 2091. It therefore assumes that the sensitivity of those facilities in 2091 will be the same as in 2025 and suggests that technological advances may improve the result. (APP/6.1.18, §18.5.134.)

NCC's rejection of the equivalent landfill assumption is therefore important. The local waste authority expressly says that additional landfill cannot simply be assumed because geological constraints limit the locations in Norfolk where hazardous or non-hazardous landfill could be permitted. (NCC RR, §§4.88–4.90.)

The Applicant's own cumulative assessment demonstrates the consequence of this uncertainty. During coincident peak replacement of the major energy schemes, it predicts approximately 17,200 tonnes of residual WEEE and batteries reaching landfill even after applying the 95% recovery assumption. Because hazardous landfill is a very-high-sensitivity receptor, Chapter 18 finds a **moderate or large adverse cumulative effect which is significant**. The equivalent cumulative decommissioning scenario again produces a **moderate or large adverse significant effect** on hazardous-waste capacity. (APP/6.1.18, §§18.5.153–18.5.159.)

The proposed response is itself deferred: future Operational and Decommissioning SWMPs are to reassess capacity and, if necessary, coordinate different NSIP operators, stagger decommissioning, stagger hazardous-waste deliveries and secure temporary hazardous-waste storage. (APP/6.1.18, §18.5.160.)

That is a material finding. Chapter 18 does not demonstrate that cumulative hazardous-waste effects are non-significant. It identifies them as significant and relies upon future inter-project coordination, potentially many decades after consent, to manage them. ExQ1 Q1.16.5 now requires the Applicant to explain the evidential basis for the identified moderate adverse and significant effect on hazardous-waste capacity during operation and decommissioning, including the quantities and principal waste streams assessed, the facilities and infrastructure assumed to be available and the basis for concluding that residual effects would be appropriately mitigated. The ExA has therefore expressly identified the same issue: a significant capacity effect cannot be converted into an acceptable residual conclusion simply by assuming that future treatment capacity, markets or coordination arrangements will emerge when required.

Predicted recyclability is not demonstrated recycling capacity. A material can be technically recyclable and yet have no available treatment facility, economically viable route or spare capacity when the waste actually arises.

The Examination should therefore distinguish technical recovery potential from actual capacity, commercial availability, geographic availability, hazardous-waste capacity, transport distance and cost.

18.28 Decommissioning security and insolvency

The long-term waste case also assumes that an operator with sufficient resources will remain available to implement the waste hierarchy and fund removal at the end of the Scheme.

The July 2026 draft DCO Requirement 21 controls timing and process. It requires decommissioning within the 60-year period for the relevant solar works, notification to the planning authority and submission of a Decommissioning Environmental Management Plan before works commence. It does not, however, itself provide a project-wide ring-fenced fund, bond or escrow mechanism guaranteeing that the money required to carry out those works will exist when the liability crystallises.

That distinction is important. A legal obligation to decommission and the financial capacity to discharge that obligation are different things.

The ExA has now raised the same distinction in relation to Article 37, asking whether a transferee would have sufficient covenant strength to comply with the decommissioning requirements. That question addresses corporate ability to meet the obligation, but it does not by itself answer whether project-specific funds are ring-fenced and available if the responsible entity later fails.

The risk is not limited to the final year. Over 60 years the Scheme may undergo one wholesale PV replacement, up to five BESS replacement cycles, transformer replacement and potentially substantial incident-related waste management. At final decommissioning the Applicant itself predicts hundreds of thousands of tonnes of material requiring removal, processing, recovery or disposal.

Norfolk County Council raised this concern during statutory consultation. In considering the longevity of East Pye and the consequences if the project financially failed, the County Council considered that a financial bond would be needed to safeguard future generations. BEPS has separately developed a proposed model for ring-fenced, insolvency-protected financial security, indexed and periodically reviewed so that the decommissioning liability cannot simply be transferred to landowners, regulators or the public purse.

Producer responsibility does not resolve that entire liability. Chapter 18 relies appropriately on the WEEE regime for PV panels, but it also acknowledges that some large-scale fixed installations, including transformers within Project Substations, fall outside that WEEE treatment. Nor does a manufacturer's take-back obligation necessarily fund removal of foundations, aggregate, access infrastructure, contaminated material, site restoration or remediation following an incident.

BEPS therefore seeks a funded decommissioning security mechanism proportionate to the actual restoration liability. It should cover removal, lawful waste treatment, hazardous and fire-damaged material, contamination remediation and restoration, be protected against insolvency and be periodically reviewed against updated costs.

The issue is straightforward:

A decommissioning plan specifies what should happen. Financial security demonstrates that it can still happen if the undertaking responsible for the Scheme is no longer capable of paying for it.

Part F – Human Health

18.29 Human health: statutory and policy framework

The legal starting point is not disputed. Regulation 5(2)(a) of the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 requires the EIA to identify, describe and assess appropriately the direct and indirect significant effects of the development on population and human health. Chapter 18 expressly recognises that obligation. (APP/6.1.18, §18.6.13.)

EN-1 similarly recognises health as a cross-cutting consequence of energy infrastructure. The Applicant's own policy review records that where a project has effects on humans, the ES should assess those effects for each relevant element, identify potential adverse health impacts and identify measures to avoid, reduce or compensate for them. EN-1 also requires attention to vulnerable groups and those who may be differentially affected.

The final assessment refers to ISEP/IEMA's 2022 guidance on both effective scoping of human-health assessment and determining significance, together with UKHSA/PHE health-impact guidance. (APP/6.1.18, §§18.6.14–18.6.16.)

The Scoping Opinion is equally important. PINS did **not** require East Pye to prepare a standalone Health Impact Assessment chapter. It accepted a cross-cutting approach, but expressly required the ES to set out potential health impacts during construction, operation and decommissioning clearly and to cross-reference their assessment across relevant topics including Landscape and Visual, Air Quality and Water Environment.

BEPS therefore does not contend that the absence of a standalone health chapter is itself a defect.

The final position of the specialist public-health consultee must also be recorded fairly. On 3 June 2026 UKHSA, responding also on behalf of OHID, stated that its February 2025 comments had been addressed, acknowledged that the ES had identified no matters capable of significantly affecting public health, and concluded that the development should not result in any significant adverse public-health impact. It therefore chose not to register an interest.

The remaining issue is consequently narrower: whether Chapter 18 transparently integrates all relevant receptor-specific and cumulative pathways and whether its no-significant-effect conclusion remains secure where other statutory consultees have identified unresolved technical matters.

The revised NPPF is consistent with that receptor-specific approach. Policy P3 requires development proposals to take account of likely effects, including cumulative effects, of pollution on health, living conditions and the natural environment, and specifically requires consideration of the sensitivity of the surrounding population, including groups such as children and older people who may be particularly vulnerable. It also requires adverse impacts from air, noise, artificial light, water, soil and other forms of pollution to be avoided where possible or mitigated to an acceptable degree. This does not create a separate health-impact methodology for the Scheme, but it reinforces the need to retain

vulnerable and differentially exposed groups within the assessment rather than relying solely upon population-wide averages.

18.30 What the Human Health Summary Statement actually does

The final Human Health Summary Statement is a substantial improvement on the PEIR approach. Norfolk County Council describes it as a ‘clear and accessible overview’ which improves transparency. (NCC RR, §4.77.) BEPS agrees that the final assessment should be judged on that improved document rather than the earlier consultation-stage material.

Chapter 18 establishes a health baseline across five MSOAs, covering approximately 45,200 people. It identifies an older-than-average population: approximately 28% are aged 65 or over. It also records relatively high disability and long-term-health-condition indicators and rural accessibility constraints. It expressly recognises children and young people, older people, persons with existing health conditions, low-income groups, people with long-term illness or disability and ethnic-minority groups as potentially more sensitive to particular direct or indirect effects. (APP/6.1.18, §§18.6.37–18.6.40 and 18.6.73–18.6.76.)

There is, however, an unexplained tension within the assessment. Immediately after identifying those vulnerabilities, paragraph 18.6.77 concludes that there are ‘no identified population-level sensitive receptors or vulnerable groups that require further consideration’ in the appraisal. The distinction may be intended to mean that vulnerable individuals and groups exist but do not constitute a population-level receptor of enhanced sensitivity. If so, Chapter 18 should explain that reasoning. As written, the conclusion sits uneasily beside the preceding paragraphs.

The Statement synthesises findings from Climate Change, Water Environment, Landscape and Visual, Transport and Access, Noise and Vibration, Air Quality, Socio-Economics, Soils and Agricultural Land, Ground Conditions and EMF. It also states that cumulative and in-combination effects have been considered. (APP/6.1.18, §§18.6.17–18.6.25.)

Its principal limitation is structural. For most pathways Chapter 18 inherits the environmental significance conclusion reached in the underlying technical chapter and then concludes that no significant health effect follows. Mental wellbeing is treated separately in the Equality Impact Assessment because, the Applicant says, there is no agreed robust EIA methodology or consistently applied significance threshold for mental-health effects. (APP/6.1.18, §§18.6.26–18.6.27.)

That approach is not inherently unlawful. But it creates an important examination question: where the underlying technical assessment is disputed or incomplete, the health conclusion which depends upon it cannot automatically be treated as settled.

That issue is now expressly before the Examination. ExQ1 Q1.6.1 asks the Applicant to explain how its approach accords with current ISEP guidance on population and human health and whether any health pathways have been

excluded because the Human Health Summary does not anticipate effects beyond those identified in the technical chapters. Q1.6.2 separately requires the Applicant to identify every human-health conclusion which relies upon future management plans, detailed design, operational controls or later-stage mitigation, and to explain how likely significant effects can nevertheless already be excluded. Those questions go directly to the structural limitation identified above. Where the health assessment inherits its conclusion from another technical chapter, confidence in the health conclusion can be no greater than the adequacy of the underlying assessment and the certainty of the mitigation on which it depends.

18.31 Air quality, dust, noise and construction disturbance

The Human Health Summary concludes that construction dust and traffic emissions will produce negligible changes at residential receptors once the Outline CEMP and other controls are applied. It similarly characterises construction noise as temporary and controlled through working hours and good practice, leading overall to negligible or minor adverse, non-significant health effects. (APP/6.1.18, §§18.6.251–18.6.256.)

BEPS does not duplicate the detailed objections made in Chapters 12 and 13. The relevant point for Chapter 18 is that the health conclusion depends upon those technical controls being delivered across an extensive, dispersed construction site and over the full construction programme.

Operational noise is more revealing. Chapter 18 acknowledges that the unmitigated assessment identified significant adverse effects from inverter noise during early-morning periods. Additional mitigation is therefore necessary and may include quieter inverters, acoustic enclosures, relocation or reorientation of plant and barriers; the detailed solution remains subject to further design. (APP/6.1.18, §§18.6.225–18.6.228.)

Even after mitigation, one residential receptor is predicted to remain up to 2 dB above background at night and 1 dB above background in the early morning, above the NOAEL although below the LOAEL. The resulting long-term effect is classified as minor adverse and not significant. (APP/6.1.18, §18.6.229.) NCC accordingly says that mitigation is essential and should be clearly defined and secured for every affected receptor. (NCC RR, §4.80.)

The health conclusion should therefore be conditional upon the actual mitigation required to achieve the modelled post-mitigation levels. A finding of no significant health effect should not become the mechanism by which the detailed noise controls necessary to achieve that finding are left unresolved.

18.32 Transport, severance and road safety

The transport-health pathway is also more complex than the phrase ‘low baseline flows’ suggests.

Chapter 11 predicts substantial percentage increases on some rural lanes. Fairstead Lane, for example, is assessed with an increase of approximately 116% in combined traffic in the relevant construction scenario. The Transport assessment calculates approximately 39 daily HGV movements on Fairstead Lane and 53 on Shotesham Road, but concludes that fear and intimidation effects remain non-significant because absolute traffic volumes are low and construction is temporary. (APP/6.1.11, §§11.8.14–11.8.17.)

That may be a valid EIA significance judgement, but the human-health assessment should not confuse a low baseline with absence of burden on the individual receptor. Rural residents, pedestrians, cyclists, horse riders and people with mobility limitations experience the actual vehicle movements, not the percentage significance category.

Chapter 18 recognises schoolchildren, older people and persons with mobility constraints as potentially differentially affected by traffic and accessibility changes. It relies upon the Outline CTMP and Public Rights of Way Management Plan to maintain access and concludes that effects on healthcare, education and other services will remain limited. (APP/6.1.18, §§18.6.130–18.6.148 and 18.6.254.)

There will nevertheless be temporary PRoW restrictions, some lasting longer than one month. NCC accepts that long-term closures are not proposed but recommends that temporary closures occur only where strictly necessary, with suitable alternatives and clear communication. (NCC RR, §4.82.)

The health question is therefore not simply whether the Transport chapter records an EIA-significant traffic effect. It is whether the combined consequences of additional HGVs, changes to quiet rural roads, PRoW restrictions, construction access and perceived safety reduce walking, cycling, riding or independent access for those groups most reliant on the local network.

18.33 Water quality and drinking-water receptors

Drinking water is the strongest example of why the health conclusion cannot be separated from unresolved technical evidence elsewhere in the ES.

PINS required the ES to identify private water supplies and assess impacts where significant effects could arise, noting that supplies existed within 250 m and that accurate locations and abstraction data were not then available.

The final Human Health Summary relies upon Chapter 9 to conclude that no significant residual health effect arises through the water environment. The Environment Agency's Relevant Representation, however, identifies outstanding deficiencies directly relevant to drinking-water protection.

At EA33, the Agency states that the residual-effects assessment considers water quantity for public and private supplies but omits water-quality impacts from spills and pollutants. Its stated consequence is that ‘residual risk of contamination of water supplies has not been considered’. It requires contamination impacts to be included for both public and private abstractions.

At EA34, the Agency says the Source Protection Zones are not accurately described. It confirms that the south-western Order Limits containing the BESS, National Grid Substation and Project Substations lie within SPZ3 and are approximately 500 m from SPZ1 of a public water-supply abstraction. It also says private groundwater abstractions should be treated as **High-sensitivity receptors**, rather than the lower sensitivity used in the assessment.

EA35 identifies potential underassessment of pathways between historic contamination and private or permitted abstractions. EA36 requires Foundation Works Risk Assessments and hydrogeological assessment because deep foundations and trenchless drilling may create preferential pathways through superficial deposits into the Principal Aquifer. (Environment Agency RR, 4 June 2026, EA33–EA36.)

These are not objections about public perception. They concern the technical assessment of potable-water receptors.

Accordingly, Chapter 18's health conclusion should be revisited or expressly made conditional upon resolution of EA33–EA36. A public or private drinking-water source is not protected merely because the overall population-level health assessment is non-significant. The relevant question is whether that particular source-pathway-receptor linkage has been demonstrated to be acceptably controlled.

18.34 BESS fire and toxic emissions

The same distinction applies to BESS fire.

UKHSA/OHID has not identified a significant population-level public-health effect. BEPS does not dispute that evidence. The Applicant's own plume modelling nevertheless identifies receptor-specific exceedances which require active emergency management.

As set out at section 18.9 above, the sensitivity scenario predicts exceedances of the selected Air Quality Assessment Levels at Tivetshall St Margaret FP3 and Great Moulton Restricted Bridleways 18 and 19. At the worst modelled point, one-hour HF reaches 125% of the relevant AQAL, four-hour HF 196%, eight-hour CO 176% and eight-hour HF 282%. No equivalent residential AQAL exceedance is predicted.

That distinction should be retained. The evidence does **not** show a significant residential population-health effect. It does show that persons lawfully using particular public rights of way could be within a modelled exceedance area during the selected BESS-fire scenario.

The oBSMP proposes that the operator may seek temporary closure of affected routes according to wind direction. The health and safety question is therefore operational: how rapidly can those routes be closed, how will persons already on them be warned or removed, who has authority to implement closure, and how is that response coordinated with emergency services?

A population-level ‘not significant’ conclusion does not answer those receptor-specific questions.

18.35 Electromagnetic fields

EMF is one area where the final application has materially answered the Scoping Opinion. PINS declined to allow EMF to be scoped out because the final cabling and potential 400 kV infrastructure were uncertain and required assessment of human and ecological receptors.

Chapter 17 now assesses the Scheme against the 1998 ICNIRP reference levels of 100 µT for magnetic fields and 5 kV/m for electric fields. Chapter 18 reports a maximum magnetic field of 95 µT at 1 m above the 400 kV underground cable centreline and 81 µT at the minimum-clearance point beneath the existing/diverted 400 kV overhead line. External electric fields from underground cables are screened by their construction, while the overhead-line design relies upon a minimum 15 m setback to keep public exposure below 5 kV/m. The resulting effect is classified as Minor and Not Significant. (APP/6.1.18, §§18.6.219–18.6.223.)

BEPS should not assert that those values breach the ICNIRP limits. They do not.

However, Chapter 18 later describes the predicted EMF levels as ‘well below’ the ICNIRP reference limits. For the modelled underground cable maximum, 95 µT is 95% of the 100 µT reference level. ‘Below’ is accurate; ‘well below’ is not a useful description of that particular worst-case result.

The examination issue is therefore one of securing the assessed envelope. The final cable configuration, loading, burial geometry and separation from receptors must remain within the assumptions used to produce the 95 µT result, and the 15 m overhead-line setback relied upon to meet the electric-field reference level must be enforceable. If later detailed design could increase the maximum field above the assessed envelope, the present health conclusion would no longer answer the consented scheme.

18.36 Mental wellbeing, landscape change and community effects

Mental wellbeing is the area in which the Applicant's documents themselves show the greatest residual uncertainty.

Chapter 18 accepts that large infrastructure projects can affect mental wellbeing through environmental change, disruption, uncertainty and concern about risk. It does not itself apply an EIA significance assessment to mental-health outcomes, explaining that there is no agreed robust methodology or consistently applied significance threshold. Instead, the detailed qualitative consideration is placed in the Equality Impact Assessment. (APP/6.1.18, §§18.6.26–18.6.27.)

That EqIA does not conclude that there is no issue. NCC quotes its conclusion that:

‘there is concern regarding the long-term potential mental health impacts of the scheme, particularly regarding elderly and more vulnerable populations’.

The identified pathways include access to nature, visual amenity and attachment to place, fears about fire and community safety, cumulative effects of concurrent schemes and concerns over housing and business values. NCC considers that some residual effects on local populations are likely to remain and asks for a more proactive, outreach-based approach rather than reliance upon passive email and telephone contact. (NCC RR, §§4.78–4.79.)

Chapter 18 itself reaches an important finding at §18.6.258: landscape character and visual amenity are the **principal operational pathway** through which health effects may arise, particularly through mental wellbeing, sense of place and perceived environmental quality. It recognises that environmental quality is especially relevant in this rural area and particularly for older residents.

That should be considered alongside the Landscape and Visual assessment, which identifies significant adverse effects that remain at multiple receptors and locations even after mitigation. A significant landscape effect does not automatically produce a significant clinical health effect, but neither can it be translated into ‘no significant health effect’ merely by pointing to future planting.

The final WR should therefore ask the Applicant to explain the bridge between the two conclusions: how admitted long-term significant transformation of the landscape, together with the EqIA's acknowledged concern over vulnerable residents and attachment to place, has been evaluated before reaching the final conclusion that health and wellbeing effects remain minor or negligible.

18.37 Vulnerable and differentially affected groups

Chapter 18 contains a sufficiently detailed baseline to identify differential vulnerability.

Approximately 28% of the study-area population is aged 65 or over. The assessment also records disability and rural-access constraints and expressly recognises children and young people, older people, persons with respiratory or cardiovascular conditions, people with mobility limitations, low-income households and persons with long-term illness or disability as potentially more sensitive to direct or indirect effects. (APP/6.1.18, §§18.6.73–18.6.76.)

Those vulnerabilities do not operate uniformly across the 45,200-person health-study area. Exposure is highly localised. Examples include:

- residents living immediately beside construction and HGV routes;
- children and other vulnerable users of nurseries, schools or rural roads;
- older or mobility-impaired residents dependent on local roads and PRoWs;
- households and businesses dependent upon private groundwater supplies;
- walkers, cyclists and equestrians using affected PRoWs and lanes;
- persons using the PRoWs identified in the BESS plume sensitivity assessment; and
- residents experiencing the greatest landscape, noise or construction effects.

The health assessment should therefore avoid allowing a large population denominator to dilute a concentrated effect on a small receptor group.

This is particularly relevant to paragraph 18.6.77, which concludes that no population-level sensitive receptor or vulnerable group requires further consideration immediately after paragraphs 18.6.73–18.6.76 identify precisely such groups. The Applicant should explain whether this means merely that no entire MSOA is classified as highly vulnerable, and, if so, demonstrate how smaller vulnerable receptor populations are retained in the assessment.

UKHSA/OHID's final response is relevant here. Its earlier concerns, including those concerning temporary-worker accommodation, were considered by UKHSA/OHID to have been addressed. BEPS should therefore not present those matters as unresolved public-health objections. The remaining issue is the treatment of localised groups for whom exposure may be materially different from the population average.

18.38 Overall human-health conclusion

The final human-health case should be presented fairly. UKHSA/OHID reviewed the application, considered its earlier comments addressed, identified no issue likely significantly to affect public health and concluded that East Pye should not result in a significant adverse public-health impact. Norfolk County Council likewise describes the Chapter 18 summary as clear and accessible.

BEPS does not seek to replace those professional public-health conclusions with an unsupported assertion of population-wide harm.

The remaining objection is more precise.

First, Chapter 18's integrated health conclusion is derivative: it depends upon the technical conclusions in the Water, Transport, Air Quality, Noise, Landscape, Ground Conditions and EMF assessments. Where those conclusions remain subject to material regulatory challenge, the corresponding health conclusion is not automatically secure. The Environment Agency's EA33–EA36 objections concerning drinking-water receptors are the clearest example.

Secondly, some effects are receptor-specific rather than population-wide. The Applicant's own BESS modelling identifies AQAL exceedances on three PRoWs. The final noise assessment leaves one residential receptor above the NOAEL during night/early-morning periods. Temporary PRoW restrictions affect particular users. Those effects may remain non-significant in EIA terms, but they should not disappear into an overall population-health conclusion.

Thirdly, the Applicant's own EqIA identifies concern about long-term mental-health effects, especially among elderly and vulnerable residents, while Chapter 18 recognises landscape change as the principal operational health pathway. NCC considers that residual community impacts are likely. That evidence requires acknowledgement in the final health conclusion even if it does not cross the threshold of an EIA-significant population-health effect.

Fourthly, the treatment of vulnerability requires clarification. Chapter 18 identifies an older population, disability and accessibility constraints and several categories of vulnerable people, but then concludes that no population-level vulnerable group requires further consideration. The assessment should demonstrate that localised vulnerable groups have not been averaged out by the broad study-area baseline. Accordingly, BEPS's position is:

UKHSA/OHID did not identify a significant population-level public-health effect. BEPS's remaining concern is whether the ES transparently integrates receptor-specific, differential and cumulative health pathways where subsequent technical evidence identifies PRoW exposure during a BESS incident, unresolved drinking-water pathways, residual noise effects and acknowledged long-term mental-wellbeing concerns.

The ExA has now separately questioned both parts of this methodology. ExQ1 Q1.6.1 asks the Applicant to explain how the Human Health Summary's statement that it does not anticipate effects beyond those identified in the technical chapters accords with current ISEP guidance, and whether any health pathways have thereby been excluded. Q1.6.2 asks the Applicant to identify every health conclusion dependent upon future management plans, detailed design, operational controls or later-stage mitigation and to explain how significant population and human-health effects can already be excluded. Those questions go directly to the derivative structure identified above: where a health conclusion depends upon an underlying technical assessment or future mitigation, the health conclusion can be no more secure than that evidence and control.

The appropriate remedy is not necessarily a new standalone HIA. The ExA should require a consolidated human-health schedule identifying each relevant pathway, the exposed population or receptor group, the underlying technical assessment, the significance conclusion, residual uncertainty, mitigation and the precise DCO mechanism by which that mitigation is secured. That would allow the final conclusion of no significant adverse public-health effect to be tested against the actual evidence rather than treated as a freestanding assertion.

Part G – Other matters and cross-cutting assessment

18.39 Lighting

The treatment of lighting illustrates the distinction between removing a topic as a standalone ES chapter and removing the environmental effect from consideration. PINS expressly accepted that a separate lighting chapter was unnecessary, but did **not** agree that lighting could be scoped out entirely. It required lighting effects to remain within the relevant environmental topics. More specifically, in its Landscape and Visual comments PINS found that insufficient information had been provided to exclude effects on night-time views and required the ES either to assess effects on landscape, visual and ecological receptors or demonstrate that no likely significant effects would occur. PINS

specifically required consideration of intermittent sources such as motion-activated security lighting.

This was important because the Applicant's own Scoping Report anticipated several materially different lighting sources. Construction and decommissioning may require temporary artificial lighting during periods of darkness; operational solar arrays are not intended to have permanent lighting, but substations, ancillary infrastructure and the BESS may require security and maintenance lighting. The Scoping Report proposed motion-sensor lighting, shielded low-intensity downlighting and no lighting attached to perimeter fencing. It also promised a standalone Lighting Strategy dealing with light spill, nearby properties and ecological and heritage receptors, to be secured through the DCO. South Norfolk Council's Environmental Management Officer subsequently questioned reliance on motion-sensing lighting and recommended actively controlled lighting used by security personnel monitoring the site through infrared CCTV.

The final application has improved the position. Chapter 18 cross-refers to the Lighting Strategy, and the Outline CEMP, OEMP, DEMP and LEMP contain or support lighting controls. Ecological assessment and management measures also address sensitive habitats and bats. That is the correct general approach.

The remaining concern is security of delivery. The Revision 2 draft DCO authorises lighting columns and lighting within several works, including security infrastructure and temporary compounds. Requirements 13 and 14 secure the CEMP and OEMP and Requirement 21 secures the DEMP. However, the Lighting Strategy itself does not appear as a separately identified certified document in Schedule 12 or as the subject of a discrete requirement. Given that PINS specifically required lighting to remain part of the environmental assessment, the Applicant should identify precisely how every material commitment in APP/6.3.7.11 is made enforceable.

That matters across several receptors. Construction lighting must be controlled from the outset, including winter working periods. Operational and emergency BESS/substation lighting must avoid unnecessary activation and spill. Ecological controls must protect dark hedgerows, woodland edges and established bat routes. Residential lighting effects must remain within the assessed envelope throughout the 60-year operational period. Temporary replacement and decommissioning lighting require equivalent controls. Where new pylons, substations or temporary high-level lighting occur close to low-level aviation activity, the lighting strategy should also be checked against the aviation safety case.

BEPS does not contend that lighting requires another standalone ES chapter. It does contend that a mitigation strategy expressly relied upon to demonstrate insignificant effects must be identifiable, binding and applicable to every phase of the development.

18.40 Minerals

Minerals is one of the areas in which the final application has materially answered the Scoping Opinion.

At scoping, the Applicant proposed to exclude minerals because less than 10% of the Site was thought to overlie safeguarded sand and gravel and because prior extraction was considered commercially impractical. PINS disagreed. It expressly required the ES to assess the loss of access to mineral resources over the Scheme's lifetime and required that assessment to be informed by consultation with the Mineral Planning Authority.

The final application has done substantially more. Mineral safeguarding is assessed in Chapter 16 Ground Conditions and Appendix 16.2 Mineral Resource Assessment, rather than principally in Chapter 18. The assessment identifies the underlying geology by sub-site and Cable Route Corridor and estimates the potentially safeguarded resource. It concludes that minerals beneath solar fields would be inaccessible during operation but that this sterilisation would be temporary, ending following decommissioning after 60 years. The BESS, National Grid Substation and Point of Connection are stated not to overlie safeguarded mineral resource.

Most importantly, Norfolk County Council has now reviewed that work in its capacity as Mineral Planning Authority. Its Relevant Representation at §§4.83–4.89 records engagement with the Applicant, accepts that driven or screw-mounted panel foundations would have minimal effect on the underlying resource, accepts the assessment of temporary sterilisation, and concludes expressly that mineral resource safeguarding has been ‘correctly addressed’. NCC also accepts post-consent ground investigation informing reuse of material excavated from the cable corridor.

BEPS should therefore not maintain a broad objection that the Applicant has failed to comply with PINS's minerals requirement. On the current evidence, that would be unsustainable.

The residual point is one of implementation. The agreed approach depends upon excavation arisings being characterised and suitable mineral material being reused where practicable rather than unnecessarily exported or disposed of. Those measures should remain clearly secured through the CEMP, Soil Resource and Management Plan and Site Waste Management Plan. Subject to that safeguard, mineral sterilisation is not a principal outstanding Chapter 18 objection.

18.41 Television and telecommunications

PINS did not accept the Applicant's original proposal simply to scope out telecommunications, television reception and utilities. It required receptors to be identified through consultation and desk study and required any necessary diversions to be located and described, together with mitigation and assessment where significant effects could arise.

The final Chapter 18 substantially responds. For telecommunications, the Applicant has undertaken a desk review and initial statutory-undertaker consultation. Chapter 18 acknowledges that diversion of the existing 400 kV overhead line will require associated fibre-optic cables to be rerouted or extended. Significantly, however, §18.3.19 states that the **full details of telecommunications diversions will only be defined at detailed design stage**, with further consultation thereafter. Construction risks to underground or

overhead telecommunications are then controlled through protection zones, ground-penetrating radar, crossing techniques, the Outline CEMP and protective provisions.

That is not necessarily improper detailed-design deferral, but it means the no-significant-effect conclusion depends upon successful later resolution of those interfaces. The DCO and protective provisions must therefore ensure that no affected works proceed until the relevant apparatus owner has approved the necessary protection or diversion arrangements.

The television position is materially less contentious. Chapter 18 records that the nearest identified television transmitter is approximately 7.7 km north-west of the National Grid Substation and Point of Connection and identifies no transmitter within the Order Limits. The Applicant concludes that the predominantly low-level development, notwithstanding the grid infrastructure, will not cause a significant reception effect. BEPS has identified no technical evidence demonstrating otherwise.

A proportionate safeguard would nevertheless be a simple investigation and rectification procedure for any verified Scheme-related television or telecommunications interference arising after commissioning. That would close the residual evidential gap without overstating a presently unproven impact.

18.42 Railway interaction

BEPS's earlier consultation-stage concerns regarding the Norwich–Diss railway should now be narrowed in light of the final evidence.

First, glint and glare is not presently demonstrated to be a railway issue. The Glint and Glare Assessment applies a 500 m railway study area and identifies no railway receptor within that assessment distance. The earlier Scoping Report similarly recorded the active railway approximately 1.9 km west of Site 4 and approximately 2.1 km west of Site 2. There is therefore no evidential basis for asserting a significant railway glare effect merely because the railway lies within the wider project locality.

Secondly, the final BESS material does now assess smoke visibility at the railway. The fire-emissions assessment models five receptors on the Norwich–Diss line between approximately 990 m and 1,170 m from the worst-case initiating BESS unit. In the sensitivity scenario it predicts visibility distances of approximately 8.75–9.84 km and concludes that these remain within applicable road and rail stopping-distance criteria. The report itself notes that the calculation is indicative because visibility also depends on meteorological conditions and time of day.

Thirdly, Network Rail was included by PINS amongst the statutory undertakers formally consulted at scoping. BEPS has not identified, from the materials presently reviewed, an outstanding Network Rail objection to the final Scheme.

The position should therefore not be overstated. BEPS does not rely upon speculative claims of railway blast damage, electromagnetic signalling failure or structural effects where no direct interface has been demonstrated. The remaining examination task is simply to establish whether the final cable route, drainage system, access arrangements or other authorised works create any

direct interface with Network Rail land or apparatus and, if so, whether the necessary asset-protection arrangements are secured. The BESS emergency plan should also preserve the railway-notification arrangements assumed by the plume and visibility assessment.

The railway remains part of the wider infrastructure context, but on present evidence it is not one of the strongest freestanding objections to Chapter 18.

18.43 Cybersecurity, crime and security

Cybersecurity should similarly be kept within its proper scope.

Chapter 18 expressly recognises that solar and storage systems rely upon inverters, communications and utility control and automation systems and that this creates vulnerability to both conventional and cyber threats. It also identifies vandalism and arson as potential causes of injury or fire. The Applicant proposes construction and decommissioning security through fencing, secure materials storage and security personnel, operational security through CCTV and permanent fencing, and repeated security risk-management threat assessments undertaken by suitably qualified persons.

BEPS therefore should not contend that cybersecurity or physical security has been ignored.

Its planning relevance is narrower. Cybersecurity matters environmentally where safety-critical functions depend upon digital systems: battery monitoring, fault detection, alarms, automatic isolation, shutdown, drainage isolation or remote emergency control. The final system-specific BSMP and Emergency Response Plan should demonstrate that those safety functions remain effective under loss of communications, loss of power or control-system failure and that adequate manual or fail-safe capability exists.

That does not require publication of operationally sensitive security information. It requires assurance that the safety case does not assume that digitally controlled protection will always remain available. Cybersecurity is therefore relevant as part of the resilience of the BESS safety system, not as a freestanding planning objection.

18.44 Combined effects and interdependencies

The principal weakness of assessing these matters in separate technical compartments is that several of the Applicant's own mitigation measures depend upon another environmental system working as intended. These are not remote ‘domino’ scenarios; they are practical interdependencies disclosed by the application itself.

The clearest example is BESS firewater. The safety case depends upon fire detection, drainage isolation, impermeable containment, adequate storage and later lawful disposal operating together. The Environment Agency identifies what happens when those systems are considered collectively. EA23 warns that delays in obtaining an appropriate disposal route could leave contaminated firewater in the drainage system while further rainfall occurs, creating a risk that

containment is overwhelmed. EA24 then identifies residual contamination within aggregate drainage material even after liquid firewater is removed and requires a means of cleaning or replacing contaminated material without damaging the impermeable liner. EA20 raises equivalent containment concerns for substation firewater. This is therefore a combined pathway of **fire + firefighting water + rainfall + containment capacity + disposal delay**, not five unrelated topics.

That pathway then intersects with groundwater. EA34 confirms that the south-western Order Limits containing the BESS, National Grid Substation and Project Substations lie within SPZ3 and approximately 500 m from SPZ1 of a public-water abstraction, while requiring private groundwater abstractions to be treated as high-sensitivity receptors. A containment failure is consequently not simply a drainage event; it is potentially a drinking-water pathway.

The Applicant's own plume modelling provides another direct interaction: **BESS fire + wind direction + PRoW use**. No residential AQAL exceedance is predicted, but three PRoWs experience modelled exceedances in the sensitivity assessment. The response depends upon emergency warning and potential temporary closure of the route. The environmental conclusion therefore depends upon an operational access-management response occurring rapidly enough to protect persons already present.

Other interdependencies arise directly from the design. High-voltage electrical infrastructure and the FM05 National Gas Transmission pipeline occupy the same wider development area, and NGT has identified potential interference with its cathodic-protection system from high-voltage cables, pylons, BESS and PV arrays. NGT requires controlled crossings, minimum separation, risk assessment, supervision and protective provisions. Construction effects cannot therefore be assessed independently of existing utility constraints.

The same principle applies to road glare: reflection geometry depends upon panel technology and orientation, but the predicted effect also depends upon road alignment, driver position and whether existing or proposed vegetation actually screens the panel at the relevant time. At Tibenham, glare cannot be divorced from circuit geometry, low-level flight, EFATO and forced-landing constraints. During operation and decommissioning, repeated BESS replacement cannot be separated from hazardous-waste capacity. Final decommissioning cannot be separated from the financial capacity of the entity required to undertake it.

The Examination should therefore test these dependencies as systems. A mitigation measure should not be treated as reliable merely because it appears somewhere in a separate management plan.

18.45 Cumulative effects across Chapter 18 topics

The application correctly distinguishes cumulative effects with other developments from in-combination effects generated by different aspects of East Pye itself. That distinction was already established in the Applicant's Scoping Report, and PINS required the Applicant to seek agreement with the relevant LPAs on the cumulative-schemes list and to map the location and extent of those developments.

The final cumulative assessment is materially broader than the PEIR. Norfolk County Council acknowledges that the ES now identifies major projects including Norwich–Tilbury, but remains concerned about the concentration of energy infrastructure in South Norfolk and particularly the proximity of the emerging Tasway Energy Park. NCC identifies three other major Norfolk solar NSIPs — Tasway, The Droves and High Grove — and calculates that, together with East Pye, the projects would affect more than 4,750 ha of agricultural land. NCC describes the resulting pattern as cumulative and clustered development rather than isolated projects.

For Chapter 18, three cumulative pathways are particularly important.

The first is hazardous waste. Here the Applicant's own assessment already identifies a significant effect. At the assumed peak replacement scenario, Chapter 18 estimates approximately 17,200 tonnes of residual WEEE and waste batteries would require landfill following the assumed 95% recovery rate. Because hazardous-waste landfill is assessed as a very-high-sensitivity receptor, §18.5.154 identifies a **moderate or large adverse cumulative effect which is significant**. A significant cumulative effect is again identified for decommissioning. The proposed response includes future reassessment, inter-project coordination and potentially staggering waste deliveries or decommissioning. These significant findings must remain visible in the overall conclusions; they cannot be reduced to a general statement that Chapter 18 produces no significant cumulative effect.

The second is transport, glare and operational exposure. East Pye places arrays beside several A, B and minor roads, while other solar and grid projects will use parts of the same rural highway network. The relevant cumulative question is not simply whether two projects produce glare at the identical second. It includes the repeated transformation of a journey through multiple solar landscapes, combined construction traffic and the increasing dependence on vegetation to separate reflective infrastructure from highway users.

The third is aviation. East Pye, Norwich–Tilbury and other energy developments do not create identical aviation effects, but they may affect the same operational receptor. For Tibenham, the proper cumulative question is whether the combined development environment progressively removes emergency options or introduces obstacles, reflective surfaces and other constraints around low-level operations. A conclusion that there is no cumulative effect merely because a pylon, solar array and substation affect aircraft in different ways would be too narrow.

The overall issue is therefore not whether every other development produces the same mechanism as East Pye. It is whether the same road, waste facility, landscape, community, water receptor or aerodrome is being asked to absorb several effects from several developments.

Part H – Evaluation

18.46 Application of the mitigation hierarchy

Chapter 18 demonstrates very different approaches to mitigation across different receptors. Those differences are important because they reveal where risks have genuinely been designed out and where they are instead being passed forward for operational management.

Avoid. Seething provides the clearest example. The Applicant altered the layout and removed solar development from land in response to forced-landing concerns. The relevant hazard was therefore reduced at source by changing the physical development. That is genuine avoidance.

The same approach is much less apparent at Tibenham. The Applicant accepts that development removes or affects areas which may otherwise provide emergency landing opportunities but principally relies upon the proposition that aviation operations can be ‘operationally accommodated’. The distinction is material. Operational accommodation requires the existing aviation activity to adapt to the development; avoidance changes the development so that the existing safety function remains available.

Road glare shows a similar hierarchy. Where reflections are predicted, the principal response is often existing vegetation or proposed planting rather than removing or reorienting the panels responsible for the reflection. Screening can be legitimate mitigation, but it is reduction, not avoidance, and its effectiveness depends upon vegetation being present, sufficiently high and dense, retained, maintained and effective in the relevant season.

For BESS, substantial mitigation has now been developed: detection, separation, shutdown, suppression/firefighting arrangements, firewater containment and emergency planning. That is a significant improvement. But final battery chemistry, enclosure system, manufacturer-specific large-scale testing, final layout and parts of the consequence and emergency-response case remain to be resolved. The risk has therefore largely moved from **avoidance** to **engineering control and future management**.

Utilities follow the same pattern. The Scheme has not entirely avoided National Gas or National Grid infrastructure. Compatibility is instead to be achieved through detailed design, crossings, protective provisions, method statements and operator agreement. Waste is still further down the hierarchy: the underlying waste stream is accepted, with the case depending on future reuse, recycling and treatment markets. Final decommissioning is managed through a future DEMP rather than eliminated as a future liability.

This is not an argument that management-plan mitigation is inherently unacceptable. PINS itself recognised that detailed mitigation can appropriately be secured after consent. Its Scoping Opinion nevertheless required proposed mitigation to be agreed where possible with relevant consultation bodies and to be clear how it is secured through the DCO or another legal mechanism.

The central distinction should therefore be maintained:

‘Operational accommodation’ is not equivalent to avoidance, and a future management plan is not equivalent to eliminating the risk through design.

Where avoidance is feasible — particularly where the same Applicant has already used it elsewhere — the Examination should require an explanation for choosing management of a continuing risk instead.

18.47 Reliance on post-consent approval

A significant part of the final safety and environmental case remains dependent upon decisions to be made after consent.

For BESS, those matters include the final battery chemistry and manufacturer, enclosure and suppression configuration, system-specific large-scale fire testing, detailed HAZID/HAZOP/FMEA/LOPA work, final Fire Risk and Environmental Risk Assessments, updated plume or consequence analysis where the selected system differs from the modelled concept, detailed firewater design and the final Emergency Response Plan. The Outline BSMP itself says that the Applicant and future operator will work with NFRS during design development and that a site-specific Risk Management Plan will be developed post-consent. (NSIP Documents)

Utilities are similarly dependent upon detailed design. Chapter 18 expressly states that the final telecommunications diversions will be defined later. Gas and electricity crossings require operator approval, method statements and protective provisions. The final National Grid interface remains subject to the requirements of NGET.

Glare mitigation depends in places upon the final panel system and final vegetation. Waste management becomes increasingly deferred through the operational life: detailed replacement arrangements, receiving facilities, hazardous-battery handling and ultimately decommissioning waste capacity will be decided decades later. The DEMP itself is not required until shortly before decommissioning.

There is nothing unusual in reserving genuine construction detail. The important distinction is between **how an already-demonstrated acceptable development will be implemented** and **whether the development will be acceptable at all**.

Post-consent approval is appropriate for selecting the precise supplier, pipe diameter or contractor method within a tested envelope. It is much more problematic where the future decision determines whether a safety consequence propagates, whether containment can hold the necessary volume, whether an aviation objection can be resolved, whether utility works are constructible or whether the mitigation relied upon to reach a non-significant conclusion can actually be delivered.

PINS's overarching Scoping Opinion anticipated this problem. Where design flexibility remained, it required the application to set out the maximum parameters and explain how they had informed an adequate assessment. The same discipline should now be applied to Chapter 18. The DCO may retain

flexibility, but the **environmental envelope and minimum performance outcome must be fixed before consent**.

18.48 Security and enforceability of mitigation

This is particularly important because several Chapter 18 conclusions depend not simply on mitigation being proposed, but on it being legally delivered.

Revision 2 of the draft DCO now contains an identifiable framework. Requirement 6 prevents Work No. 2 from commencing until a Battery Safety Management Plan has been approved by the relevant planning authority, following consultation with Norfolk Fire and Rescue Service and the Environment Agency. Requirements 13 and 14 secure the CEMP and OEMP, with Environment Agency consultation. Requirement 21 requires an approved DEMP before decommissioning. These are material improvements.

However, the current drafting repeatedly requires final plans only to be **'substantially in accordance with'** their outline versions. The Environment Agency has directly objected to that formulation. EA4 states that the phrase undermines enforceability and creates unnecessary uncertainty because material on which the Agency has based its position could subsequently be weakened. Its requested solution is simple: remove 'substantially'.

That objection carries particular weight for Chapter 18 because the outline documents contain mitigation relied upon to justify non-significant effects. The issue is not linguistic tidiness. If firewater capacity, drainage isolation, pollution controls or battery-safety measures can materially depart from the assessed version while remaining arguably 'substantially' consistent with it, the chain between the ES conclusion and the development actually constructed becomes weaker.

The lighting position also requires clarification. The Applicant originally committed to a standalone Lighting Strategy secured through the DCO, and Chapter 18 continues to rely upon it. Yet the current Schedule 12 list of certified documents does not separately identify that Lighting Strategy. The Applicant should therefore identify the precise requirement and commitment by which its mandatory provisions are secured.

The same audit should be undertaken across Chapter 18. For each mitigation measure upon which a significance conclusion depends, the Examination should be able to identify the controlling document, DCO Requirement or protective provision, approving authority, mandatory consultee, approval timing and minimum compliance standard.

The test is straightforward: **if removal of a mitigation measure would change the environmental conclusion, that measure should not be capable of quietly disappearing at detailed design.**

18.49 Internal consistency and outstanding disputes

The final application has resolved some earlier deficiencies, but several important conclusions remain disputed by the bodies or operators directly affected.

For Tibenham, the Applicant's conclusion that the remaining aviation effects are capable of operational accommodation is not accepted by Norfolk Gliding Club, and the General Aviation Awareness Council has separately questioned the aviation-safety assessment. The disagreement is therefore not between the Applicant and an abstract objector; it concerns the judgement of the operator whose circuits, launch failures, forced-landing options and day-to-day operating environment are affected.

For water and BESS containment, the Environment Agency has identified a series of unresolved matters concerning substation firewater, BESS drainage isolation, contaminated aggregate, rainfall capacity, Source Protection Zones and drinking-water receptors. Those comments directly qualify the Applicant's reliance on final detailed drainage and safety design.

For National Gas Transmission, Chapter 18 concludes that utility effects can be controlled by protective provisions, yet NGT's own requirements demonstrate the level of detailed compatibility work involved. It identifies FM05 and associated cathodic-protection apparatus and expressly identifies high-voltage cables, pylons, BESS and PV arrays as potential sources of interference. It requires controlled crossings, separation, access, technical assessment and operator approval. Where NGT or NGET protective provisions remain unagreed, the issue cannot properly be recorded as resolved merely because draft provisions exist.

NGET's position similarly distinguishes development consent from the ultimate grid connection solution. Its Relevant Representation makes clear that consenting a particular National Grid Substation arrangement does not itself oblige NGET to connect the project in that form and that the wider Gate 2 process may affect the ultimate infrastructure requirement.

There is also a recurring internal design tension between fixed and tracker panels. The application seeks flexibility to use either, while the Glint and Glare Assessment demonstrates materially different reflection durations and geometry for the two systems and NCC has expressly preferred the lower fixed-panel option because of wider environmental effects. The environmental assessment must therefore constrain whichever option produces the relevant worst case rather than allowing the final technology choice to escape the assessment envelope.

These disputes should be treated as an examination schedule of unresolved matters, not submerged within broad conclusions of ‘no significant effect’.

Part I – Conclusion and relief

18.50 Overall conclusion

Chapter 18 and its supporting documents now contain substantial environmental assessment. BEPS does not maintain the consultation-stage proposition that these matters have simply been omitted. Several have been materially improved and some have, on present evidence, been satisfactorily addressed. Minerals is the clearest example: PINS required an assessment, the Applicant supplied one, consultation took place with the Mineral Planning Authority and NCC now considers mineral safeguarding correctly addressed. There is likewise no present evidence of a significant television-reception effect, and the railway issue has been materially narrowed by specific BESS smoke-visibility modelling.

The remaining concern is more fundamental than the number of pages supplied. It is whether the final conclusions are supported by sufficiently **project-specific, settled and enforceable** evidence.

For utilities, significant interfaces depend upon protective provisions, detailed crossing design and statutory-undertaker agreement. For BESS, the Outline BSMP represents a major improvement, but final technology, system-specific testing, detailed containment and emergency planning remain deferred, while the Environment Agency continues to identify unresolved firewater and groundwater issues. For aviation, the principal affected operator continues to dispute the Applicant's safety conclusion at Tibenham. For roads, the outcome depends upon panel technology, road geometry and vegetation, including at Site 4 where arrays lie on both sides of the A140. For waste, the Applicant's own assessment identifies significant cumulative hazardous-waste effects during peak replacement and decommissioning. For final restoration, there remains a distinction between imposing a duty to decommission and ensuring that funds will exist to discharge it. For human health, the population-level conclusion remains non-significant, but particular pathways affecting PRoWs, drinking-water receptors, noise receptors and vulnerable groups still depend upon the underlying technical assessments being resolved.

There is also a common pattern across those matters. Where the design creates a conflict, the proposed response is frequently future detailed design, screening, management, third-party accommodation or later agreement rather than physical avoidance.

The central Chapter 18 conclusion should therefore be:

Chapter 18 does not fail because it contains no assessment. It remains problematic because several of its key ‘not significant’ conclusions depend upon technology not yet selected, infrastructure interfaces not yet finally agreed, mitigation not yet fully designed, vegetation not yet established, future recycling capacity not yet existing, or operational accommodation not accepted by the affected operator. Those dependencies must be resolved or securely bounded before they can support the final planning balance.

That is particularly important because the Scoping Opinion was expressly based upon the information then before PINS; it was not a determination that later design changes, new evidence or unresolved statutory-consultee concerns could never require further scrutiny.

18.51 Remedies sought

BEPS asks the Examining Authority to require focused resolution of the outstanding matters rather than simply additional narrative.

Utilities. NGT and NGET protective provisions should be agreed in final form before the close of Examination, together with the technical principles governing crossings, clearances, cathodic-protection interference, access and construction beneath or adjacent to existing apparatus. No affected works should commence until the relevant statutory undertaker has approved the detailed method where its apparatus is engaged.

BESS safety and water protection. Requirement 6 should secure a genuinely system-specific final BSMP. Before BESS construction or energisation, the selected technology should be supported by applicable large-scale fire-test evidence and the final safety studies, consequence/plume assessment where required by the selected system, hydraulic firewater-containment design and Emergency Response Plan. EA and NFRS should remain mandatory consultees. The final drainage design must demonstrate containment of the reasonable worst-case firefighting and rainfall volume, automatic and manual isolation, post-incident cleaning, contaminated-aggregate management and lawful disposal.

Aviation. The outstanding NGC and GAAC concerns should be resolved through a site-specific operational safety assessment based upon the final Site 1 layout and infrastructure. The Applicant should explain the different mitigation approach at Seething and Tibenham. Where an aviation-safety conflict cannot be demonstrated to be acceptably accommodated by the affected operator, physical avoidance through removal, relocation or setback of infrastructure should be required.

Road glint and glare. The consented envelope should be demonstrated safe for whichever of fixed or single-axis tracking panels produces the relevant reasonable worst case. Site 4 and the north–south A140 require specific assessment because arrays lie on both sides of the road. The assessment should cover elevated HGV, bus and agricultural-vehicle eye heights, relevant minor rural lanes and junctions, construction accesses and Year 1 rather than mature-planting screening. Where panel technology, orientation or layout is critical to the conclusion, that parameter should be restricted through the DCO.

Lighting and telecommunications. The Applicant should identify the precise DCO mechanism securing the Lighting Strategy and make its material limits binding across construction, operation, replacement, emergencies and decommissioning. Any required telecommunications diversion should be agreed before the affected work commences. A proportionate investigation and rectification mechanism should cover verified Scheme-related television or telecommunications interference.

Waste and decommissioning. The Applicant should maintain an auditable whole-lifecycle material and waste balance covering construction, routine failure, PV replacement, repeated BESS replacement, fire-damaged material and decommissioning. Future SWMPs should reassess actual treatment and hazardous-waste capacity rather than assume capacity will emerge. Where staggering or inter-project coordination is relied upon to mitigate the Applicant's own significant cumulative hazardous-waste finding, a mechanism must exist to deliver it. A funded, ring-fenced and insolvency-protected decommissioning security should cover removal, waste treatment, contamination remediation and restoration throughout the Scheme's life.

Human health. The Applicant should provide a consolidated health-pathway schedule identifying the receptor or vulnerable group, underlying technical assessment, significance conclusion, outstanding uncertainty, mitigation and securing mechanism. This need not constitute a new standalone HIA; its purpose is to ensure that localised effects are not lost within a population-wide conclusion.

General mitigation control. Finally, BEPS asks for a single definitive mitigation schedule showing, for every measure relied upon to avoid or reduce a Chapter 18 effect, the source document, commitment number, DCO Requirement or protective provision, approving body, mandatory consultee, trigger point and minimum performance standard. The Environment Agency's objection to the repeated phrase ‘substantially in accordance with’ should be resolved so that final plans cannot materially weaken mitigation which underpins the ES conclusions.

If those matters cannot be resolved within Examination, the corresponding ‘not significant’ or ‘acceptable’ conclusion should not be assumed. The decision-maker should assess the Scheme on the basis of the effects and uncertainties that remain, rather than on the basis of mitigation which is still dependent upon future design, future agreement or future market capacity.

Chapter 19: Cumulative and In-Combination Effects

19.1 Executive summary and principal objection

Chapter 19 does not assess East Pye Solar as one functioning environmental system. It is principally a summary of residual conclusions already reached in separate Environmental Statement chapters. By the time those conclusions reach Chapter 19 they have already been filtered through topic-specific significance thresholds, embedded-mitigation assumptions, professional judgment and, in several cases, unresolved or deferred assessment. Chapter 19 therefore does not independently test the environmental consequences of the Scheme as a whole; it largely reproduces the assumptions and limitations of Chapters 6–18.

That is the central defect.

East Pye is not a compact development affecting a small number of discrete receptors. It comprises ten dispersed Sites, numerous Sub-Sites, approximately 24 km of cable corridor, a BESS, multiple project substations, a new National Grid Substation, overhead-line and pylon works, highway alterations, access and haul-road infrastructure, construction compounds and extensive temporary working areas. Those components repeatedly affect the same rural landscapes, villages, roads, soils, groundwater bodies, watercourses, ecological networks and heritage settings. The correct cumulative question is therefore not whether each component or topic can individually be reduced to a ‘minor’ or ‘not significant’ residual effect. It is what happens to the same receptor when those pressures are experienced together.

The Applicant’s methodology is poorly suited to answering that question. Chapter 19 expressly requires a residual effect to be Minor or greater before it is normally taken forward; excludes negligible effects from further consideration; assesses broad ‘receptor groups’ rather than every individual receptor; and states expressly that ‘the scale of the effect interaction has not been identified’. Significance is then determined either because one constituent effect was already significant or through professional judgment where individually non-significant effects are considered capable of interaction.

This structure creates several linked problems.

First, effects are filtered before interaction is tested. Numerous individually small effects can become environmentally important when repeated across the same receptor or network: hedge severances, intermittent lighting, traffic movements, noise events, small areas of soil compaction, temporary drainage changes or repeated construction disturbance. Excluding such effects because they have already been labelled negligible risks eliminating the very evidence required to determine their cumulative importance.

Secondly, Chapter 19 inherits every weakness in the underlying chapters. An under-assessed effect, omitted receptor, optimistic mitigation assumption or uncertain significance judgment does not become reliable merely because it is

subsequently entered into a cumulative table. BEPS has already identified this structural problem elsewhere in the Written Representation: an interaction omitted at source does not become assessed merely because the ES contains a later cumulative-effects chapter.

Thirdly, the grouping of receptors can conceal localised worst cases. A generic category such as ‘residents/users of the local area’ does not identify the particular household simultaneously exposed to a substation, construction route, lighting, landscape change and noise. ‘Ecologically-designated sites and priority habitats’ does not represent a maternity colony, connected hedgerow network, chalk-stream reach or great crested newt pond network. The environmental response of those receptors depends upon their specific spatial and functional relationships, not their membership of a broad category.

Fourthly, the methodology does not establish the spatial or temporal scale of interaction. That omission is particularly serious for a dispersed development whose effects may arise concurrently at multiple work fronts and recur during replacement, repowering and decommissioning. The number of simultaneous construction compounds, active haul routes, cable operations, HDD works, piling locations and illuminated nodes is capable of determining whether the receiving environment remains functional during construction. Yet Chapter 19 does not quantify that cumulative operational reality.

Fifthly, construction and decommissioning are largely grouped together on the assumption that decommissioning will usually be similar to or less harmful than construction. That assumption is not demonstrated. After approximately 60 years the ecological, climatic, agricultural, hydrological and development baseline will be materially different; mature mitigation planting may exist; soils may have changed; replacement infrastructure may have been installed; substantial waste streams will arise; and some grid infrastructure is intended to remain. Decommissioning is therefore not simply construction in reverse.

Sixthly, the assessment underplays the external cumulative context. South Norfolk Council, Norfolk County Council and the LLFA have all raised concern about the interaction of East Pye with other major energy and infrastructure developments, including Tasway Energy Park, Norwich to Tilbury, other solar and BESS proposals and Hornsea Three-related infrastructure. The LLFA specifically supported inclusion of proposed but unconsented schemes where overlapping programmes make cumulative effects reasonably foreseeable.
The Applicant’s mapping compounds that problem. Very large housing, solar, BESS and infrastructure projects are represented as point symbols rather than by their true landtake, red-line boundaries, linear corridors, access routes or zones of influence. A development occupying hundreds of hectares can therefore appear as one small dot. That representation cannot show whether schemes occupy adjoining landscapes, share roads, affect the same catchment, constrain the same bat population or alter the same heritage setting. It visually minimises the cumulative development pressure that the assessment is supposed to disclose.

The treatment of Tasway illustrates the wider inconsistency. Tasway remains a relevant proposed scheme, is described as paused rather than abandoned, and has been identified by both local authorities as requiring cumulative consideration. BEPS has also identified its functional relationship with the Great Moulton grid infrastructure. Yet the Applicant applies a stricter uncertainty

threshold to Tasway than to elements of its own Scheme. East Pye's BESS remains integral to the assessment despite its unresolved Gate 2 position and future delivery uncertainty, while uncertainty surrounding Tasway is relied upon to reduce its cumulative relevance. That is not a consistent precautionary methodology.

The same imbalance appears in the treatment of benefits. Chapter 19 attributes significant beneficial operational effects to ecological habitats and water quality through cessation of agricultural activity and reduced fertiliser and chemical use. Those benefits depend upon successful habitat establishment, long-term management, hydrological performance, mitigation durability, replacement impacts and the actual land-management regime over six decades. They are therefore predictions dependent upon future performance, yet are treated with greater certainty than many adverse risks for which the Applicant demands detailed proof before acknowledging significance.

The result is an assessment that fragments the Scheme before asking whether its effects combine. That reverses the proper analytical sequence. Receptors experience one development, not separate ES chapters.

The Applicant has therefore constructed an assessment methodology which systematically reduces the environmental information available before asking whether effects interact. The resulting predominance of 'not significant' conclusions is a product of that methodology, not evidence that the combined burden of East Pye is environmentally insignificant.

19.2 The correct cumulative assessment framework

A reliable assessment of East Pye requires three distinct but related forms of analysis. They should not be conflated because they answer different environmental questions.

19.2.1 Internal accumulation within East Pye

The first question is the accumulation of effects generated by East Pye itself.

This is particularly important because East Pye is dispersed across numerous Sites, Sub-Sites and linear corridors. Different components of the same authorised development can affect different parts of the same receptor network simultaneously. A project-wide assessment must therefore look beyond the significance assigned to each isolated component and examine their combined physical operation.

Examples include panels operating together with fencing, access tracks, substations and underground cabling across the same landscape; several construction compounds operating simultaneously; multiple active construction fronts; repeated hedgerow crossings; several sources of lighting; repeated use of the same rural road; and piling, trenching, drainage works and foundations affecting the same groundwater or catchment system.

The ecology evidence illustrates the problem clearly. Construction compounds can each generate hardstanding, runoff, lighting, noise, traffic, fuel storage and

human activity. One compound may lie beside a bat corridor, another beside a pond network and a third within the same sub-catchment. Individually they may be assessed as localised or temporary; together they can affect different components of one connected ecological system.

The same applies to lighting. The Scheme contains operational and construction lighting associated with substations, BESS infrastructure, compounds, accesses, security equipment and potentially HDD operations. Several individually compliant light sources may together divide a dark landscape into illuminated or intermittently illuminated barriers. For light-sensitive barbastelle bats, the cumulative loss of darkness along connected routes may be more important than the direct physical loss of any individual hedge.

Construction disturbance likewise operates cumulatively within the Scheme. Cable trenching, piling, HDD, highway works, vegetation removal, haul roads, compounds and access works may overlap spatially and temporally. The same woodland edge may experience noise, lighting, traffic and dust; the same watercourse may receive upstream runoff while also being affected by a crossing and adjacent construction activity. The relevant question is not whether every individual disturbance is temporary. It is whether the receptor remains environmentally functional while numerous temporary disturbances occur together.

The Applicant should therefore identify the maximum realistic number and location of simultaneous work fronts and assess internal cumulative effects against actual receptors: individual maternity colonies; pond networks; sensitive watercourse reaches; connected hedgerow systems; residential clusters; individual heritage settings; private water supplies; and constrained rural-road corridors.

BEPS has already identified this principle in the wider Written Representation: the ES is organised by topic, but the environment is not. Residents may experience visual change, noise, lighting, traffic and amenity effects together; heritage assets may experience setting, visual and construction effects together; ecological receptors may experience habitat change, disturbance and hydrological effects together; and watercourses may experience several construction and drainage pathways simultaneously.

That is internal cumulative assessment. It is not adequately captured by a table assembled from residual effects after those interactions have already been separated between Chapters 6–18.

19.2.2 External cumulative effects

The second question is the effect of East Pye together with other existing, consented and reasonably foreseeable development affecting the same receptors.

This assessment must be receptor-led rather than development-type-led. The relevant issue is not whether another proposal is another solar farm. It is whether another proposal affects the same landscape, road, waterbody, ecological population, heritage setting, labour market, settlement or community.

Relevant development therefore includes, where within the appropriate Zone of Influence:

- Tasway Energy Park;
- Norwich to Tilbury;
- The Droves and High Grove where their effects overlap relevant receptors;
- other solar and BESS proposals;
- Hornsea Three-related works and associated infrastructure;
- overhead lines, substations and other grid development;
- strategic and local housing development;
- highway works;
- and other infrastructure capable of generating overlapping environmental effects.

Norfolk County Council has identified an exceptional concentration of energy infrastructure in Norfolk and expressly referred to Tasway, The Droves, High Grove, Norwich to Tilbury and Hornsea Three-related works. South Norfolk Council likewise identifies Tasway, Norwich to Tilbury and other energy and TCPA developments as capable of producing cumulative landscape, ecological, community and economic effects. The LLFA supports inclusion of proposed but unconsented projects where overlapping construction programmes could affect the same drainage and flood systems.

The cumulative assessment must therefore follow the receptor.

For barbastelle bats, it should map all relevant development against maternity colonies, Core Sustenance Zones, woodland, hedgerows, commuting routes and feeding habitat.

For water, it should map development by catchment and groundwater pathway rather than project boundary.

For transport, it should identify schemes using the same A140, A47, village approaches, rural lanes and AIL routes.

For heritage, it should identify where several projects alter the same historic landscape or setting.

For residents, it should assess whether the same communities face sequential or simultaneous years of construction, landscape industrialisation and traffic disturbance.

For soils and agriculture, it should assess the geographical concentration of BMV land loss and temporary construction landtake.

The current point-symbol mapping does not permit that analysis. A 700 MW solar proposal, strategic housing site, pylon corridor or major BESS installation cannot meaningfully be represented as a single point if the purpose of the exercise is to understand spatial overlap. Actual footprints and corridors must be shown.

Tasway requires particular attention. It has not ceased to exist as a proposal merely because it is paused. It has been specifically identified by the local authorities as relevant to cumulative effects, and BEPS’ evidence identifies a

relationship with the wider Great Moulton grid infrastructure. The Applicant should either include Tasway within a main or sensitivity-case assessment or provide a clear, evidence-based explanation for exclusion which is applied consistently to its own uncertain project components.

External cumulative assessment is therefore not an optional background exercise. It is necessary to establish what South Norfolk will actually experience if East Pye is developed within the wider pattern of foreseeable housing, solar, storage and grid infrastructure.

At ISH1 the Applicant confirmed that it intends to submit an interrelationships report at Deadline 1 drawing together information on the proliferation of DCO and other relevant projects. The Applicant expressly described that document as not constituting a formal cumulative assessment in EIA terms. The ExA also questioned the initial intention to confine its scope to Norfolk, observing that administrative boundaries do not correspond to environmental effects, and asked the Applicant to engage with the host authorities over its scope. BEPS welcomes the production of that material insofar as it improves the evidence base, but it should not be treated as a substitute for the receptor-specific cumulative assessment required by the ES.

19.2.3 Cross-topic in-combination effects

The third question concerns different environmental pressures generated by East Pye acting upon the same receptor. This is the issue that Chapter 19 describes as ‘in-combination effects’. The correct starting point is the receptor, not the ES chapter.

A resident may simultaneously experience:

landscape change + operational or construction noise + lighting + HGV traffic + vibration + severance + loss of tranquillity.

A listed building or conservation area may experience:

visual intrusion + change to the historic agricultural landscape + construction traffic + noise + lighting + altered approach or experience.

A barbastelle maternity colony may experience:

hedgerow severance + lighting + construction noise + road traffic + loss or compression of foraging habitat + woodland-edge disturbance + hydrological change affecting prey availability.

A private water-supply user may experience:

pile-created groundwater pathways + trenching + contamination mobilisation + altered drainage + BESS or transformer pollution risk + firewater containment failure.

A PRoW user may experience:

visual industrialisation + fencing + construction noise + temporary closure or diversion + HGV interaction + loss of tranquillity + lighting.

A chalk-stream receptor may experience:

sediment mobilisation + runoff + HDD risk + groundwater change + cable effects + construction crossings + pollution from several upstream areas.

These combinations cannot be reconstructed reliably after the constituent chapters have already downgraded, mitigated or excluded individual effects. The combined assessment must test the actual receptor experience.

The Applicant's own screening methodology makes this particularly important because Chapter 19 does not assess every individual receptor and excludes effects below Minor before interaction is considered. The more that the underlying chapters fragment an effect into individually small elements, the greater the risk that the final receptor-level burden disappears from the cumulative assessment.

There is also a separate legal terminology issue which should be kept clear. For EIA purposes, Chapter 19 uses 'in-combination' to describe different environmental effects generated by East Pye acting on the same receptor, while 'cumulative effects' generally refers to effects of East Pye together with other development.

Under the Conservation of Habitats and Species Regulations 2017, however, 'in combination' has a separate and specific meaning: the effects of the project together with other plans or projects upon a European site and its qualifying features. The HRA question must therefore be considered under its own legal framework and should not be treated as satisfied merely because Chapter 19 has carried out an EIA effect-interaction exercise. BEPS' ecology evidence identifies this distinction expressly.

The same care is required in relation to European Protected Species. Effects on barbastelle maternity colonies and other EPS may be relevant to cumulative EIA, protected-species licensing and, where a qualifying European-site relationship exists, HRA, but those are legally distinct tests. A finding of 'not significant' in the Chapter 19 EIA matrix cannot determine whether an EPS licence is realistically grantable or whether an HRA in-combination pathway has been excluded.

The three levels of analysis must therefore remain distinct:

1. accumulation of effects generated by East Pye itself;
2. East Pye acting cumulatively with other plans and projects; and
3. different environmental pressures generated by East Pye interacting upon the same receptor.

Chapter 19 does not presently demonstrate that all three have been assessed comprehensively. Until they are, the Examining Authority cannot safely conclude that the cumulative environmental effects of the Scheme have been identified or that the repeated 'not significant' findings represent the true combined consequences of the development.

19.3 Chapter 19 cannot cure omissions in Chapters 6–18

Chapter 19 is only as reliable as the assessments which feed into it. It does not undertake a fresh receptor-led assessment of the Scheme. It reviews the residual effects already identified in Chapters 6–18 and asks whether those residual effects interact. That means any effect omitted, understated, scoped out or reduced prematurely in an underlying chapter is correspondingly absent or understated in Chapter 19.

This is a fundamental limitation because many of the most important East Pye interactions arise precisely where mitigation proposed in one discipline has consequences in another.

Landscape planting is the clearest example. Chapter 7 relies heavily upon new hedgerows, trees, woodland and scrub to screen solar and electrical infrastructure. Yet planting introduced to reduce visual effects may alter the openness and historic structure of the South Norfolk Claylands, affect the setting of heritage assets and reduce the suitability of open farmland for skylark, lapwing and other open-country birds. It cannot simply be counted as landscape mitigation, ecological enhancement and heritage mitigation without assessing those competing functions together.

The same problem arises with transport. If resolving highway objections requires new internal haul routes, passing places, visibility splays, road widening or vegetation removal, those measures may create additional effects on hedgerows, Roadside Nature Reserves, soils, drainage, watercourses, archaeology, heritage settings and residential receptors. Chapter 11 itself identifies unresolved cross-topic consequences from highway works. A transport solution is not environmentally neutral simply because it resolves a traffic problem.

Noise mitigation creates the same potential conflict. Relocating, reorienting or screening BESS, transformer or substation plant may reduce noise at one dwelling while moving infrastructure closer to a heritage asset, drainage feature, ecological corridor or another residential receptor. Acoustic barriers may themselves introduce visual and landscape effects. Chapter 19 cannot assume a reduced residual noise effect without establishing that the physical mitigation required to achieve it is environmentally compatible with the conclusions of the other chapters.

Drainage measures likewise occupy land and can change habitats, soils, archaeological conditions and hydrological pathways. Landscape mitigation may change agriculture. Ecological planting may alter heritage setting. Retaining habitat created during operation may prevent restoration of the former agricultural landscape. These are not incidental overlaps; they are the reason an EIA is required to assess the environment as a whole.

There is also a serious inconsistency in the future baseline. Landscape, ecology, heritage and agriculture do not all appear to assume the same post-decommissioning condition. Parts of the ES describe the development as temporary and reversible, while the landscape case assumes that mature

woodland, trees and hedgerows may remain and that National Grid infrastructure will remain in situ. If those features remain, the landscape has not returned to its existing agricultural condition. The ecological, heritage, agricultural and landscape assessments must therefore use one coherent end state. Volume 1 of this Written Representation identifies this as a substantive cross-topic inconsistency.

Socio-economic effects provide another example. Significant adverse landscape effects are established elsewhere in the ES, yet the consequences of prolonged landscape industrialisation for tourism, recreational experience, rural businesses and community wellbeing are not necessarily propagated into Chapter 14 with equivalent weight. Chapter 19 cannot compensate for that omission by combining only the residual socio-economic effects which Chapter 14 has already chosen to recognise.

The same principle applies throughout the ES. If ecological effects of lighting are omitted at source, Chapter 19 cannot recover them. If transport effects on heritage are not quantified, they cannot later appear in the heritage interaction. If groundwater contamination pathways are deferred to later investigation, Chapter 19 cannot establish their combined effect on private water-supply users. If replacement and repowering have not been fully assessed in the underlying chapters, their whole-life interactions cannot emerge in the cumulative table.

The correct principle is simple:

an interaction omitted at source does not become assessed merely because the ES contains a later cumulative-effects chapter.

Chapter 19 therefore cannot be treated as a cure for deficiencies elsewhere in the Environmental Statement. On the contrary, because it relies upon those preceding assessments, their unresolved uncertainties propagate directly into its conclusions.

The Examining Authority should therefore test every Chapter 19 conclusion against the underlying evidence and ask whether all relevant effects, mitigation consequences and receptor interactions were first identified correctly in Chapters 6–18. Where that has not occurred, the corresponding Chapter 19 conclusion cannot safely be relied upon.

19.4 The ‘Minor or greater’ screening threshold is unsound

Paragraphs 19.2.0–19.2.8 impose a further methodological filter. Chapter 19 only takes an effect forward where the residual effect is Minor or greater and there is another qualifying effect on the same receptor. Effects characterised as negligible are excluded from further consideration.

That approach is particularly inappropriate for East Pye.

The environmental risk created by a dispersed scheme does not arise only from a small number of individually large effects. It also arises from repetition. A single small hedge gap may be negligible. Numerous gaps across connected

flight routes may fragment a bat network. One low-level light source may be negligible. Several substations, compounds, accesses, vehicles and security installations may cumulatively erode a dark landscape. One short traffic interruption may be negligible. Repeated HGV movements, road controls and construction activities across several sites may materially affect the same village or rural lane.

The same applies to soils. One localised area of compaction may be limited; repeated compaction from haul roads, compounds, trenching, panel construction, maintenance and replacement across the same agricultural holding may materially affect drainage and soil structure.

For water, an individually small change to runoff, infiltration or groundwater movement may appear insignificant in one location. Repeated alterations across several micro-catchments, cable corridors, foundations and drainage systems may together change the quantity, timing or quality of water reaching the same downstream receptor.

For landscape and heritage, several minor changes can progressively erode the same rural setting. A solar field, a substation, a pylon group, a new access, screening vegetation and another nearby energy scheme may each be assessed separately at low magnitude while collectively transforming the character in which a settlement or heritage asset is experienced.

The ecological WR identifies the problem precisely:

The methodology risks excluding precisely the cumulative pressure created by a dispersed Scheme: numerous small hedge gaps, low levels of illumination, localised noise, repeated vehicle movements, small areas of compaction and multiple short-term disturbances.

That criticism applies equally to human, heritage, hydrological, agricultural and landscape receptors.

It is also circular to exclude an effect because it has already been classified as negligible when the purpose of Chapter 19 is to determine whether effects change in significance when experienced together. The fact that an effect is negligible **in isolation** does not establish that it is environmentally irrelevant when repeated or combined with other pressures on the same receptor.

The threshold is therefore capable of producing false negatives by design. The more a large scheme divides its environmental consequences into individually small components, the more likely those effects are to disappear before their cumulative significance is examined.

For East Pye, the appropriate question is not simply whether each constituent effect exceeds a predetermined individual threshold. It is whether the total pressure on the receptor changes its condition, function, character or experience. Chapter 19 does not demonstrate that this question has been answered.

19.5 The Applicant admits that it has not assessed the scale of interaction

Paragraph 19.2.3 contains an unusually important qualification:

‘The scale of the effect interaction has not been identified as part of this assessment.’

That admission materially weakens the Chapter 19 conclusions.

Scale is not an optional descriptive detail. For a cumulative assessment, it is often what determines significance.

The environmental consequence of an interaction depends upon questions such as:

- how many receptors experience it;
- how many East Pye Sites contribute to it;
- what proportion of a habitat or landscape is affected;
- how often the interaction occurs;
- how many construction fronts operate simultaneously;
- whether impacts overlap or follow sequentially;
- whether an alternative unaffected route or habitat remains;
- and whether the effect persists for days, years, decades or through repeated lifecycle phases.

Those questions are especially important for East Pye because of its geographic extent and fragmented layout.

For a barbastelle colony, the relevant scale may be the number of commuting routes affected across its Core Sustenance Zone, not the magnitude assigned to a single hedge crossing.

For a rural settlement, it may be the proportion of approaches and surrounding landscape affected by solar development, grid infrastructure and construction traffic, rather than the effect at one representative viewpoint.

For a road user, it may be the frequency and duration of conflict with HGV movements across several construction sites.

For a catchment, it may be the combined area of compacted ground, panel coverage, access tracks, trenching and drainage modification contributing to the same downstream system.

For agricultural land, it may be the cumulative area and duration of productive land removed from use and repeatedly disturbed.

For heritage, it may be the progressive change to an entire historic landscape surrounding several assets, rather than the isolated view from any one asset.

A Chapter 19 assessment which states significance without first identifying the scale of the interaction therefore omits one of the principal variables needed to justify that significance judgment.

That weakness is compounded by reliance upon professional judgment. Professional judgment is legitimate, but it must be applied to an adequately defined effect. It cannot substitute for the missing spatial and temporal description of that effect.

For a Scheme exceeding 1,200 hectares and extending through ten Sites, numerous Sub-Sites and approximately 24 km of cable corridor, the scale of interaction is central to the environmental question. The Applicant's express decision not to identify it materially reduces confidence in the repeated conclusions of no significant in-combination effect.

19.6 Broad receptor groups conceal actual worst cases

Chapter 19 does not assess every individual receptor. Paragraph 19.2.6 expressly states that it instead uses ‘receptor groups’, and paragraph 19.2.7 identifies four principal groups: residents and users of surrounding land uses; PRoW and walking-route users; heritage assets; and ecologically designated sites and priority habitats.

That degree of aggregation is too coarse for East Pye.

The significance of an in-combination effect depends upon the receptor's actual relationship with the development. A house next to one solar field is not equivalent to a house affected simultaneously by a construction route, a substation, lighting, noise and landscape change. A remote County Wildlife Site is not equivalent to a maternity woodland surrounded by cable works and solar development. A village footpath with one distant view is not equivalent to a promoted walking route passing through several development areas.

The assessment must therefore identify the worst-affected actual receptors, not simply the average experience of broad categories.

19.6.1 Worst-affected residential properties

The category ‘residents/users of the local area’ obscures material differences between households.

Some residential receptors may experience a combination of:

- major or substantial visual change;
- operational transformer or BESS noise;
- construction traffic;
- vibration;
- lighting;
- temporary access restrictions;
- loss of tranquillity;
- changes to water supply risk;
- and repeated disturbance during replacement and decommissioning.

The Applicant's own LVIA identifies significant effects around Site 1 and the BESS, including Major to Substantial Adverse effects for residential and local visual receptors around Great Moulton and Station Road. Yet Chapter 19 largely collapses these materially different experiences into one receptor group.

That prevents the Examination from identifying the actual residential worst case.

The Applicant should provide a receptor-by-receptor schedule for properties experiencing multiple effects, identifying every relevant environmental pathway and the combined temporal sequence.

19.6.2 Great Moulton and Site 1: the cumulative industrial nexus

Site 1 requires separate treatment because it is the clearest location where multiple project components and environmental constraints converge.

BEPS has already identified Site 1 as a ‘cumulative industrial nexus’. It must be considered together with the BESS, project substation infrastructure, proposed National Grid Substation, grid connection works, pylons and overhead-line infrastructure, cable corridors, access routes and surrounding development.

The receptor environment simultaneously includes:

- Great Moulton and nearby dwellings;
- the Principal Chalk Aquifer and Source Protection Zone;
- private water supplies;
- Tibenham Airfield and aviation safeguarding;
- the railway;
- major electrical infrastructure;
- agricultural land;
- landscape and heritage receptors;
- construction and AIL routes;
- and potential major-accident and contamination pathways.

The water WR further identifies the concentration of dual 400kV infrastructure, BESS, oil-filled transformers, impermeable hardstanding and firewater requirements above a sensitive aquifer and near private boreholes.

The question is therefore not whether each constituent Site 1 effect is acceptable in isolation. It is whether this concentration of electrical, transport, hydrological, aviation, agricultural and residential constraints creates an acceptable location for the Scheme's principal infrastructure hub.

Chapter 19 does not provide that assessment.

19.6.3 Private water-supply users

Private water-supply users should not disappear into the generic category of ‘residents’.

For those households, the relevant receptor is the drinking-water supply itself and the human population dependent upon it. The pathways include groundwater disturbance, piling, trenching, contaminated ground, drainage alteration, transformer oils, BESS-related contaminants and contaminated firewater.

These risks are highly location-specific. A private borehole hydraulically connected to a construction area cannot be assessed meaningfully through the average experience of ‘residents/users of the local area’.

The assessment should therefore identify individual supplies or coherent hydrogeological receptor clusters and test the complete set of pathways affecting each.

19.6.4 Schools, children and vulnerable highway users

The same problem arises with transport.

Children walking to school, cyclists, equestrians, elderly pedestrians and residents using narrow village lanes do not experience construction traffic in the same way as an ordinary motorised road user.

The transport evidence identifies constrained rural roads, school-related timing restrictions, PRoW conflicts and extensive reliance upon management measures such as marshals, call-forward systems, traffic controls and passing arrangements.

Where a school, village or vulnerable-user route is exposed simultaneously to HGVs, noise, severance, delay, air emissions and loss of pedestrian amenity, that receptor requires specific assessment. Broad grouping dilutes rather than reveals the risk.

19.6.5 Farms and rural businesses

Farm businesses are also inadequately represented by generic land-user or socio-economic categories.

The same holding may experience:

- permanent or long-duration landtake;
- loss of BMV land;
- severance of fields;
- disruption to drainage;
- temporary occupation;
- restricted access;
- construction traffic;
- soil compaction;
- compulsory rights;
- and uncertainty about restoration.

Rural tourism and other local businesses may simultaneously experience landscape change, access disruption, traffic, labour-market competition and reduced visitor amenity.

Those combined effects are not captured by assessing agriculture, transport and socio-economics separately and then assigning the receptor to a broad group.

19.6.6 Individual heritage assets and conservation areas

‘Heritage assets’ is particularly unsatisfactory as a cumulative receptor category.

The Scheme affects assets of very different significance, setting, visibility and relationship to the development. Grade I churches, Grade II* farmsteads, conservation areas and non-designated historic landscape features cannot be meaningfully averaged.

An individual church may be affected by:

- transformation of its agricultural setting;
- solar arrays;
- substations or pylons;
- traffic on historic approaches;
- construction noise;
- vegetation changes;
- and new screening which itself alters historic openness.

A conservation area may experience a different combination of HGV movements, highway works, visual change and alteration of rural approaches.

The correct assessment must therefore identify the particular asset and the particular combination of effects upon its significance and setting. A broad ‘heritage assets’ category risks concealing the assets experiencing the most serious cumulative harm.

19.6.7 Ecological populations and functional networks

The ecological grouping is the most problematic of all.

Chapter 19 identifies ‘ecologically-designated sites and priority habitats’ as the relevant operational receptor group. That is not an adequate substitute for species populations or functional ecological networks.

East Pye affects fundamentally different receptor systems, including:

- barbastelle maternity colonies and overlapping Core Sustenance Zones;
- connected hedgerow and dark-flight networks;
- great crested newt pond and terrestrial networks;
- farmland-bird territories;
- ancient woodland and veteran-tree networks;
- River Tas and chalk-stream systems supporting white-clawed crayfish and other aquatic species;
- botanically important field margins and roadside verges;

- County Wildlife Sites;
- and Roadside Nature Reserves.

These receptors respond differently to the same development.

New hedgerow planting may benefit one species while reducing open-country bird habitat. Lighting may have little relevance to a grassland habitat score but materially affect barbastelle connectivity. Sediment may have limited terrestrial consequences but severe aquatic effects. A retained woodland may avoid direct habitat loss while suffering cumulative edge effects, hydrological change, lighting and isolation.

The WR's ecological analysis therefore correctly requires cumulative assessment at the level of functional networks and shared receptors by name and location, rather than broad habitat categories.

Chapter 19's receptor grouping suppresses those distinctions. It cannot demonstrate the ecological worst case unless actual populations, colony networks, catchments and habitat systems are followed across the Scheme.

19.7 Misleading cumulative mapping

The Applicant's presentation of external cumulative development materially understates the scale of the surrounding development context.

Large solar, BESS, grid and housing schemes are represented principally as point symbols rather than by their actual red-line boundaries, construction footprints, cable corridors, substations, access routes and zones of environmental influence. BEPS' review of the cumulative material identifies this directly.

That is not a neutral cartographic choice. Cumulative effects are spatial. Their significance depends upon whether developments overlap in the same landscape, affect the same road, drain to the same watercourse, intersect the same ecological network or surround the same settlement.

A point symbol cannot show:

- whether Tasway and East Pye occupy the same or adjoining landscape;
- whether their ecological Zones of Influence overlap;
- whether Norwich to Tilbury affects the same hedgerows, woodland or heritage settings;
- whether several BESS or housing sites drain into the same tributary;
- whether several developments use the same rural construction route;
- whether the same residential receptors sit between several developments;
- or whether separate energy schemes progressively enclose the same settlement.

The result is visually misleading. A development covering hundreds of hectares can appear little more significant than a small local planning application because each is reduced to a similarly small symbol.

That presentation also conceals linear development particularly badly. Norwich to Tilbury is not experienced as a single point; it is a major electricity transmission corridor. Housing development is not experienced at the centre point of an allocation; it occupies land, creates roads, drainage and traffic and generates new receptors. Solar farms are not points; they comprise extensive arrays, substations, accesses and construction areas.

The cumulative map visually minimises the very cumulative development pressure that it is supposed to disclose.

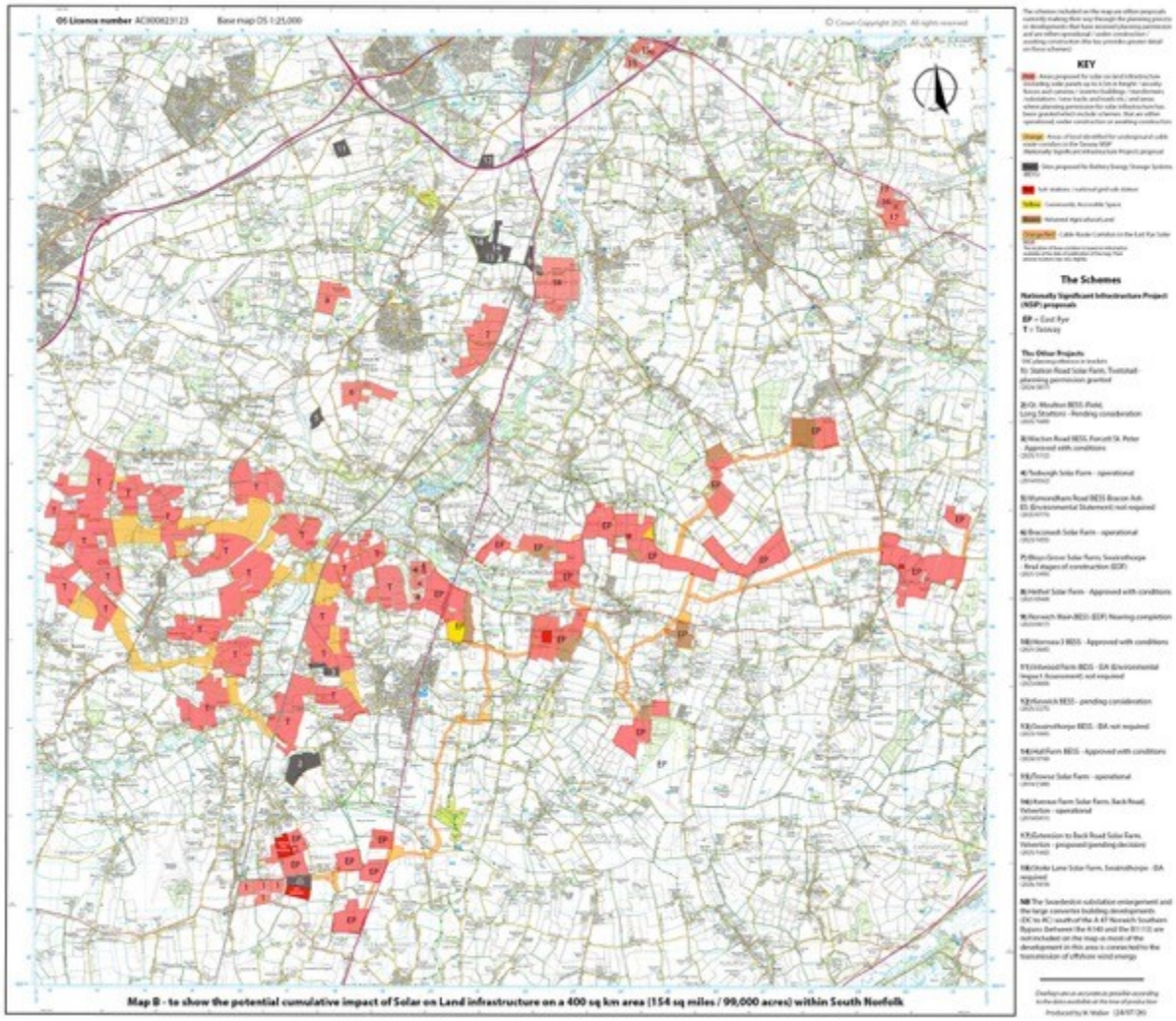
This matters directly to the decision-making process. A decision-maker viewing a field of isolated dots is not being shown the actual geographic transformation of the South Norfolk landscape. The Applicant should therefore provide GIS-based cumulative plans showing, so far as information is reasonably available:

- full red-line or application boundaries;
- solar, BESS and substation footprints;
- overhead-line and cable corridors;
- major construction and access routes;
- relevant landscape Zones of Theoretical Visibility;
- ecological Zones of Influence;
- surface-water catchments and groundwater receptors;
- heritage assets and their relevant settings;
- and settlements and residential receptors affected by more than one development.

Those plans should be produced at a scale capable of showing spatial overlap with East Pye rather than simply locating the existence of another project. Without that information, neither the public nor the Examining Authority can readily see the actual cumulative pattern of development which Chapter 19 is supposed to assess.

This concern was expressly examined at ISH1. The ExA referred to BEPS's criticism that surrounding schemes had effectively been presented as 'dots on maps' and said that the cumulative material could be made clearer by showing the actual extent of other schemes, particularly where they lie close to East Pye and may give rise to overlapping effects. The ExA also cautioned against defining the proposed interrelationships exercise only by the Norfolk administrative boundary, observing that an administrative boundary is not an environmental boundary. The Applicant agreed to consider projects beyond Norfolk where relevant and to engage with the host authorities on the scope of the work.

That hearing exchange materially supports the remedy already sought in this section. The necessary improvement is not simply a longer project list. It is spatial information sufficient to show where the footprints, corridors, access routes and environmental zones of influence of different projects actually overlap.



19.8 Tasway Energy Park has been excluded inconsistently

19.8.1 Tasway remains a potential project

Tasway should not be treated as though it has ceased to exist. The evidence assembled by BEPS records that the project is paused rather than abandoned. A paused project may resume; an abandoned or withdrawn project cannot. The cumulative assessment should therefore consider whether Tasway remains reasonably foreseeable and, if uncertainty remains, test its inclusion through a sensitivity scenario rather than simply removing it from the environmental picture.

The local authority evidence strongly supports its relevance. South Norfolk Council and Norfolk County Council both identified Tasway as a project requiring cumulative consideration with East Pye Solar. The appropriate response to

uncertainty is therefore not automatic exclusion. It is transparent assessment of the reasonable scenarios.

19.8.2 Tasway is geographically and functionally relevant

Tasway is not simply another distant solar proposal on a schedule. It is relevant because its effects potentially overlap East Pye in the same part of South Norfolk and through the same environmental systems. Those potential relationships include:

- shared and adjoining rural landscape;
- overlapping construction and highway networks;
- the Great Moulton/Tivetshall energy-infrastructure area;
- ecological networks, including bat habitat;
- cumulative effects around Tibenham Airfield;
- heritage and settlement receptors;
- and the reported intention or discussion concerning use of the Great Moulton grid connection.

BEPS' procedural evidence has previously identified Tasway's intended Great Moulton connection and the corresponding need for cumulative assessment. Those relationships are exactly what cumulative assessment is intended to test. They cannot be dismissed merely by attaching a lower procedural status to the neighbouring development.

19.8.3 The local authorities specifically sought Tasway's inclusion

The exclusion is particularly difficult to justify because the statutory consultees raised the issue directly. South Norfolk Council stated that the cumulative effects of East Pye with Tasway, Norwich to Tilbury and other schemes had not been adequately explored. Norfolk County Council likewise raised cumulative concern about Tasway, BESS development, Norwich to Tilbury and other energy infrastructure. The LLFA supported consideration of proposed but unconsented solar and BESS schemes where overlapping programmes could produce cumulative effects, particularly for drainage and downstream flood risk.

The Applicant therefore needs to explain not merely why Tasway has a different planning or grid status, but why those differences eliminate the environmental pathways identified by the consultees. That explanation has not been demonstrated.

19.8.4 The BESS comparison exposes inconsistent treatment of uncertainty

The treatment of Tasway also exposes a wider inconsistency in the Applicant's approach to uncertainty. East Pye's BESS remains an integral component of the Scheme and is relied upon in the environmental and project case despite its Gate 1 status and the unresolved future of its transmission connection. The BESS does

not presently have the same connection status as the solar generation element. That uncertainty has not caused the Applicant to remove the BESS from its Scheme assessment or from the benefits it attributes to East Pye. Tasway, by contrast, is treated more strictly because its future progression is uncertain. The Applicant therefore appears to apply different evidential thresholds to uncertainty depending upon whose project is being assessed.

The Applicant applies uncertainty asymmetrically. Tasway is excluded because future progression is said to be uncertain, while East Pye's own BESS remains an integral part of the assessed Scheme despite its Gate 1 status, unresolved connection position and uncertain delivery. If uncertainty is sufficient to remove Tasway from cumulative assessment, the Applicant must explain why materially comparable uncertainty does not weaken reliance upon its own BESS.

The Applicant cannot use uncertainty selectively.

A precautionary cumulative assessment should include Tasway in at least a reasonable worst-case or sensitivity scenario. Failure to do so risks materially understating the future concentration of energy infrastructure around Great Moulton, Tivetshall, Tibenham and the wider South Norfolk landscape.

19.9 Other surrounding energy infrastructure

Tasway Energy Park is not the only external energy project relevant to the cumulative assessment. The wider evidence identifies an exceptional concentration of proposed, consented and built energy infrastructure in Norfolk. NCC has expressly referred to Tasway, Bloys Grove, Trowse, The Droves, High Grove, Norwich to Tilbury and works associated with Hornsea Project Three when raising cumulative concerns.

The appropriate assessment therefore needs to look beyond a list of projects and determine which environmental receptors are shared.

19.9.1 Norwich to Tilbury

Norwich to Tilbury is particularly relevant because it is a major linear electricity-infrastructure project affecting the same wider rural landscape. Its potential cumulative effects include:

- additional pylons and grid infrastructure within the same landscape character areas;
- further effects on heritage settings and historic rural character;
- construction traffic using parts of the same strategic and local highway network;
- additional vegetation and hedgerow disturbance;
- ecological fragmentation;
- and further visual industrialisation.

The cumulative question is not whether East Pye and Norwich to Tilbury are different types of electricity infrastructure. It is whether the same receptor experiences both. Where the same church, settlement, road, woodland network, airfield or view is affected, the schemes must be considered together.

19.9.2 Other solar developments

The concentration of solar development must be assessed at landscape and regional scale. Other solar schemes may contribute to:

- repeated removal of land from agricultural production;
- cumulative loss of BMV land;
- repeated construction traffic;
- landscape enclosure and industrialisation;
- labour and accommodation pressure;
- loss of open-country habitat;
- cumulative impacts on bat and bird populations;
- and increased demand for substations and grid infrastructure.

The Applicant should therefore assess not merely whether one other solar project is visible simultaneously with East Pye, but whether the cumulative concentration changes the character and environmental function of the receiving landscape.

19.9.3 Other BESS schemes

BESS projects are also environmentally relevant in their own right. They generate potential cumulative effects through:

- industrial compounds;
- transformer and inverter noise;
- lighting;
- traffic;
- fire and contaminated firewater risk;
- drainage;
- electrical infrastructure;
- and demands on emergency services.

Where several BESS schemes are located around Long Stratton, Great Moulton or shared grid infrastructure, their effects should not be treated as isolated point developments. Their combined industrial character, construction programmes and grid requirements form part of the future baseline against which East Pye must be assessed.

19.9.4 Existing and proposed grid infrastructure

The assessment must also account properly for the wider electricity-network landscape. East Pye Solar itself includes substantial grid infrastructure, but it does not arrive in an infrastructure vacuum. Existing overhead lines, proposed Norwich to Tilbury works, East Pye's own new National Grid Substation, project

substations, pylons and other connection infrastructure collectively alter the landscape and create additional construction and environmental pressure.

The relevant question is not simply whether each infrastructure component has an acceptable individual impact. It is what degree of electricity infrastructure can be introduced before the rural landscape, ecological network and historic setting are materially transformed. Chapter 19 does not presently answer that question.

19.10 Housing growth has been understated

The cumulative development context must also include housing. East Pye is proposed within a living rural area in which settlements will continue to change during its proposed 60-year operational life. Strategic and local housing growth around Long Stratton, Tasburgh and other relevant settlements therefore matters wherever the developments affect the same receptors or infrastructure.

Housing is particularly important because it creates both environmental pressure and new human receptors. During construction, housing development may interact with East Pye through:

- additional HGV and contractor traffic;
- competition for road capacity;
- overlapping roadworks;
- construction noise and dust;
- increased demand for construction labour;
- temporary accommodation pressure;
- and cumulative drainage effects.
- Operationally, housing may:
- increase recreational use of PRoWs and rural roads;
- increase traffic on already constrained corridors;
- create new residents exposed to the changed landscape;
- alter drainage and catchment behaviour;
- increase demand upon public services;
- and reduce the remaining undeveloped separation between settlements and infrastructure.

The importance of this wider development context is demonstrated by the Applicant's own socio-economic assessment. Chapter 14 identifies **47 cumulative schemes**, of which **23 are energy-related and 11 are solar farms**. It expressly relies upon the possibility of simultaneous construction of those developments when concluding that cumulative employment effects may be Major Beneficial and significant. That admission is important.

The Applicant is prepared to aggregate the surrounding development pipeline when doing so strengthens its claimed employment and skills benefits. The same development pipeline must therefore be treated with equal seriousness when considering its adverse consequences for roads, accommodation, tourism, landscape, drainage, environmental capacity and communities.

Chapter 14 itself accepts that overlapping energy projects could place greater pressure on the temporary accommodation market and identifies a cumulative Minor Adverse effect in South Norfolk. The same logic applies more widely. A cumulative assessment cannot fairly present the benefits of 47 schemes as a real simultaneous economic opportunity while visually representing those developments as insignificant dots and narrowing their adverse environmental interactions elsewhere.

Housing development should therefore be mapped by its actual allocated or consented footprint where relevant, and the cumulative analysis should identify:

- shared construction routes;
- overlapping construction periods;
- combined drainage catchments;
- effects on rental and temporary accommodation;
- cumulative demand on local services;
- recreational pressure;
- and the increased population exposed to South Norfolk's long-term landscape and amenity effects.

The surrounding development context is not a background detail. It determines the future baseline in which East Pye would operate for six decades. Unless housing, energy and infrastructure development are represented at their true scale and assessed against shared receptors, the cumulative case will continue to understate the degree of change proposed for South Norfolk.

19.11 East Pye must be assessed cumulatively with itself

A central weakness in Chapter 19 is that it does not adequately assess the cumulative effects generated by East Pye upon itself. The Scheme is treated as a series of component effects divided between technical chapters, when in reality the same receptors are exposed repeatedly to different elements of one development.

Volume 1 identifies the correct principle: 'the key point is that receptors experience one scheme, not separate ES chapters.' That principle is particularly important here because East Pye is not a compact generating station. It comprises ten dispersed Sites and numerous Sub-Sites, approximately 24 km of cable corridor, multiple project substations, a BESS, a new National Grid Substation, overhead-line and pylon works, access roads, highway alterations, compounds and extensive temporary construction areas.

The environmental effect of that configuration cannot be understood simply by adding together separately assessed residual effects. The Scheme creates repeated pressure on the same landscape, ecological networks, roads, water systems, soils and communities.

19.11.1 Multiple Sites and Sub-Sites

The ten-site configuration creates repeated industrialisation across one connected rural landscape. A settlement may experience solar development on more than one approach. A bat population may use hedgerows and woodland spanning several Sites. A road may serve multiple construction areas. A catchment may receive runoff from several development parcels.

The relevant cumulative question is therefore not whether each Site is individually capable of mitigation. It is whether the combined development alters the environmental function and character of the wider South Norfolk Claylands.

Chapter 19 does not demonstrate that assessment. Its receptor-group methodology risks treating repeated effects from different parts of the same Scheme as separate local effects rather than as one landscape-scale pressure.

19.11.2 Approximately 24 km of cable corridors

The cable network is itself a major cumulative development component. The WR identifies effects from trenching, HDD, joint bays, temporary working widths, haul access, soil storage, dewatering and repeated crossings. Those works interact simultaneously with soils, groundwater, archaeology, agricultural drainage, ecology, watercourses, transport and EMF.

A cable corridor is not environmentally neutral because it will ultimately be buried. Construction can sever hedgerows, disturb soils, intercept drainage, create preferential groundwater pathways and require access through sensitive habitats. Where several circuits and crossings are required across approximately 24 km, those effects must be assessed cumulatively within the Scheme.

The relevant question is not whether each crossing can be individually mitigated. It is how many ecological, hydrological and agricultural systems are disrupted by the total cable network and whether those effects overlap spatially or temporally.

19.11.3 Multiple substations and National Grid infrastructure

East Pye contains substantial electrical infrastructure in addition to the solar arrays. The Scheme includes Project Substations, a new National Grid Substation, 132kV and 400kV infrastructure, existing and diverted 400kV overhead lines and new pylons. Chapter 17 confirms that the electrical system includes multiple underground circuits, overhead lines, substations, transformers and other electrical plant.

Those elements should be assessed as one cumulative industrial system. Their combined effects include landscape change, noise, lighting, EMF, drainage, foundation works, transformer oil, AIL transport and long-term infrastructure retention.

It is artificial to treat each substation or cable as though its effects arise in isolation. The Scheme's cumulative infrastructure footprint is materially greater than the sum of its individual equipment schedules.

19.11.4 BESS, substations and National Grid infrastructure at Site 1

Site 1 is the clearest example of internal cumulative constraint stacking. It combines the proposed BESS, Project Substation, National Grid Substation, overhead-line works and pylons with nearby homes, ecological, groundwater and private-water receptors, Tibenham Airfield, railway infrastructure, agricultural land and major construction access.

BEPS has already identified Site 1 as a cumulative infrastructure nexus. The significance of that location lies precisely in the interaction between these constraints. The Applicant must therefore demonstrate that fire containment, drainage, noise mitigation, aviation safeguarding, AIL access, groundwater protection, landscape and ecological mitigation, electrical safety and residential protection can all be satisfied simultaneously. Chapter 19 does not undertake that integrated test.

19.11.5 Multiple construction compounds and work fronts

The cumulative construction assessment is also incomplete because the Applicant does not clearly identify the maximum number of construction compounds and active work fronts that may operate at the same time. That matters because each compound and work front can generate lighting, vehicle movements, noise, dust, hardstanding, runoff, fuel and chemical storage, temporary drainage, vegetation removal and workforce activity. Several individually temporary effects may become a prolonged landscape-scale pressure where they occur concurrently across multiple Sites.

The Applicant should therefore disclose the realistic maximum simultaneous construction scenario and assess the environmental effects of that scenario. Without it, the assessment cannot demonstrate the true construction worst case.

19.11.6 Repeated highway interventions

The Scheme also requires repeated interventions across the rural road network. Chapter 11 identifies access works, passing places, visibility splays, vegetation clearance, highway widening, drainage changes, oversailing and structural constraints.

Each intervention may appear limited in isolation. Repeated across numerous lanes, they can cumulatively alter hedge networks, roadside ecology, drainage, historic road character and landscape structure. The cumulative effect therefore includes not merely construction traffic but the permanent and temporary physical changes required to make that traffic possible. This is of particular concern in the area surrounding Site 1, Great Moulton and Tivetshall.

19.11.7 Multiple HDD and watercourse crossings

The same principle applies to HDD and watercourse crossings. One controlled crossing may present a limited risk. Numerous crossings across connected catchments create repeated opportunities for sediment release, drilling-fluid

escape, hydrological disturbance, habitat damage and construction access impacts.

Where those watercourses ultimately feed the same downstream system, the assessment must consider the cumulative catchment consequence rather than each crossing independently. Chapter 19 does not provide that synthesis.

19.12 Landscape mitigation can itself create environmental harm

The Applicant relies heavily on new hedgerows, trees, woodland and scrub as landscape mitigation. That planting may reduce visibility of solar arrays and electrical infrastructure, but it is not environmentally neutral. In Volume 1 of this written representation, BEPS identifies the central problem directly:

‘The same hedge cannot simply be counted as landscape mitigation, heritage mitigation and ecological enhancement without assessing what it encloses, what open habitat it removes, what historic relationship it changes and what long-term landscape it creates.’

That is an important Chapter 19 issue because planting intended to solve one environmental problem may create another. For open-country birds, additional enclosure can reduce habitat suitability by fragmenting large fields and introducing vertical structures and predator perches. For heritage, new screening may obscure or change historic spatial relationships between churches, farmsteads, settlements and agricultural land. For landscape character, extensive new woodland belts may alter the open clayland structure that currently defines the area. The same planting may also affect agricultural functionality by changing field size, access and the capacity to restore land to its former use after decommissioning.

The Applicant cannot therefore treat planting as an unqualified environmental benefit. It must assess both the infrastructure being screened and the environmental effect of the screening itself. This is particularly important where mitigation planting is expected to remain after decommissioning. If mature woodland and hedgerows remain, the post-development landscape may differ permanently from the pre-development agricultural landscape. Chapter 19 should reconcile those cross-topic consequences. It does not.

19.13 Transport mitigation creates effects in other chapters

Transport mitigation is another clear example of cross-topic interaction. Chapter 11 identifies unresolved requirements for internal haul routes, passing places, visibility splays, access works, vegetation clearance, road widening, drainage changes and other highway interventions. It also recognises ecological, landscape, drainage and heritage consequences arising from those works. Those consequences must be carried into Chapter 19.

A new passing place may require hedge removal or verge excavation. A visibility splay may require tree loss. A haul road may compact BMV soil or cross field drainage. Road widening may affect a Roadside Nature Reserve or historic lane. Culvert or drainage works may affect watercourses. A revised route may move traffic closer to homes or heritage assets.

The transport solution is therefore not simply a means of reducing traffic impact. It is itself a source of environmental effect. Where the local highway authority requires a different access strategy from that assessed by the Applicant, the problem becomes more serious. Any materially different routeing solution may generate a new combination of ecological, landscape, heritage, drainage and land effects which the current ES has not assessed.

Chapter 19 cannot assume that transport mitigation solves the environmental problem unless the physical consequences of that mitigation have been reconciled across the ES. They have not.

Transport mitigation cannot be treated as environmentally neutral merely because it solves a transport constraint.

19.14 Water, ground conditions and soils form one connected system

Chapters 9, 15 and 16 address different technical subjects, but the receptors and pathways are physically connected.Heavy clay soil affects runoff and infiltration. Compaction alters drainage. Trenching can intercept agricultural drains. Piling and deep foundations may create or extend groundwater pathways. HDD may affect groundwater or surface-water systems. Contaminated soils may be mobilised by construction. Concrete, cement, oils and BESS firewater introduce potential pollutants. These pathways can ultimately affect the same aquifer, private water supply or chalk-stream receptor.

Volume 2 expressly identifies the lack of reconciliation between Chapters 9, 15 and 16. Chapter 19 is where that reconciliation should have occurred. The issue is especially significant because much of the Scheme is underlain by Principal Aquifer and because private water supplies, field drainage, ordinary watercourses and chalk-stream systems form linked receptor networks.

A pile does not operate in a ‘ground conditions’ chapter. It penetrates soil and geology and may affect groundwater. A haul road does not operate only in a ‘transport’ chapter. It compacts soil and alters runoff. A BESS fire is not confined to ‘major accidents’. Its contaminated firewater may enter drainage or groundwater. The cumulative water assessment must therefore combine soil compaction, altered runoff, agricultural drainage, groundwater pathways, piling, trenching, HDD, contaminated land, oils, concrete, dewatering and firewater within the same source–pathway–receptor framework. Chapter 19 does not do so. Its treatment of water is too fragmented to demonstrate the combined hydrological risk of the Scheme.

19.15 Ecology: cumulative effects must be assessed by functional network

The ecological assessment requires the same network-led approach. East Pye lies within a connected ecological landscape containing nationally important bats, ancient woodland, hedgerows, ponds, watercourses, farmland-bird habitat and botanical corridors. The relevant receptors are functional systems, not isolated habitat polygons.

19.15.1 Barbastelle maternity-colony landscape

The Applicant's own evidence identifies a nationally important bat assemblage, widespread barbastelle activity and multiple maternity colonies whose Core Sustenance Zones overlap the Order Limits. The cumulative receptor is therefore the maternity-colony landscape itself. That landscape is affected by panel land-take, repeated hedge gaps, lighting, noise, traffic, fencing, woodland-edge disturbance, cable routes and construction compounds. External projects may affect the same foraging and commuting network.

A colony cannot be protected merely by retaining the roost tree if the surrounding feeding and movement network is progressively compressed or fragmented. The Applicant must therefore assess the cumulative effect on colony function, not simply direct habitat loss.

19.15.2 Ancient woodland fragmentation

The WR identifies six ancient woodlands directly adjoining the Scheme and wider ancient woodland networks throughout the surrounding landscape. The relevant harm is not limited to tree removal. Development may increase isolation, lighting, disturbance, edge effects, hydrological change and separation from surrounding habitat.

Where solar fields, roads, cables and other infrastructure progressively surround or separate ancient woodland blocks, the cumulative effect may be materially greater than the effect at any individual buffer. Chapter 19 does not assess that network-level fragmentation.

19.15.3 Farmland birds and stewardship land

Farmland birds are affected by several interacting changes: solar arrays reduce open ground, fencing changes permeability, landscape planting increases enclosure, construction creates disturbance and neighbouring development may remove additional open habitat.

Many of the proposed solar fields are either current or former Countryside Stewardship land managed for biodiversity and ground-nesting birds.

The cumulative question is not simply the area of habitat retained. It is whether sufficient functionally suitable open habitat remains across the whole landscape when all potential development is taken into account. Chapter 19 does not answer that question.

19.15.4 River Tas and aquatic ecology

The River Tas and connected tributaries require catchment-scale assessment. Potential effects include HDD, sediment mobilisation, runoff, altered groundwater pathways, water-quality changes, EMF at cable crossings and cumulative construction activity. The evidence of white-clawed crayfish within the River Tas system makes an analysis of these combined pressures essential. The proposed Tasway Energy Park and Norwich to Tilbury pylons are both even closer to this surveyed colony.

Those pathways cannot be assessed separately where they affect the same aquatic system. The cumulative effect must include the possibility of several construction and electrical pathways acting upon one sensitive receptor network.

19.15.5 Roadside Nature Reserves and botanical corridors

Roadside Nature Reserves, species-rich verges and historic lanes are particularly exposed to transport-related works. Visibility splays, highway widening, new access points, traffic, dust and vegetation clearance may affect small areas individually but collectively erode a connected botanical and ecological network. These linear habitats are also among the least comprehensively surveyed. East Pye Solar has not carried put a botanical survey despite being alerted by botanists to the need for one.

That combination of incomplete baseline and repeated engineering pressure makes cumulative assessment essential.

19.15.6 Great crested newt and pond networks

Great crested newts depend upon ponds and surrounding terrestrial habitat as a network. Fencing, roads, cable trenches, compounds and vegetation loss between ponds can therefore affect population function even where individual ponds are retained. The correct receptor is the pond and terrestrial network, not each pond in isolation. Chapter 19 does not demonstrate that this network has been assessed cumulatively.

19.16 Heritage: the whole historic landscape must be assessed

The cultural-heritage effects of East Pye extend beyond individual views of listed buildings. The Scheme is located within a surviving historic agricultural landscape containing multiple Grade I churches, many Grade II* and hundreds of Grade II farmsteads, multiple conservation areas, historic lanes and long-established relationships between settlement and countryside. Those relationships are affected by solar arrays, substations, pylons, road works, traffic, lighting and new screening vegetation. The wider cumulative context includes Norwich to Tilbury, Tasway if it proceeds, housing growth and other energy infrastructure.

The effect is therefore not simply whether two developments can be seen simultaneously from one window. It is the progressive alteration of the historic landscape within which assets derive part of their significance. The Applicant relies materially upon planting to reduce visual effects. That is insufficient. **Screening may reduce visibility. It cannot restore an historic spatial relationship once that relationship has been changed.** A mature hedge cannot remove a substation. It cannot restore an historic open field. It cannot reverse the industrialisation of an approach to a church. It cannot recover lost tranquillity. In some circumstances the hedge itself changes the historic landscape by enclosing views that were formerly open.

Chapter 19 should therefore assess the combined change to the whole historic landscape and to the experience of individual assets within it. It does not.

19.17 Residents and community amenity: the Applicant fragments one lived experience

The Applicant's treatment of residents illustrates the wider structural weakness of the ES. A resident does not experience separate landscape, noise, transport, air-quality and socio-economic effects. They experience one lived environment. During construction that may include major visual change, HGV traffic, noise, vibration, road closures, dust, lighting, loss of tranquillity, severance, uncertainty and pressure on local services or accommodation. During operation it may include long-term landscape change, substation or BESS noise, lighting, altered road character and loss of the former rural setting.

Chapter 19 recognises several of those effects individually but largely concludes that significant in-combination effects arise only where significant visual effects coincide with construction or operational noise. That is too narrow. A combined residential effect does not become insignificant merely because only one constituent effect crossed a technical significance threshold. A household experiencing a major landscape change plus repeated HGV disturbance, low-level noise, lighting and reduced tranquillity may experience a materially different overall amenity effect.

The assessment must therefore identify worst-affected residential receptors and follow the full combination of effects experienced by each. Generic receptor grouping obscures that lived reality.

19.18 PRoWs and recreational receptors

The same problem applies to users of PRoWs and recreational routes. Chapter 19 acknowledges significant visual effects but concludes the overall in-combination amenity effect is generally not significant because transport effects are individually Minor. That conclusion does not reflect how routes are experienced. Users may encounter solar infrastructure, substations, fencing, noise, HGVs, temporary closures, diversions, construction crossings, dust, lighting and a sustained loss of tranquillity along the same journey.

Chapter 11 identifies extensive PRoW interactions and specifically recognises promoted routes including Boudicca Way and Via Beata. It also identifies the possibility that internal haul strategies may increase PRoW conflicts. For long-distance or promoted routes, cumulative exposure is especially relevant. A walker may pass through or beside several East Pye Sites over the course of one route. Three new permissive paths do not restore the existing experience of those established routes. The Applicant should therefore assess route-long cumulative effects rather than isolated crossing or viewpoint effects.

The ExA has now expressly raised this issue in ExQ1 Q1.11.4. It notes the Applicant's 'compartmentalised assessments' and asks for an assessment of the cumulative and sequential visual effects experienced by recreational users likely to traverse more than one named PRoW during a single journey, including circular routes from Great Moulton, Saxlingham Nethergate, Saxlingham Green and other settlements. That question directly confirms the need to assess the journey experienced by the receptor rather than a sequence of isolated path segments or viewpoints.

19.19 Transport and construction-programme cumulative effects

The transport cumulative assessment cannot be divorced from the construction programme.Chapter 11 demonstrates that East Pye already relies on an unusually constrained access strategy involving shared haul corridors, HGV controls, call-forward systems, holding compounds, school-related restrictions, AIL movements and rural lanes of limited physical capacity.

The key question is whether those controls remain workable when several East Pye work fronts operate simultaneously and when external projects are added. Relevant overlapping demands include Norwich to Tilbury, Tasway, other solar and BESS projects, housing construction and major infrastructure works.These schemes may use the same A47, A140 and rural-road network, the same workforce catchments and the same accommodation market.

ISH1 produced specific evidence of an unresolved external cumulative transport interaction. National Highways stated that its principal concern was the A47/A140 junction and that further analysis was required to justify the Applicant's position. It specifically identified the cumulative effect of East Pye construction traffic together with construction traffic from Norwich to Tilbury as a matter requiring consideration. The Applicant confirmed that it had been liaising with the Norwich to Tilbury project to obtain trip-generation information and that this overlap was being considered.

This illustrates why a strategic-link percentage is not sufficient. A cumulative network may appear acceptable overall while a particular junction, bridge, village lane or school route becomes the limiting receptor.

The Applicant should therefore provide a programme-linked cumulative logistics model identifying the maximum simultaneous traffic demand from East Pye and reasonably foreseeable surrounding schemes. Without that evidence, the conclusion that cumulative transport effects are manageable is not demonstrated.

ISH1 also confirmed that the current construction programme is indicative and that the eventual phase or phases and timetable would be settled later through Requirement 2. The Applicant stated that cumulative effects from other schemes would be taken into account in that process. That future control is relevant, but it does not remove the present EIA question: whether a realistic reasonable-worst-case overlap of East Pye work fronts and external construction programmes has already been assessed.

19.20 Noise and vibration cumulative effects

The cumulative noise assessment also understates the whole-life and multi-source character of East Pye Solar. Construction noise arises from traffic, piling, general construction activity and HDD. Operational noise arises from Project Substations, the National Grid Substation, BESS, inverters and associated plant. Replacement and decommissioning create further periods of construction-type noise. The Applicant's own Chapter 12 acknowledges that HDD can produce impacts ranging up to Major Adverse, although the final significance conclusion is still reported as not significant.

Chapter 12 also accepts long-term cumulative operational noise effects at high-sensitivity receptors but classifies them as Minor Adverse and not significant.Those conclusions must be viewed in the context of a quiet rural acoustic environment and multiple potential sources. The cumulative question is not simply whether two modelled sound levels remain below a threshold. It is whether the character, duration, repetition and timing of noise from several Scheme components and external developments materially changes the rural acoustic environment.

Decommissioning illustrates the weakness. Chapter 12 states that cumulative decommissioning effects cannot be meaningfully assessed because other project timescales are unknown, but nevertheless concludes they are unlikely to be significant because each development is expected to have a DEMP. That is assumption, not assessment. A management plan cannot establish that simultaneous future noise will not occur.

19.21 Air-quality cumulative effects

The air-quality cumulative issue is narrower but still relevant. East Pye construction will generate HGV movements, worker traffic, dust and road-related emissions. Those effects may coincide with Norwich to Tilbury, housing schemes and other major energy developments using the same road network. The principal concern is therefore cumulative construction exposure at settlements, schools, vulnerable residents and ecological receptors close to shared routes.

Repeated highway works, road widening, soil disturbance and construction traffic may also extend the duration of dust and particulate exposure beyond that associated with East Pye alone. The Applicant should demonstrate that cumulative construction programmes have been reflected in traffic-related emissions and dust assessment wherever the same receptors may be affected. Chapter 19 does not provide a clear receptor-specific synthesis of those combined effects.

The August 2026 NPPF now states expressly in national decision-making policy P3 that development proposals should take account of the likely effects, ‘including cumulative effects’, of pollution on health, living conditions and the natural environment, whether those effects are on- or off-site and whether they arise from the development itself or pre-existing conditions in its vicinity. The NPPF is not the primary policy framework for this NSIP, but that wording reinforces the need for receptor-specific cumulative consideration of noise, air emissions, dust, lighting and other pollution pathways rather than treating each source in isolation.

19.22 Socio-economic cumulative effects are selectively positive

The Applicant's treatment of cumulative socio-economic effects reveals an important asymmetry. Chapter 14 is willing to aggregate surrounding projects where that produces a larger beneficial employment conclusion. The cumulative assessment recognises that simultaneous construction of major schemes may generate substantial employment and skills demand.

Yet the same overlapping construction programmes also create adverse effects: competition for skilled labour, pressure on temporary accommodation and the private rental market, additional traffic, tourism displacement, pressure on services and disruption to local businesses. Those effects arise from the same cumulative development pipeline. The methodology should therefore be symmetrical.

The Applicant readily aggregates surrounding development where aggregation strengthens the claimed economic benefit, but the assessment is markedly less precautionary where the same overlapping development produces environmental or community burdens.

The economic case is also gross rather than necessarily net. Jobs associated with East Pye may coincide with labour demand from other infrastructure schemes, which could constrain rather than expand the locally available workforce. Chapter 19 should therefore assess cumulative employment benefit alongside cumulative labour-market pressure, accommodation demand, tourism effects and service impacts using the same development assumptions. A cumulative methodology cannot maximise the benefit scenario while minimising the harm scenario.

19.23 Soils, agricultural land and food production

Cumulative land-use effects require a spatial rather than national assessment. East Pye itself affects substantial areas of agricultural land, including BMV land and land managed under stewardship. Other solar developments, Norwich to Tilbury, housing, highway works and associated infrastructure remove or disturb further land within the same regional agricultural economy. The relevant issue is therefore not the percentage of English farmland affected nationally. It is the local concentration of loss and disturbance.

Heavy clay soils are also vulnerable to compaction from construction traffic, temporary haul roads, compounds, cable works and repeated replacement activities. Chapter 15 identifies those risks and questions assumptions of full reversibility.Cumulative effects may therefore include not only land-take but reduced soil structure, altered agricultural drainage, fragmentation of holdings and loss of established stewardship function.

The Applicant must assess the total concentration of agricultural change within the affected landscape rather than treating each scheme as an insignificant fraction of national farmland. A small national percentage does not answer a large local cumulative loss.

19.24 EMF cumulative effects

The cumulative EMF assessment is particularly weak. Chapter 17 treats cumulative effects mainly in relation to cables sharing a trench and generic domestic electrical exposure. It does not provide a project-wide model of the combined electrical environment created by multiple East Pye circuits, existing and diverted overhead lines, Project Substations, the National Grid Substation, BESS and inverter compounds.

Nor does it adequately include Norwich to Tilbury, Tasway or other surrounding BESS and grid projects. There is no hotspot mapping, no combined receptor modelling and no adequate cumulative ecological assessment. That omission is particularly serious for aquatic receptors. Chapter 17 provides no crossing-specific assessment of EMF within the riverbed, banks or water column and no combined-field assessment where multiple circuits cross.

Chapter 19 should therefore not inherit Chapter 17's conclusion of limited significance without correction. The Applicant must model the actual electrical system being authorised and its overlap with surrounding infrastructure.

19.25 Utilities and infrastructure interactions

East Pye Solar intersects a dense network of existing infrastructure. Chapter 18 identifies Openreach, Gigaclear, B4RN, Anglian Water, Cadent and National Gas Transmission infrastructure within the Order Limits. It records that the high-pressure Natural Gas 5 Feeder passes through Sub-Sites 5A, 5B, 7B, 7E, 7F and CRC7, while an existing dual-circuit 400kV overhead line and pylons pass through Site 1.

These are not simply utilities to be ‘worked around’. They impose easements, access requirements, safety zones, construction restrictions, emergency requirements and long-term maintenance obligations. Site 7E is particularly important because the National Gas transmission pipeline interacts with the area proposed for construction access and haul-road use. That creates a direct engineering and safety interface between heavy construction traffic and nationally important gas infrastructure.

Site 1 similarly combines existing and proposed National Grid infrastructure, railway proximity, electrical works and other constraints. The correct cumulative question is whether one final design can comply simultaneously with all easement, loading, access, drainage, safety and environmental requirements. Chapter 19 does not demonstrate that reconciliation.

19.26 Major accidents and disaster risk must be assessed cumulatively

Chapter 18 adopts a high-level approach to major accidents and disasters and relies heavily on outline plans and future detailed assessment. The WR records unresolved issues including BESS thermal runaway, toxic release, firewater contamination, hydrogen fluoride, groundwater risk, HSE consultation zones and gas-main interaction.

Chapter 19 should therefore provide the integrated major-accident synthesis which Chapter 18 does not.

Site 1

Site 1 combines a BESS, Project 400kV infrastructure, National Grid 400kV infrastructure, overhead lines and pylons, nearby railway, sensitive groundwater and private-water receptors, homes, aviation constraints and construction access.

A serious event could interact across several of those systems. A BESS or transformer fire could generate smoke, contaminated firewater, electrical isolation requirements and emergency-access demands while affecting nearby homes, railway operations, aviation and groundwater.

The question is not whether each risk has an outline management response. It is whether the combined emergency scenario has been assessed.

Site 5

Site 5 combines major electrical infrastructure with a sensitive water and ecological environment, including hydrological links to the River Tas system.

A transformer or construction pollution event therefore cannot be considered only as an infrastructure issue. Its consequences may include groundwater or surface-water contamination and ecological harm.

These concentrations of hazard and receptor sensitivity are precisely the type of interaction Chapter 19 should synthesise. It does not.

19.27 Aviation and glint/glare cumulative effects

Tibenham Airfield should be treated as a shared cumulative receptor. The relevant effects are not confined to one glint-and-glare calculation. They include East Pye solar arrays, Tasway if it proceeds, the Norwich to Tilbury pylons which pass immediately to the west, multiple substations, pylons, cranes, lighting and the progressive loss or alteration of emergency landing terrain around the airfield.The cumulative issue is therefore operational safeguarding.

Each additional development may reduce flexibility available to glider pilots, alter the visual environment, introduce obstacles or remove suitable emergency landing areas. The effect of East Pye must be assessed in the context of all reasonably foreseeable surrounding development affecting Tibenham, not as though Site 1 exists alone.

Tasway's pause does not remove that requirement where the project remains capable of proceeding. It has the same gate 1 status as the East Pye Solar BESS, yet the applicant is still treating that project as if it is material. To discount Tasway would be inconsistent.

The correct question is whether the cumulative development pattern preserves a safe operational environment around Tibenham. Chapter 19 does not answer it.

19.28 Replacement and repowering create further cumulative construction phases

East Pye's 60-year life is not simply construction followed by operation and then decommissioning.Volume 1 of BEPS’s Written Representation identifies foreseeable replacement of solar panels, repeated BESS replacement, transformer replacement, cable works and associated re-use of access infrastructure. Volume 2 identifies corresponding ecological and whole-life disturbance.

Those activities will involve renewed HGV traffic, compounds, lifting equipment, waste handling, noise, soil disturbance and ecological disruption. BESS equipment may be replaced up to five times during the operational period. Solar modules and power-conversion equipment may also require major replacement cycles. Those are foreseeable phases of the authorised development and should be assessed cumulatively. They may occur after mitigation habitat has matured, meaning that the receptor value affected during replacement could be greater than during original construction.

ISH1 has since confirmed that this is not merely a theoretical concern. When asked what construction compounds would be required when the solar modules are replaced, the Applicant said that the ‘exact areas’ used for the original compounds would be needed again, albeit on a phased basis. That evidence is

particularly important where land used as a construction compound is subsequently restored or established as ecological mitigation, as at Site 6. The cumulative assessment therefore needs to include the return of construction-type activity to land which may by then have developed materially different ecological, soil and landscape value.

Chapter 19 barely acknowledges this whole-life reality. A 60-year NSIP cannot be assessed as:

construction → passive operation → decommissioning.

It contains potentially substantial intermediate construction phases which must form part of the cumulative assessment.

19.29 Decommissioning cannot be assumed to be construction in reverse

Chapter 19 groups construction and decommissioning largely together because decommissioning is assumed to produce similar or lesser effects. That assumption is unsound.

By the time decommissioning occurs, the receiving environment will be fundamentally different. Mitigation woodland and hedgerows may be mature. New habitats may have become established. Soils will have undergone decades of altered management. Surrounding settlements and infrastructure will have changed. Climate conditions may differ materially. Some electrical infrastructure will remain live or permanently retained.

The waste burden will also be fundamentally different. Decommissioning requires removal and disposal or recycling of decades-old solar, battery and electrical equipment rather than delivery of new equipment. Underground cables, ducts, foundations or other infrastructure may remain. National Grid infrastructure is expected to remain. Access and drainage infrastructure may also persist.The environmental conflicts at decommissioning are therefore different from construction.

Removing equipment may damage habitats created as mitigation. Retaining those habitats may prevent restoration of agricultural land. Removing buried infrastructure may create soil and ecological disturbance, while leaving it in place produces a different permanent land condition.

Volume 1 of BEPS’s written representation identifies precisely these incompatible concepts of reversibility and restoration. Decommissioning therefore requires a separate cumulative assessment against the future baseline that will actually exist. It cannot lawfully or technically be assumed to be ‘construction again, but less’.

19.30 The post-decommissioning end state is internally inconsistent

The ES does not present one coherent post-decommissioning future. Different chapters rely upon different assumptions about what will remain.

The National Grid Substation and elements of the Grid Connection Infrastructure are expected to remain. Chapter 17 itself recognises that retained infrastructure may remain live during decommissioning.

Landscape mitigation planting may also remain. Woodland, hedgerows and trees planted to screen the Scheme could therefore become permanent features of the landscape. Underground cables, ducts, joint bays, foundations, access works and drainage infrastructure may also be retained in whole or in part depending upon the final decommissioning strategy.

That creates a fundamental cross-topic inconsistency:

- If mature planting remains, the historic and agricultural landscape has not been restored to its former condition.
- If BNG habitat remains, agricultural restoration may be constrained.
- If grid infrastructure remains, visual and heritage effects continue.
- If drainage systems remain, hydrological conditions may remain altered.
- If underground infrastructure remains, soils and future agricultural operations may remain affected.

If that infrastructure is removed, further ecological, soil, transport and waste effects arise. Landscape, ecology, heritage, agriculture, soils and water cannot each assume whichever future baseline produces the most favourable conclusion. There must be one defined post-decommissioning scenario.

Volume 1 of BEPS's written representation already identifies this as one of the clearest examples of cross-topic inconsistency in the ES. The Applicant should therefore provide a single removal-and-retention schedule identifying what will remain permanently and ensure that every environmental chapter assesses the same end state. Until that is done, the Applicant has not demonstrated reversibility, restoration or the true long-term cumulative effect of the Scheme.

19.31 The claimed operational ecological benefit is based on the wrong baseline and is not demonstrated

Chapter 19 concludes that operation will produce significant beneficial in-combination effects for ecologically designated sites and priority habitats because conventional agricultural activity, fertiliser application and chemical inputs will cease, while new habitat and improved water quality will result. That conclusion is materially overstated because it assumes a false comparison: intensive agricultural land before development against ecologically improved solar grassland afterwards. That is not the environmental baseline across substantial parts of East Pye.

Large areas within the Order Limits have been, and in some cases remain, subject to publicly funded Environmental Stewardship or Countryside Stewardship management specifically intended to deliver biodiversity recovery. BEPS's review of Natural England spatial data identifies substantial stewardship land associated with Sites 4, 5 and 7, with agreements commencing around 2013 and some continuing to at least 2028. The management includes low-input cropping, field margins, winter food or stubble provision and habitat mosaics relevant to declining farmland birds. Live agreements have also been identified at Sites 5A and 5B and at the western end of Site 7. The ecological importance of that management is not theoretical. The Applicant's own survey evidence records 81 skylark territories, 70 of them within areas of permanent development, together with confirmed breeding by Red List linnet, skylark and yellowhammer, probable breeding by song thrush and a wider assemblage dependent upon open fields, mature boundaries, margins and associated habitats. The land is therefore not ecologically neutral farmland awaiting biodiversity enhancement. Parts of it are already functioning conservation habitat produced through more than a decade of deliberate public investment.

The expiry of a stewardship agreement does not erase the habitat condition or ecological function created by that management. The EIA baseline is the environment that exists, not the contractual status of the subsidy which helped create it. Replacing established stewardship habitat with panel arrays, fencing, access tracks, substations and a different management regime is therefore not automatically an ecological gain merely because fertiliser application may cease. It is the replacement of one functioning ecological system with another whose species composition, carrying capacity and long-term functionality remain uncertain.

That distinction is especially important for farmland birds. Existing stewardship has maintained open, relatively undisturbed habitat and associated margins which support skylark and other declining species. Solar development introduces repeated vertical structures, fencing, access routes, maintenance activity and additional enclosure. New grassland and hedgerows may benefit some species, but they do not necessarily replace the ecological function of extensive open breeding habitat. The immediate loss occurs at construction; any replacement value arises later, if it arises at all. The Applicant has not demonstrated where the 70 skylark territories within permanent development areas will be accommodated or that the future solar landscape will provide equivalent carrying capacity.

More fundamentally, Chapter 19's claimed ecological benefit is difficult to reconcile with the evidence on bats. The Applicant's own surveys establish that the Order Limits support a bat assemblage of national importance and that barbastelle is highly abundant and widespread across the Scheme. South Norfolk Council records ten bat species within the Order Limits and evidence from the Norfolk and Norwich Bat Group identifying 12 barbastelle maternity colonies whose Core Sustenance Zones overlap the Order Limits. The Council expressly states that research indicates solar development can significantly reduce bat

activity both within solar sites and along adjacent boundary features, and has requested additional species-specific survey and avoidance of panels immediately adjoining woodland.

The peer-reviewed evidence directly undermines the assumption that retaining hedgerows and creating new grassland is sufficient to preserve bat function. Tinsley et al. (2023), published in the *Journal of Applied Ecology*, compared 19 operational ground-mounted solar farms with paired control sites in England and found significantly lower activity for six of the eight bat taxa analysed. Importantly, reductions were not confined to the panel fields: reduced activity was also recorded along retained field boundaries for some taxa. That finding is particularly important at East Pye because hedgerow retention and enhancement are central to the Applicant's mitigation case. Physical retention of a hedge does not demonstrate retention of its ecological function if bats reduce their use of that boundary after solar development is introduced alongside it. The relevant ecological question is therefore not merely how many metres of hedge remain, but whether the nationally important bat assemblage continues to use the landscape for commuting and foraging at comparable levels.

Other peer-reviewed research points in the same direction. Barre et al. found altered flight behaviour and significantly reduced feeding-buzz probability at utility-scale solar farms, indicating poorer foraging conditions within solar landscapes. The Wilder Ecology review also records that Szabadi et al. found solar farms were used principally by species adapted to more anthropogenic environments, while *Myotis* species and *Barbastella barbastellus* were infrequently recorded within the solar farms studied. The available literature is therefore not consistent with a general assumption that converting farmland to solar grassland necessarily improves habitat for rare and specialist bats.

East Pye is materially more sensitive than the ordinary agricultural sites against which those studies were undertaken. The Applicant itself identifies the Scheme landscape as nationally important for bats, while specialist evidence identifies multiple barbastelle maternity colonies, overlapping Core Sustenance Zones and widespread use of woodland, hedgerows, field margins, ponds and watercourses. The consequence of reduced bat activity here is therefore potentially much more serious than at an ordinary solar site: it may affect the functional landscape supporting maternity colonies of a rare Annex II species.

The issue cannot be answered by Biodiversity Net Gain. BNG measures habitat quantity and condition; it does not establish that a barbastelle maternity-colony landscape remains functional, that existing commuting routes will continue to be used, that insect prey availability will remain equivalent or that displaced bats can simply use newly created habitat elsewhere. New woodland and hedgerows also cannot immediately reproduce the maturity, structure, darkness, roost features and prey associations of the existing Claylands network. Volume 2 therefore correctly concludes that habitat creation is not a substitute for avoiding disruption to the existing bat landscape.

Nor does cessation of fertiliser and pesticide use answer the problem. Reduced agricultural inputs may improve some soil, vegetation and water-quality parameters, but that benefit operates through a different ecological mechanism from solar-related habitat displacement, behavioural avoidance, fragmentation, altered microclimate and changes in prey availability. One cannot be assumed to cancel the other.

The claimed benefit is further weakened by uncertainty over the actual operational management regime. The WR identifies reliance on mechanical mowing and possible herbicide use rather than a secured low-intensity grazing regime. Repeated mowing traffic, vegetation control and herbicide application are not environmentally equivalent to the stewardship management currently supporting parts of the landscape, nor do they establish that the future solar grassland will provide a superior ecological resource.

The same uncertainty applies to hydrology and whole-life management. Claimed water-quality benefits from reduced fertiliser inputs do not answer effects from soil compaction, altered runoff, piling, trenching, HDD, transformer oils or BESS firewater. Habitat gains must also survive panel replacement, repeated BESS replacement, transformer works and eventual decommissioning, by which time mitigation habitats may themselves have become valuable ecological receptors. Climate change, drought, disease and future water availability introduce additional uncertainty over whether planting and habitat prescriptions will perform as assumed over six decades.

The proper conclusion is therefore substantially stronger than that the ecological benefits are merely ‘conditional’. Chapter 19 has not demonstrated a net significant ecological benefit at all. It compares the Scheme against an inadequately characterised agricultural baseline, fails to give proper weight to existing and recent stewardship management, and assumes that generic habitat creation and reduced chemical inputs outweigh or replace species-specific ecological functions which may be degraded by solar industrialisation.

For farmland birds, the Scheme would remove established publicly funded conservation habitat and replace it with a fundamentally different land-use system whose capacity to support the existing populations has not been demonstrated. For bats, the position is still more serious: the best available peer-reviewed evidence shows that ground-mounted solar can reduce activity even where boundary habitats remain, while East Pye occupies a nationally important bat landscape supporting multiple barbastelle maternity colonies. The Applicant has not demonstrated that landscape-scale solar development across that functional network can be mitigated by retained hedges, buffers, new planting or BNG.

Accordingly, Chapter 19 should not attribute a Significant Beneficial ecological in-combination effect to the operational Scheme. On the present evidence, that conclusion is unsupported and potentially reverses the true ecological risk. Where an existing conservation-managed landscape supports nationally important bat populations and substantial farmland-bird use, the mitigation

hierarchy requires the Applicant first to demonstrate avoidance of functional harm. It has not done so.

19.32 Benefits cannot cancel unrelated harms

Chapter 19 correctly recognises that beneficial and adverse effects of different natures should not simply be balanced against one another to produce a neutral environmental outcome. Paragraph 19.2.4 states that where beneficial and adverse effects occur simultaneously on the same receptor, the Applicant does not assign an overall beneficial or adverse nature because such balancing would be inherently subjective. That principle must be applied consistently throughout the assessment.

Construction employment does not reduce landscape harm. Skills benefits do not make narrow rural roads safer. Ecological planting does not restore the historic setting of a listed building. A national greenhouse-gas benefit does not remove local habitat fragmentation. Reduced fertiliser use does not neutralise a groundwater contamination pathway or the loss of a dark bat corridor.

Those effects concern different receptors and different environmental functions. They may all be relevant to the eventual planning balance, but they should not be allowed to dilute one another within the EIA significance assessment.

The August 2026 NPPF W3 now requires substantial weight to be given in decision-making to the energy-security, economic-development and net-zero benefits of renewable and low-carbon energy development. That is a planning-balance requirement; it does not alter the prior EIA task of identifying the nature and significance of adverse environmental effects accurately. Substantial policy weight for renewable-energy benefits is therefore not a basis for reducing or netting-off an unrelated environmental effect within the cumulative assessment itself.

This is especially important because Chapter 19 repeatedly presents beneficial socio-economic effects alongside adverse environmental effects. During construction it identifies Major Beneficial effects for jobs and employment and Moderate Beneficial effects for skills while also recording adverse visual, transport, noise, water and tourism effects. The coexistence of those benefits does not make the adverse effects less physically real or environmentally significant.

The same applies to ecology. A positive BNG outcome or new hedgerow planting cannot be used as a general counterweight to harm to a barbastelle maternity-colony network, ancient woodland, chalk-stream ecology, farmland-bird habitat or rare botanical assemblage. Those are receptor-specific questions and must be assessed on their own terms.

The appropriate sequence is therefore clear. EIA should identify the nature and significance of each effect and interaction without allowing unrelated benefits to reduce the classification of harm. The planning balance comes later, when the

decision-maker weighs properly evidenced benefits against properly evidenced adverse effects. Chapter 19 should not permit that distinction to become blurred.

19.33 Chapter 19 demonstrates a wider failure of integrated design

The most important consequence of Chapter 19 is not the number of effects classified as significant or not significant. It is what the chapter reveals about the design of East Pye as a whole.

Volume 1 asks the central question whether the Applicant has demonstrated one environmentally coherent and deliverable Scheme in which access, drainage, landscape mitigation, ecological protection, heritage mitigation, noise control, grid infrastructure, residential protection and decommissioning can all coexist within the authorised envelope. Chapter 19 should have answered that question. It does not.

The Scheme depends upon numerous interacting mitigation and engineering requirements. Ecological buffers must coexist with solar arrays, fencing and access tracks. Landscape planting must screen infrastructure without causing unacceptable harm to open-country birds, historic landscape or agricultural functionality. Drainage must protect groundwater and downstream receptors while accommodating roads, substations and BESS infrastructure. Highway access must be physically achievable without unacceptable hedge, verge, heritage, drainage or ecological damage. Noise mitigation must protect residents without relocating or screening plant in a manner that creates different environmental effects.

The same requirement applies to AIL works, gas-pipeline easements, groundwater protection, aviation safeguarding, BNG delivery and agricultural restoration. These are not optional design refinements. They are conditions which must be satisfied simultaneously if the Scheme is to be environmentally coherent.

The existing WR demonstrates repeated examples where solving one problem risks creating another. Landscape planting may damage open-country habitat or alter heritage setting. Internal haul routes may affect soils, watercourses and hedgerows. Noise barriers may create landscape effects. Drainage infrastructure may require further landtake. Retaining ecological mitigation after decommissioning may prevent restoration of the historic agricultural landscape.

Chapter 19 does not reconcile those conflicts. It largely assumes that each discipline's mitigation will operate as intended and then combines the resulting residual effects.That is the wrong test.

The relevant question is whether there is at least one physically deliverable design within the DCO envelope in which all of the environmental assumptions relied upon by Chapters 6–18 are simultaneously true. If one chapter assumes a planting belt where another requires open habitat, if one assumes a haul route

where another requires ecological protection, or if one relies on plant relocation into land constrained by drainage, heritage or aviation, the ES has not demonstrated an integrated solution.

The failure is therefore not simply one of cumulative assessment. It is a failure of integrated design. Chapter 19 exposes that problem because it is the point at which the Environmental Statement should have demonstrated that the Scheme's different mitigation regimes are mutually compatible. Instead, it shows that the Applicant has produced a series of topic-specific solutions without proving that they combine into one environmentally coherent project.

19.34 Cumulative constraint density indicates poor site selection

The concentration of environmental and infrastructure constraints affecting East Pye is itself relevant to site suitability.

The Scheme intersects or adjoins a nationally important bat landscape, multiple ancient woodlands, BMV agricultural land, sensitive heritage assets, chalk-stream systems, private water supplies, constrained rural roads, aviation safeguarding, National Gas infrastructure, existing and proposed grid infrastructure and quiet rural residential receptors. It is also proposed within a wider landscape experiencing additional pressure from Tasway, Norwich to Tilbury, other solar and BESS development and strategic housing growth. Those constraints are not distributed independently. Several occur together on the same Sites.

Site 1 combines major grid infrastructure, BESS, aviation, groundwater, private water supplies, nearby homes, landscape and transport constraints. Site 5 combines electrical infrastructure, sensitive water receptors, agricultural land and chalk-stream ecology. Other Sites combine ancient woodland, barbastelle habitat, heritage assets, narrow roads, BMV land and ecological corridors.

The number and concentration of required mitigation measures therefore provide evidence about the underlying suitability of the chosen location.

A well-sited development may require mitigation. That is normal. What is materially different at East Pye is the extent to which environmental acceptability depends upon numerous independent systems all working successfully at once: buffers, planting, highway controls, traffic management, drainage systems, groundwater protection, lighting controls, protected-species measures, noise barriers, habitat management, firewater containment and future restoration.

The greater the density of interacting constraints, the greater the risk that mitigation ceases to be a means of refining an appropriate development and becomes the mechanism by which an inappropriate location is made temporarily capable of appearing acceptable on paper.

That is particularly important when the alternatives assessment shows that the Scheme's scale and land package were substantially shaped by the Applicant's project objective rather than by an environmental carrying-capacity exercise. Volume 1 identifies that the land search was driven by the need to accommodate approximately 500 MW and that a smaller scheme was not taken forward as an alternative.

Chapter 19 should therefore not merely ask how numerous harms can be managed after site selection. Their concentration is itself evidence that this was an environmentally inappropriate landscape in which to locate a development of this extent.

The cumulative constraint density supports the wider BEPS submission that the Scheme has been fitted into the landscape through layers of mitigation rather than designed from the environmental capacity of the place.

19.35 Consequences for significance conclusions

The repeated Chapter 19 conclusions of ‘not significant’ cannot safely be relied upon because they are the product of a methodology containing several cumulative weaknesses:

- the external cumulative project selection is incomplete or insufficiently precautionary, most notably in relation to Tasway and other reasonably foreseeable development.
- the spatial presentation is misleading because large developments are reduced to point symbols rather than shown at their actual scale and geographic extent.
- broad receptor grouping risks concealing the actual worst case for individual homes, private water supplies, heritage assets, PRoWs and ecological populations.
- negligible effects are screened out before their combined significance is tested, even though repeated individually small effects may be precisely the mechanism by which a dispersed Scheme creates cumulative harm.
- Chapter 19 imports unresolved deficiencies from Chapters 6–18. Where an underlying effect has been omitted, understated or made dependent upon uncertain mitigation, the cumulative conclusion inherits that weakness.
- mitigation is frequently assumed rather than demonstrated as a completed and mutually compatible environmental solution. The fact that a topic chapter identifies a future management plan or design measure does not establish that its necessary outcome is secured or that it does not create effects elsewhere.
- paragraph 19.2.3 expressly states that the scale of effect interaction has not been identified. That omission is particularly serious for a dispersed development where spatial extent, frequency, number of affected receptors and duration may determine significance.
- temporal assessment is incomplete. Construction overlap is insufficiently defined, future cumulative project programmes are uncertain, and the

assessment does not adequately consider the possibility of sequential years of disturbance across different Sites and surrounding projects.
- replacement and repowering are not treated adequately as foreseeable intermediate construction phases despite the potential for full panel replacement, repeated BESS replacement and further transformer, cable and access works over the 60-year lifetime.
- the decommissioning baseline is internally inconsistent. Landscape, ecology, agriculture and heritage cannot each rely upon different assumptions about whether planting, grid infrastructure, drainage, cables and habitat remain after solar operation ends.

These are not isolated defects capable of being discounted individually. They operate together and in the same direction: each tends to reduce the amount of adverse information entering the final significance judgment.

The resulting predominance of ‘not significant’ conclusions should therefore be treated with substantial caution. Chapter 19 has not demonstrated that those conclusions represent the environmental worst case of the Scheme experienced as a whole.

19.36 Overall conclusion

Chapter 19 does not demonstrate that the cumulative and in-combination effects of East Pye are acceptable. It demonstrates the limitations of a topic-led EIA applied to an unusually dispersed and environmentally constrained development.

The Applicant has assessed the Scheme principally as a collection of residual effects after topic-specific mitigation rather than asking what happens to the landscape, community or environmental receptor when the authorised development is experienced as a whole. That distinction is decisive because the same homes, roads, aquifers, ecological networks, heritage settings and rural landscapes are exposed repeatedly to different components of one project and to surrounding development.

The methodology then further narrows that picture by excluding effects below Minor, aggregating receptors, declining to assess interaction scale, assuming mitigation and treating construction, operation and decommissioning through simplified temporal assumptions.

The result is not a reliable demonstration of cumulative acceptability.

Receptors experience one East Pye Solar Scheme, not nineteen Environmental Statement chapters.

19.37 Remedies sought

BEPS submits that the primary remedy is refusal. The deficiencies in Chapter 19 are not confined to missing tables or narrative. They arise from the Scheme's dispersed configuration, incomplete cumulative context, unresolved cross-topic interactions and failure to demonstrate one integrated environmental solution.

If the Examining Authority nevertheless considers that the defects might be capable of remedy within Examination, the Applicant should be required to provide a revised cumulative and in-combination assessment before any positive recommendation is made.

That assessment should contain a complete cumulative-development schedule based upon a consistent and transparent inclusion methodology and should include Tasway within the main assessment or, at minimum, a reasonable worst-case sensitivity scenario. Relevant housing, solar, BESS, transmission and major infrastructure developments should be represented by their actual red-line boundaries, corridors and principal construction footprints rather than by point symbols.

The Applicant should provide GIS-based receptor mapping showing where East Pye and other developments overlap the same settlements, homes, heritage settings, ecological networks, catchments, private water-supply areas, roads and PRoWs. The assessment should identify actual worst-affected receptors rather than relying predominantly on broad receptor groups.

A separate internal cumulative assessment of East Pye should identify the maximum realistic simultaneous construction scenario, including active Sites, compounds, haul roads, piling areas, HDD operations, watercourse crossings, highway interventions and illuminated work areas. That assessment should demonstrate the combined effect of the Scheme upon the same receptor networks.

The Applicant should also provide an interdisciplinary mitigation-conflict matrix demonstrating that landscape planting, ecological mitigation, drainage, highway works, noise controls, aviation safeguarding, gas and utility requirements, groundwater protection, BNG and agricultural restoration can all be delivered simultaneously within one physical design.

Functional ecological assessment should be undertaken at the scale of the receptor, including barbastelle maternity-colony landscapes and Core Sustenance Zones, ancient woodland connectivity, farmland-bird habitat, great crested newt pond networks, Roadside Nature Reserves and botanical corridors, and the River Tas and associated aquatic system. This should include the interaction of East Pye with relevant external development.

A catchment-scale water assessment should combine soils, drainage, groundwater, piling, HDD, trenching, contamination, private water supplies, BESS and transformer firewater, ordinary watercourses and downstream chalk-stream receptors within one source–pathway–receptor framework.

A specific Site 1 cumulative infrastructure-risk assessment should address the BESS, Project and National Grid 400kV infrastructure, overhead-line works, railway, utilities, groundwater, private water supplies, homes, Tibenham Airfield, landscape, heritage and construction access, and demonstrate that all safety, environmental and engineering requirements can be met simultaneously.

The Applicant should provide a programme-level cumulative transport model showing overlapping East Pye construction activity together with Tasway, Norwich to Tilbury, relevant housing and other major development, including HGV traffic, AIL routes, workforce movements, holding areas, vulnerable road users, school restrictions, bridge constraints and rural-road capacity. This should respond directly to National Highways' request for greater cumulative granularity.

A cumulative aviation assessment should treat Tibenham Airfield as a shared receptor and assess East Pye together with Tasway and other relevant infrastructure, including solar arrays, substations, pylons, cranes, lighting, glint and glare and the availability of emergency landing terrain.

The Applicant should also provide cumulative EMF hotspot mapping for the complete electrical environment, including East Pye cables, Project Substations, BESS, National Grid infrastructure, existing and diverted overhead lines and relevant surrounding electricity projects, with specific assessment of ecological and aquatic receptors where appropriate.

Replacement and repowering should be assessed as foreseeable intermediate construction phases rather than subsumed within operation. Decommissioning should then be assessed separately against the future environmental baseline rather than assumed to be similar to or less harmful than construction.

Finally, the Applicant should provide one coherent post-decommissioning baseline applied consistently across landscape, heritage, ecology, agriculture, soils and water. That baseline should identify which substations, pylons, cables, ducts, foundations, access works, drainage systems, mitigation planting and BNG habitats will remain and which will be removed.

The resulting assessment must then feed back into significance and design. Additional information is not sufficient if the Applicant simply retains the same significance conclusions. Where the revised cumulative assessment identifies greater harm, the response must be avoidance, relocation, reduction or other substantive design change.

Unless those deficiencies can be remedied within Examination without materially changing the assessed Scheme, the Examining Authority should conclude that the Environmental Statement has not demonstrated the cumulative environmental acceptability of East Pye Solar. That failure should weigh materially against consent and, taken with the unresolved site-selection, ecological, transport, water, heritage, agricultural, aviation and deliverability objections set out elsewhere in BEPS's Written Representation, supports refusal of the application.

Chapter 20: Residual Effects – The True Environmental Balance

The planning balance must now be undertaken against the current national policy framework. The National Planning Policy Framework published in August 2026 is a material consideration for decision-making from the date of its publication. It gives substantial weight to the benefits of renewable and low-carbon energy development, but expressly requires proposals to be assessed against the national decision-making policies in the Framework taken as a whole. The existence of renewable-energy benefits therefore does not disapply the separate requirements relating to heritage, biodiversity, flood risk, good design, agricultural land, pollution, public protection or other environmental effects.

For this NSIP, the primary statutory policy framework also now includes the 2025 National Policy Statements EN-1 and EN-3, which came into force in January 2026. Those policies continue to support nationally significant renewable infrastructure, but they do not remove the requirement to assess and weigh site-specific adverse effects or to demonstrate proper avoidance and mitigation. EN-3 expressly requires applicants, where possible, to avoid Best and Most Versatile agricultural land, to explain the choice of site, to prefer poorer-quality agricultural land where agricultural land is necessary, and to secure appropriate soil mitigation and restoration.

20.1 Executive conclusion: the residual-effects summary is not reliable

Chapter 20 does not provide a reliable statement of the true residual environmental effects of East Pye Solar. It presents a strikingly asymmetric picture: extensive significant landscape and visual harm is acknowledged, while almost every other environmental topic is reduced to ‘no significant residual effects’ once mitigation has been assumed. At the same time, substantial beneficial effects are attributed to ecology, water quality, employment and skills.

That outcome is not credible when tested against the Applicant’s own evidence or the Relevant Representations of statutory and specialist consultees.

The Applicant itself identifies Major, Major to Substantial and Moderate adverse effects across numerous landscape character areas, individual Sites, settlements, residential receptors, Public Rights of Way and promoted routes. Significant effects remain during operation and, in a number of cases, remain Moderate Adverse even at Year 15. Site 1 continues to experience a Major Adverse landscape-character effect at Year 15; Tas Tributary Farmland and Great Moulton Plateau Farmland remain Moderate Adverse; and numerous residential and recreational receptors continue to experience significant effects.

Yet Chapter 20 states that construction produces no significant residual effects on ecology and biodiversity, the water environment, cultural heritage, transport and access, noise and vibration, ground conditions, electromagnetic fields or ‘other environmental matters’. It similarly records no significant operational

residual effects for heritage, transport, noise, soils, ground conditions or EMF. It then characterises operational effects on bats, rivers, hedgerows, skylark and other ecological receptors as Moderate Beneficial and water-quality effects as Major Beneficial.

That inconsistency is now particularly important because the assessment cannot lawfully be treated as a collection of isolated topic conclusions. The same physical development produces the effects assessed across the ES. A Scheme which the Applicant accepts will produce Major Adverse and other Significant effects upon landscape character and visual receptors cannot simply be assumed to have no corresponding material consequences for heritage settings, tranquillity, recreational experience, ecological connectivity, community amenity or the functioning of the rural landscape where those receptors depend upon the same landscape context.

The issue is not that a Significant LVIA effect must automatically produce a Significant effect in every other EIA chapter. Different disciplines apply different methodologies. The issue is whether the contrasting conclusions have been adequately reconciled. Where the Applicant's own landscape assessment identifies substantial and persistent change to the character and perception of Sites 1, 7 and 8, the Great Moulton Plateau and Tas Tributary farmland, and numerous residential and recreational receptors, the Examination should require a coherent explanation of how that same landscape-scale transformation results in little or no residual effect when assessed through other environmental disciplines.

The consultee evidence demonstrates why those conclusions cannot safely be accepted.

Norfolk Wildlife Trust expressly addresses the Applicant’s claimed absence of significant adverse residual ecological effects and does not accept that the matter is resolved. It states that important ecological issues require detailed scrutiny and that further information and design refinement are necessary before the Project can be considered acceptable in ecological and environmental terms. NWT requires the Scheme to avoid harm to designated sites, priority habitats and protected species and to contribute meaningfully to nature recovery and ecological connectivity at landscape scale. That is fundamentally different from the settled picture presented in Chapter 20.

The Environment Agency’s application-stage Relevant Representation is still more direct. It identifies outstanding matters concerning floodplain storage, temporary works, culverting, water-quality monitoring, pollution prevention, BESS and substation design, piling and deep foundations, underground cabling, thermal effects, private and public water supplies, historic contamination, ecology and fisheries. It also states that specified pre-commencement activities are not presently covered by environmental management plans and therefore create an unmitigated risk of environmental harm. Those are not compatible with an unqualified conclusion that there will be no significant residual effects on water, ground conditions, ecology or other environmental matters.

Historic England likewise does not support the implication that heritage harm has disappeared. Its Relevant Representation recognises that the Scheme would change the settings of designated heritage assets; that some effects amount to

significant policy harm; and that residual heritage effects are likely to remain after mitigation. It identifies particular concerns involving a Scheduled Monument, two Grade I buildings, two Grade II* buildings, 42 Grade II buildings and four Conservation Areas, while also confirming that parts of the Order Limits remain archaeologically unevaluated. Chapter 20 nevertheless reduces cultural heritage to ‘no significant residual effects’.

The same problem arises with transport. Chapter 20 states that construction produces no significant residual transport effect. National Highways, however, requires further assessment of strategic junctions and greater granularity in the cumulative construction-traffic assessment, together with enforceable controls on traffic volumes and distribution. Norfolk County Council rejects or raises substantial concerns about important parts of the Applicant’s local access and routeing strategy. A conclusion of ‘not significant’ plainly does not establish that the access strategy is agreed, environmentally acceptable or physically deliverable.

Ground conditions demonstrate the same methodological problem. The Environment Agency identifies substantial uncertainty across the Scheme, including Principal Aquifers, private abstractions, piling pathways, underground cabling, historic contamination and the adequacy of later Foundation Works Risk Assessments. The Applicant has not undertaken comprehensive intrusive investigation across the Scheme and instead leaves decisive work until after consent. Chapter 20 nevertheless states that there will be no significant residual ground-condition effect.

These are not isolated disagreements over technical detail. They reveal a systemic problem with Chapter 20. The Applicant’s residual-effect conclusions are reached only after receptor values have been contested, effects have been divided between disciplines, future mitigation has been assumed to operate successfully, and unresolved investigation or design has been deferred.

The true residual effects therefore cannot be read simply from the final column of the Applicant’s tables.

Four defects run through the chapter.

First, the residual conclusions conflict with the Applicant’s own baseline evidence. The Scheme occupies a nationally important bat landscape, extensive BMV agricultural soils, multiple sensitive water catchments and aquifers, an unusually dense historic environment and a landscape in which the Applicant itself predicts extensive significant adverse change. The assessment repeatedly identifies a highly sensitive receiving environment and then arrives at residual conclusions that do not reflect that sensitivity.

Secondly, the conclusions conflict with the continuing qualifications and objections of consultees. NWT says further design refinement is necessary before ecological acceptability can be established. The Environment Agency identifies unresolved environmental risks across several disciplines. Historic England confirms residual heritage harm and incomplete archaeology. National Highways and Norfolk County Council identify unresolved construction and access issues.

The Examining Authority has itself required Statements of Common Ground with the Environment Agency, Historic England, Natural England, National Highways, Norfolk County Council, Norfolk Wildlife Trust, aviation bodies, National Gas and other parties precisely because material matters remain in dispute or outstanding.

Thirdly, Chapter 20 does not capture the cumulative and interacting nature of the harm. The same historic agricultural landscape supports heritage assets, protected species, productive soils, rural communities, recreational routes and connected water systems. The Applicant divides those effects between separate technical disciplines and then reports each residual conclusion independently. Historic England has identified cumulative concern with Tasway Energy Park and associated BESS development, while NWT and local-authority evidence identify landscape-scale ecological fragmentation and cumulative pressure from multiple energy schemes. A receptor does not experience those impacts separately. It experiences one transformed landscape.

Fourthly, Chapter 20 treats mitigation-dependent and potentially irreversible change as acceptable without first demonstrating why development at this location and scale is necessary. The result is particularly stark where the Applicant acknowledges irreversible loss or downgrading of BMV agricultural land, long-term landscape harm and significant effects persisting beyond Year 15, while simultaneously asking the decision-maker to accept major environmental restructuring as the residual consequence of a nominally temporary project.

The correct conclusion is therefore not that East Pye has few significant residual effects. It is that the Applicant's significance framework has progressively filtered out or discounted much of the harm that remains.

These conclusions do not describe the true residual effects of East Pye. They describe what remains after disputed effects have been downgraded, uncertain mitigation has been assumed to succeed, unresolved matters have been deferred and interconnected harms have been divided between technical chapters.

20.2 Residual harm can only be identified after genuine avoidance

There is a more fundamental problem. An effect cannot properly be treated as 'residual' until the mitigation hierarchy has been applied in the correct order.

The relevant sequence is:

avoid → minimise → mitigate → identify residual harm.

That sequence matters because mitigation is not a substitute for avoidance. Planting, buffers, construction management, future route refinement, habitat creation, archaeological recording or later monitoring may reduce consequences

after a development has been chosen. They do not demonstrate that the underlying impact was unavoidable.

BEPS' case throughout Chapters 1, 2 and 5 is that East Pye has not been designed from that starting point. The Applicant settled upon a transmission-scale development of approximately 500 MW, assembled a dispersed land package around grid opportunity and subsequently sought to accommodate the Scheme within the environmental constraints of that land. The result is ten dispersed Sites, extensive cable corridors, BESS and substation infrastructure, major grid works and a construction access system extending across a highly constrained rural landscape.

Norfolk Wildlife Trust's Relevant Representation is particularly important in this respect. NWT recognises the need for renewable electricity but criticises the absence of a strategic approach to siting large-scale solar development in Norfolk and records the perception that schemes are being driven principally by land availability and grid connection availability. It requires avoidance of harm to designated sites, priority habitats and protected species and says further design refinement is necessary before East Pye can be considered environmentally acceptable. That directly supports the distinction between designing around the environmental capacity of a place and selecting land first and mitigating afterwards.

The Applicant's own design evolution demonstrates that avoidance was available. Development has been removed or reduced in particular locations in response to combinations of heritage sensitivity, BMV land, ancient woodland and ecology, residential proximity and aviation concerns. As Chapters 1 and 5 of this Written Representation demonstrate, materially similar constraints remain elsewhere within the retained Scheme. The issue is therefore not whether the Applicant has ever avoided harm. It is whether the same avoidance threshold has been applied consistently across the project.

The consultee evidence reinforces that avoidance remains necessary in several areas.

Historic England confirms that the countryside itself forms part of the setting of important rural churches, listed buildings and medieval settlements. It recognises significant setting effects and residual harm after mitigation. Planting may screen infrastructure, but screening does not necessarily preserve historic openness, agricultural relationships or the legibility of settlement within its landscape. Where that relationship is fundamental to significance, the first question should be whether development should be removed or relocated, not how it can later be screened.

NWT similarly requires landscape-scale ecological connectivity to be protected. Established ancient woodland relationships, species-rich hedgerows and bat commuting networks cannot automatically be recreated by later planting. Its position that further design refinement is required is therefore an avoidance issue, not merely a demand for more compensation.

The Environment Agency applies the same logic to watercourses. Its Relevant Representation states that new culverts are unacceptable and should be replaced with clear-span bridges in accordance with its anti-culverting policy.

Where culverting cannot be avoided, the need must be justified. That is the mitigation hierarchy in practical form: first avoid the damaging intervention; only then consider how unavoidable works can be reduced or controlled.

Norfolk County Council's highway position likewise requires the Applicant to reduce reliance on unsuitable minor rural roads by moving construction traffic onto internal haul routes where practicable. But such redesign then has environmental consequences of its own for soils, hedgerows, drainage, watercourses, ecology and heritage. This illustrates why mitigation cannot be assessed discipline by discipline. A transport solution that creates additional ecological or hydrological harm is not proof that the original environmental effect has been mitigated; it may simply transfer harm from one receptor to another.

The same principle applies to archaeology. Historic England confirms that parts of the Order Limits remain incompletely evaluated and that previously unknown archaeology potentially equivalent in significance to designated assets may still be identified. Archaeological recording after destruction is not equivalent to avoiding the archaeological resource. Where further investigation may identify assets requiring preservation in situ, the residual effect cannot properly be fixed before that work is complete.

Chapter 20 therefore starts its residual-effects exercise too late. It assumes the essential form and scale of East Pye and asks what remains after mitigation. The Examination must first ask whether the harm could have been removed through a different design.

That question is especially important because no demonstrated need case establishes that this particular development must occupy these particular Sites at this particular scale. National policy support for renewable energy does not prove a locational necessity for every part of East Pye. Nor does grid availability establish that all environmentally constrained land assembled by the Applicant must be developed.

An effect cannot properly be characterised as unavoidable residual harm where the Applicant has not demonstrated why the development causing it could not instead have been deleted, relocated or reduced.

This is the central connection between Chapters 5 and 20. The alternatives assessment asks whether a materially less harmful scheme or location was available. The residual-effects assessment can only begin once that question has been answered. If environmentally damaging parcels, routes or infrastructure remain because they are needed to preserve a predetermined 500 MW project rather than because their impacts are genuinely unavoidable, their harm should not be discounted as an acceptable 'residual effect'.

The proper Examination question is therefore not merely:

What environmental harm remains after the Applicant's proposed mitigation?

It is:

What environmental harm would remain after every reasonable opportunity for avoidance, site deletion, relocation, rerouting and reduction in scale had genuinely been exhausted?

On the evidence currently before the Examination, that exercise has not been completed. Chapter 20 therefore understates the true residual harm before the planning balance has even begun.

20.3 The Applicant's own Chapter 20 demonstrates a landscape-scale conflict

Chapter 20 itself establishes that East Pye is not a development causing a small number of local visual effects. It is a landscape-scale intervention whose significant adverse effects extend across the Scheme and remain after mitigation.

Table 20.1 identifies significant construction effects across NCA 83 South Norfolk and High Suffolk Claylands, the Tas Rural River Valley, Tas Tributary Farmland, Chet Tributary Farmland, Thurlton Tributary Farmland with Parkland and Great Moulton Plateau Farmland. It records Major Adverse effects on the landscape character of Sites 1, 7 and 8 and repeated Major or Major to Substantial visual effects on residents, PRoWs and promoted recreational routes.

The operational picture is not materially different. Table 20.2 records long-term Major Adverse effects for the BESS area, Site 1 and Site 8, widespread Moderate Adverse effects across other Sites and LCAs, and repeated Major or Major to Substantial effects on individual visual receptors. Even at Year 15, significant effects remain on Tas Tributary Farmland, Great Moulton Plateau Farmland, Site 1, Site 7, Site 8 and numerous PRoW, residential and recreational receptors.

Norfolk County Council independently questions whether even those conclusions go far enough. Its Relevant Representation states that the Applicant's emphasis on the absence of formal landscape designation may underplay the experiential and recreational qualities of the area. It considers the effects on users of PRoWs and promoted routes potentially understated given the scale of the Scheme, the medium-to-long-term duration of change and the major alteration to the surrounding landscape. NCC also requires greater certainty about the timing and effectiveness of landscape mitigation.

That matters because the proposed planting is itself part of the change. The existing landscape is characterised by open and semi-open agricultural relationships between villages, churches, farms, lanes, woodland, hedgerows and river valleys. Screening the Scheme through substantial new woodland, hedges and other planting may eventually reduce views of panels, but it does not restore that landscape. It creates a different one.

The Applicant's Year 15 assessment therefore does not demonstrate reversibility. It demonstrates that significant harm persists even after fifteen years of landscape intervention intended to conceal the development.

Nor can this harm be isolated as a visual matter. The landscape being altered is simultaneously the setting of medieval settlements and listed buildings, the

functional habitat of nationally important bat populations, the agricultural resource supporting BMV soils and Countryside Stewardship land, and the surface and groundwater catchment linking ponds, ditches and chalk streams.

The significance of Chapter 20 is therefore greater than its landscape tables suggest. Those tables establish the physical scale of the intervention against which every later claim of ‘no significant residual effect’ must be tested.

East Pye is not simply being inserted into the South Norfolk landscape. On the Applicant’s own assessment, this ancient landscape would have to be substantially and enduringly reorganised around East Pye.

That admitted landscape-scale transformation is important when the conclusions of the other ES disciplines are considered. The point is not that a Significant LVIA effect must automatically produce a Significant effect under every other EIA methodology. Different disciplines apply different criteria. The issue is whether the contrasting conclusions have been adequately reconciled. Where the same physical development produces Major Adverse and other Significant changes to landscape character, settlements, residential receptors, PRoWs and recreational routes, the Examination should require a coherent explanation of how that same transformation produces little or no residual effect when considered through heritage, ecology, water, community amenity and other environmental disciplines.

20.4 The historic landscape cannot be reduced to ‘no significant cultural heritage effect’

Against that admitted landscape transformation, Chapter 20’s conclusion that there will be ‘no significant residual effects’ on cultural heritage during construction, operation or decommissioning is particularly difficult to sustain.

Historic England describes the Scheme area as an extensive, predominantly agricultural part of South Norfolk characterised by important rural churches, listed buildings and small conservation areas focused upon medieval settlement. Its Relevant Representation identifies cumulative impact with Tasway Energy Park and associated BESS development as a specific area of concern requiring further consideration.

The importance of that evidence is that the historic environment is not composed of isolated listed buildings standing independently of their surroundings. The churches, farmsteads, conservation areas, lanes, fields and settlements form a surviving historic rural landscape.

Historic England’s earlier advice expressly required heritage setting to be assessed beyond visual intervisibility, including the landscape as a whole and the effects of traffic, noise and other environmental change. It also required cumulative effects to be considered.

Historic England’s application-stage evidence identifies particular concerns involving one Scheduled Monument, two Grade I listed buildings, two Grade II* listed buildings, 42 Grade II listed buildings and four Conservation Areas. It also confirms that parts of the Order Limits remain incompletely archaeologically

evaluated and that previously unknown remains potentially equivalent in significance to designated assets may still be discovered.

That is fundamentally inconsistent with the apparent finality of Chapter 20.

A Scheme cannot produce Major and long-term change to the landscape surrounding medieval settlements, rural churches and listed farmsteads and then treat the historic-environment consequence as nil merely because individual asset effects have been pushed below an EIA significance threshold.

Nor does screening necessarily mitigate heritage harm. In an historic agricultural landscape, openness may itself form part of setting. A new woodland belt that hides panels may simultaneously sever historic visual relationships between church, village, lane and farmland. The mitigation can therefore change the heritage resource it is supposed to protect.

The problem extends beyond setting. Unknown archaeology remains capable of requiring avoidance or redesign. Historic England specifically identifies the Cable Route Corridor as an area requiring further consideration, while the Applicant’s own archaeological mitigation continues to depend upon later survey, trenching and detailed design.

Accordingly, the archaeological baseline is not fully closed and the setting assessment remains dependent upon assumptions concerning future planting and mitigation. Chapter 20 nevertheless reports the outcome as though the historic-environment case were settled.

It is not.

The correct residual effect must account for the permanent alteration of relationships that have developed over centuries: between medieval churches and their rural hinterlands, historic settlements and surrounding fields, farmsteads and lanes, and archaeological landscapes beneath those fields.

That harm does not disappear because panels may ultimately be removed.

A Scheme cannot simultaneously produce major and long-term change to the historic agricultural landscape surrounding medieval settlements and churches yet be treated as producing no significant residual historic-environment consequence merely because individual asset effects fall below the Applicant’s EIA significance threshold.

20.5 The ecological ‘benefits’ contradict the Applicant’s own ecological baseline

Chapter 20’s ecological conclusions are still more difficult to reconcile with the evidence. It states that there will be no significant adverse residual ecological effects during construction or decommissioning, but predicts Moderate Beneficial operational effects for hedgerows, ponds, rivers, woodland, skylark, bats, badger, water vole and otter.

That conclusion is not supported by the sensitivity of the receiving environment.

The Applicant’s own evidence establishes that the Order Limits support a bat assemblage of national importance. Barbastelle was the third most frequently recorded bat species and was recorded across the survey area. Multiple maternity colonies occur around the Scheme and overlapping Core Sustenance Zones extend across the development landscape. The ecological receptor is therefore not an individual roost tree or isolated woodland. It is a landscape-wide network of maternity colonies, satellite roosts, commuting routes and foraging grounds functioning as a barbastelle metapopulation.

That landscape function is inseparable from the hedgerows, ancient woodland, veteran trees, ponds, ditches, riparian corridors and field margins through which the colonies move and feed.

The Norfolk Barbastelle Study Group’s evidence makes the prematurity of the Application particularly clear. Its work confirmed a maternity colony at Little Wood through radiotracking, with a pre-parturition emergence count of 36 and an estimated post-parturition colony of approximately 55 bats. Acoustic evidence also indicates likely additional maternity colonies at Brooke Wood East and Lower Spring Wood, while other woodlands, particularly toward the eastern end of the Scheme, remain insufficiently surveyed.

The Study Group’s conclusion is fundamental: the effects of East Pye cannot properly be assessed without a fuller understanding of barbastelle distribution and habitat use. Further radiotracking and woodland assessment are required to establish the maternity-colony network, flight routes, foraging areas and functional relationships across the Scheme.

The Applicant has therefore reached a finding of Moderate Beneficial effect on bats before the baseline against which that effect must be measured has even been completed.

That is premature.

The independent scientific evidence makes the claimed benefit still less secure. Tinsley et al. (2023), in a paired study of 19 operational solar farms and 19 control sites in England, found significant negative effects of ground-mounted solar PV on bat activity. The subsequent Wildlife Trust literature review records that Tinsley et al. found lower activity for six of eight recorded species or species groups and identifies the study as directly relevant UK evidence on solar development and bats. The recent breeding-bird research relied upon elsewhere in this WR similarly cautions that evidence of biodiversity benefits from well-managed solar farms does not remove the need to locate solar development away from nature-sensitive areas.

The significance is not that every solar farm necessarily reduces every bat species. It is that the Applicant cannot legitimately assume that grassland creation beneath panels will produce a beneficial outcome for bats when peer-reviewed UK evidence demonstrates the opposite can occur.

That uncertainty is especially serious here because East Pye is not being proposed on ordinary farmland with low bat activity. It is proposed across a nationally important landscape supporting multiple barbastelle maternity colonies.

Norfolk Wildlife Trust accordingly does not accept that the Applicant's 'no significant adverse residual effect' conclusion resolves the issue. Its Relevant Representation states expressly that further information and design refinement are required before the Scheme can be considered ecologically and environmentally acceptable. It requires protection of designated sites, priority habitats and protected species and landscape-scale ecological connectivity.

Natural England's position is also materially more cautious than Chapter 20 implies. Its Relevant Representation leaves protected-species licensing as an amber issue. It records that licences may be required for roosting bats and strongly advises that the licensing position be addressed at the earliest opportunity, including through its Letter of No Impediment process.

That is important because barbastelles are European Protected Species. If the Scheme risks an offence, a licence cannot simply be assumed. The licensing tests include the absence of a satisfactory alternative and the requirement that the action does not prejudice maintenance of the affected population at favourable conservation status in its natural range.

For East Pye, that conservation-status test cannot rationally be answered by considering individual roosts in isolation. The relevant question is whether the landscape-wide maternity metapopulation can continue to function when its overlapping Core Sustenance Zones are subjected to panels, fencing, road crossings, lighting, vegetation removal, construction disturbance, substations, cable works and repeated replacement activity over 60 years. The Applicant has not demonstrated that.

Indeed, the Study Group says the colony network itself requires further investigation. It is impossible to demonstrate no deterioration in conservation status where the distribution and functional use of the affected metapopulation have not yet been fully established.

The botanical position compounds the defect. There has been no full botanical survey. The Applicant's own extended habitat survey expressly states that it is not a full botanical survey and that records of notable plants were incidental to UKHab mapping. BEPS has specialist evidence from a Level 6 botanist identifying the potential importance of field margins, roadside verges and other semi-natural habitats for rare and locally significant plant assemblages. Those are precisely the habitats threatened by road widening, visibility splays, accesses, haul roads, cable works and compounds.

A habitat cannot credibly be said to experience a beneficial residual effect where the botanical resource being affected has never been properly surveyed.

The same problem runs through the wider ecological baseline. The Order Limits interact with ancient woodland, veteran trees, SSSI woodland, County Wildlife Sites, Roadside Nature Reserves, Countryside Stewardship habitat, farmland birds and hydrologically connected watercourses. Natural England itself records hydrological connectivity between the Scheme and six SSSIs together with Saxlingham Grove and Popes Wood/Doylys Grove Ancient Woodlands.

Chapter 20 therefore turns uncertainty into benefit. It treats future grassland, planting and habitat management as a demonstrated ecological gain while

discounting the established ecological function of the landscape that would be industrialised to create it. That is the wrong comparison.

The correct baseline is not generic intensive arable land. It is the landscape that exists now: a publicly and privately managed ecological/conservation network containing nationally important bats, maternity-colony habitat, ancient woodland, rare and potentially unsurveyed flora, farmland birds, established hedgerows, ponds and watercourses.

A finding of ‘Moderate Beneficial’ effect on bats is particularly difficult to reconcile with an Applicant baseline identifying a nationally important bat assemblage, peer-reviewed evidence that operational solar farms can materially reduce bat activity, specialist evidence that the full barbastelle maternity metapopulation has not yet been mapped, and Natural England’s continuing treatment of protected-species licensing as unresolved.

The unavoidable conclusion is that the ecological assessment is not merely optimistic. In critical respects, it is premature. The Applicant is asking the Examining Authority to accept a beneficial residual effect before it has established the complete ecological baseline, before it has demonstrated maintenance of favourable conservation status for European Protected Species, and without having undertaken even a proper botanical survey of the habitats most exposed to construction.

That is not a defensible residual-effects assessment. It is a reason why development consent should not presently be granted.

20.6 Habitat creation cannot compensate for loss of ecological function

Chapter 20 converts much of the Scheme’s ecological harm into a claimed operational benefit because existing agricultural land would be converted to grassland and because hedgerows, ponds, woodland and other habitats would be created or enhanced. That approach confuses habitat quantity with ecological function.

The Applicant’s BNG baseline records approximately 942.66 ha of cropland and 95.10 ha of grassland across the Sites. That may be legitimate metric classification, but it does not distinguish between generic intensive cropland and land already performing specific ecological functions through Countryside Stewardship, open nesting habitat, winter stubble, seed-rich margins, skylark plots or other management. BEPS’ evidence shows that affected stewardship land has functions relevant to skylark, lapwing, turtle dove and other declining farmland birds. The Applicant’s own breeding-bird surveys confirm numerous skylark territories.

Those functions cannot simply be replaced by the label ‘grassland’.

Lapwing require extensive open ground and sightlines. Turtle dove depend upon a particular combination of dense nesting habitat, seed-rich forage and water.

Skylark require open nesting and foraging conditions. Newly planted hedges and grassland beneath panels do not necessarily provide those conditions, and may positively remove them through enclosure, fencing and infrastructure. BEPS' Chapter 8 records that generic new planting would not provide immediate or necessarily equivalent turtle-dove habitat, while the stewardship purpose of land remains relevant even where a particular species was not recorded breeding in one survey year.

The same defect is acute for bats. The value of a hedgerow is not determined simply by its length or metric condition. Its ecological value depends upon where it lies between maternity roosts and foraging habitat, whether it remains dark, whether it contains mature trees, its structure and continuity, and whether it forms part of an established commuting network. The Applicant's own surveys establish bat use across the Scheme. The receptor is therefore the connected landscape of roosts, woodlands, watercourses, tree lines, hedgerows and dark corridors, not isolated habitat units.

Norfolk Wildlife Trust specifically questions the assumption that relatively small hedgerow breaks can be treated as harmless, particularly for barbastelle. A retained hedge may cease to perform its existing function if it is illuminated, severed, narrowed, repeatedly disturbed or enclosed by development. NWT also warns that new planting cannot automatically replace mature hedgerows and established commuting routes, which may take decades to develop equivalent function.

That temporal deficit matters. A new hedge becoming useful in twenty or thirty years is not mitigation for loss of an established maternity-colony route at the point construction begins.

Ancient woodland illustrates the same problem. Natural England is prepared to treat ancient woodland and ancient/veteran tree matters as capable of resolution only if the Applicant's 30 m buffers and associated controls are secured consistently through the CEMP, LEMP and DEMP. But a buffer does not recreate the ecological relationship between a wood and the surrounding hedgerow, field, pond and dark-corridor network. Woodland retained physically can still be functionally isolated by development.

The South Norfolk Claylands network is also hydrological. Ponds, ditches, Hempnall Beck, the River Tas and other watercourses link terrestrial and aquatic habitats. Norfolk Wildlife Trust identifies lowland fen associated with Fritton Grange Meadows and Hempnall Beck and states that insufficient evidence has been provided to demonstrate that HDD would not alter the groundwater processes upon which that habitat depends. The Environment Agency separately identifies unresolved effects on fish, European eel, aquatic invertebrates, riparian habitat and hydrologically connected receptors. New ponds or grassland elsewhere do not compensate for deterioration in an established connected water system.

The botanical baseline makes the Applicant's claimed gains still less reliable. There has been no full botanical survey. Narrow roadside verges, field margins, hedgebanks and ditch edges—precisely the habitats most exposed to accesses, road widening, visibility splays and cable works—may support rare or locally important assemblages that have never been properly mapped. A habitat metric

cannot demonstrate replacement of an ecological resource that has not first been identified.

This is the central flaw in the Applicant's beneficial-effect case. Metric units count habitat type, area, condition and projected uplift. They do not establish that the same species can use the new habitat in the same way, at the same time, in the same landscape position.

The statutory and specialist evidence converges on that point. The Environment Agency addresses aquatic connectivity; Norfolk Wildlife Trust addresses landscape-scale ecological networks; the Tree Warden Network addresses mature trees and hedgerows; South Norfolk Council seeks protection of dark corridors and important bat routes; and the Norfolk Barbastelle Study Group seeks further survey of the maternity-colony network.

A positive BNG percentage therefore does not answer the decisive ecological question.

A numerical or habitat-based gain does not prove functional equivalence. East Pye may increase the measured area of grassland, hedgerow or other habitat while simultaneously degrading the established ecological network that makes this landscape valuable. Where equivalent function cannot be demonstrated from the moment of loss, the proper response is avoidance, not compensation.

20.7 The claimed major water benefit is not credible while regulatory risks remain unresolved

Chapter 20 states that construction would produce no significant residual effect on the water environment and then attributes a **Major Beneficial** operational effect to reduced agricultural chemical and fertiliser application and associated nutrient loading.

That conclusion is impossible to reconcile with the unresolved evidence before the Examination.

The Environment Agency has consistently identified material uncertainty over the Scheme's hydrogeological setting, groundwater–surface water interaction, piling, deep foundations, underground cabling, watercourse crossings, private abstractions, pollution prevention and the BESS and substation infrastructure. At scoping stage it expressly stated that the Applicant had not adequately demonstrated its understanding of the hydrogeological setting and that the groundwater baseline was informed largely by a limited set of historic exploratory-hole records.

Those concerns have not disappeared. The Applicant's own Chapter 16 confirms that Ground Investigation and Foundation Works Risk Assessments for the BESS and structures requiring deep foundations or piling will be undertaken **post-consent**. The FWRA is intended precisely to assess the risk that foundations could create contaminant pathways into deeper groundwater. Hydrogeological risk assessment for HDD beneath aquifers, watercourses or sensitive ecological receptors is likewise deferred post-consent 'if required'.

That is not evidence of an established negligible residual effect. It is evidence that material groundwater risks have not yet been investigated sufficiently to determine the final mitigation.

The private-water-supply position is particularly serious. The Environment Agency originally identified 35 private water supplies within 250 m for which accurate locations and abstraction strata were unavailable. It subsequently required the abstraction search to extend beyond 250 m because impacts could not be discounted where Principal Aquifers with high transmissivity occur. It identified six licensed groundwater abstractions within 1 km, including a public-water-supply borehole at Tivetshall whose Source Protection Zone extends into the Scheme area.

The Applicant’s later mapping does not cure that defect. It shows concentrations of private wells and supplies around the Site 1 BESS/grid hub and Site 5 substation, but remains principally a proximity exercise rather than a receptor-specific hydrogeological assessment. It does not establish abstraction depth, strata, flow direction, hydraulic connectivity, travel time or contaminant pathway.

The Environment Agency also identified inadequate provision to monitor and respond to leaks and spills from BESS and substation infrastructure and insufficient control of potentially contaminated firefighting runoff. It required adequate lining, containment and pollution-control measures. The later reference to impermeable membranes, shut-off valves and tankering remains an outline containment concept rather than a demonstrated receptor-specific engineering solution.

Flood risk is similarly unresolved. The LLFA considered that impermeable area had been underestimated, that infiltration viability had not been established and that the submitted flood material contained incomplete and inconsistent information. It specifically disagreed with attempts to dismiss changes in runoff and groundwater recharge arising from solar panels and infrastructure.

Site 5 demonstrates why these questions cannot be abstracted into a scheme-wide beneficial conclusion. The Site is linked through ditches and watercourses to the River Tas chalk-stream system and has sensitive private water supplies close to its boundary. Local evidence identifies a watercourse treated by the Applicant as a field drainage ditch despite its hydrological connection to the Tas, and the Environment Agency’s Relevant Representation states that information concerning watercourse crossing locations and design remains insufficient. It advises that new culverts should be avoided and that clear-span crossings should be used wherever practicable.

The ecological component is equally unresolved. The Environment Agency disputes the Applicant’s valuation of freshwater fish because it fails adequately to reflect critically endangered European eel and seeks additional evidence concerning EMF at watercourse crossings. It also identifies a separate potential impact on aquatic insects from polarised light reflected from panels. White-clawed crayfish evidence in the River Tas system has separately caused the ExA to require further survey information because dry-condition walkovers do not establish absence.

Against that evidence, the assertion of a Major Beneficial water effect is premature.

Reduced fertiliser use may be capable of providing a genuine local benefit. But it is only one pathway. It cannot neutralise risks arising from altered drainage, soil compaction, groundwater pathways, piling, trenching, HDD, transformer oils, BESS pollutants, firewater, sediment mobilisation or impacts to sensitive abstractions and aquatic ecology.

Nor is cessation of agricultural inputs necessarily permanent. The Scheme is described as temporary and the land is intended in principle to return to another use after decommissioning. It is therefore especially inappropriate to use the temporary removal of agricultural nutrient inputs as though it were a permanent environmental gain while infrastructure-related risks are assessed over the same 60-year period.

The proper conclusion is straightforward:

Reduced agricultural fertiliser use cannot convert this environmentally sensitive and incompletely assessed water case into a Major Beneficial residual effect while the Environment Agency and LLFA continue to identify unresolved risks to aquifers, flood storage, watercourses, private and public drinking-water supplies, fisheries, groundwater and pollution control. Chapter 20 credits the benefit before the Applicant has demonstrated control of the harm.

That uncertainty is also material under the current NPPF, which requires development to be safe for its lifetime, taking climate change into account, without increasing flood risk elsewhere, and requires assessment of flood risk from all sources and of relevant cumulative effects. Where the baseline, drainage response and effect on existing flow paths remain disputed or incomplete, a conclusion of no significant residual water effect cannot simply be treated as an established environmental fact.

20.8 Soils and agricultural land: the Applicant admits irreversible harm but understates its consequences

The Applicant’s own soils assessment contains one of the clearest admissions in the entire ES. Chapter 15 concludes that the Scheme would cause:

‘Irreversible loss or downgrading’

of BMV agricultural land, assessed as a **Moderate Adverse significant effect**.

Chapter 20 repeats that conclusion for construction. Yet it then states that there would be no significant operational or decommissioning effects on soils and agricultural land, while its cumulative assessment reduces operational loss of agricultural land and food production to Minor Adverse.

That treatment is internally incoherent.

The Applicant cannot acknowledge that part of the high-quality agricultural resource will be irreversibly lost or downgraded and then treat the consequences of withdrawing, disturbing and repeatedly trafficking that same resource over a 60-year operational period as environmentally negligible.

Natural England itself treats soils and BMV land as an **amber** issue. Its Relevant Representation states that detailed ALC survey work has not been completed across the Cable Route Corridor and warns that underground cable installation, temporary access tracks and compounds can cause permanent land-quality change and soil damage. It requires detailed ALC survey across the whole Order Limits, clarification and avoidance of peat, and evidence that permanent infrastructure has been kept off BMV land.

Natural England also records approximately 6 ha of BMV land that would be permanently lost to infrastructure and warns that, because BMV is a high-sensitivity receptor, even comparatively small areas of permanent land take or long-term downgrading may be significant, particularly cumulatively.

That directly undermines the Applicant’s tendency to minimise permanent loss by expressing it as a small proportion of a much larger regional resource.

The vulnerability of the remaining soils also matters. The Scheme affects heavy clay soils where structural damage, smearing, compaction and disruption of field drainage can be difficult to reverse. The Applicant’s own Chapter 15 recognises temporary damage to soil structure, while BEPS’ evidence identifies repeated trafficking from haul roads, construction compounds, cable trenching, soil storage, maintenance and replacement cycles as mechanisms capable of producing lasting degradation.

The distinction between ‘temporary works’ and temporary effects is therefore false. Natural England expressly warns that temporary displacement of soil associated with cable installation, access tracks and compounds can cause **permanent**ALC degradation if poorly undertaken.

The cable network is especially important. It extends for approximately 24 km, yet Natural England says complete ALC survey coverage has not been demonstrated. The Applicant therefore seeks powers for extensive trenching and construction activity without having fully established the quality of all agricultural land affected or the locations at which route refinement should first avoid the most sensitive soils.

The operational phase is not passive either. The Scheme permits replacement of solar panels, batteries and major electrical equipment over its lifetime. BESS replacement may occur repeatedly. Those activities require renewed HGV access, compounds, lifting operations and trafficking over soils whose structure and drainage may already have been altered by the first construction phase. Treating operation as producing only negligible soil effects therefore ignores foreseeable whole-life disturbance.

The restoration assumption is similarly uncertain. Natural England welcomes the commitment in the Outline Soil Resource and Management Plan to restore affected land to comparable ALC grade, but expressly advises that the commitment must be secured. An aspiration to restore soil quality is not

evidence that restoration will actually succeed after sixty years of changed management, compaction, trenching, drainage alteration and repeated infrastructure replacement.

Nor does the Application presently provide insolvency-proof financial security ensuring that full restoration will occur if the project company fails. BEPS' decommissioning evidence identifies this as a major regulatory gap: restoration obligations are meaningful only if the resources to carry them out remain available at the end of the project.

The cumulative position is also more serious than Chapter 20 suggests. Chapter 15 itself acknowledges that permanent BMV loss across cumulative developments may exceed 20 ha, producing a **Moderate Adverse significant cumulative effect**. That sits uneasily with the summary table's separate characterisation of operational agricultural loss and food production as merely Minor Adverse.

The proper conclusion is therefore unavoidable.

It is internally incoherent to admit irreversible loss or downgrading of high-sensitivity BMV land and then characterise the long-term agricultural consequence of removing, disturbing and repeatedly reusing that same land over a 60-year project as minor or insignificant.

East Pye's soil effect is not simply a temporary interruption in cropping. It includes permanent infrastructure loss, potential ALC downgrading, compaction of vulnerable clay soils, disruption to agricultural drainage, disturbance from a 24 km cable network, repeated replacement activity, uncertain restoration and cumulative loss alongside other schemes.

Where the Applicant itself admits irreversible damage and Natural England continues to require further survey, avoidance and soil safeguards, Chapter 20 materially understates the true residual agricultural harm.

20.9 'Temporary' development does not mean reversible development

The Applicant repeatedly relies on the proposition that East Pye is a temporary development because much of the solar infrastructure is intended to be removed after an operational life of up to 60 years. That description is materially misleading if it is used to diminish the significance of long-term environmental change.

Sixty years is not a short environmental interval. It is long enough for the landscape, soils, habitats, hydrology and communities affected by the Scheme to change fundamentally. During that period, substantial areas would cease to function as open agricultural land and instead contain solar arrays, fencing, tracks, substations, BESS infrastructure, drainage works and associated electrical plant. The Applicant's own ecological assessment recognises that the operational phase changes openness, vegetation structure, shading, surface-water distribution, field-boundary use and habitat relationships across the Scheme.

The ecological baseline at decommissioning would therefore not be the baseline assessed today. Grasslands, hedgerows, scrub, woodland belts, ponds and riparian habitats created as mitigation or BNG may by then have matured for decades and become occupied by protected or priority species. The Applicant may consequently be required to disturb or remove habitats of materially greater ecological value at decommissioning than existed at construction. BEPS' Chapter 8 identifies precisely this unresolved whole-life problem.

The same is true of the landscape. The Applicant relies heavily on new hedgerow and woodland planting to reduce its admitted significant visual effects over time. But if that planting matures sufficiently to perform the claimed screening function, it will itself alter the structure of the historic agricultural landscape. Open views, historic field relationships and the relationship between settlements, churches, lanes and farmland may be enclosed or severed. Removing the panels after 60 years would not recreate the landscape that existed before construction.

Norfolk Wildlife Trust puts the point particularly clearly. Its Relevant Representation considers this part of South Norfolk poorly suited to the proposed form of development and says that it would prefer to see the plan 'reshaped to suit the landscape', rather than the present approach which seeks to 'reshape the landscape to the scheme plan'. NWT describes the Scheme as extending across a 'huge swathe of land' in a landscape of ancient woodland, species-rich hedgerows, semi-natural road verges, barbastelle maternity populations, rare farmland birds and threatened flora—a landscape that is 'dense with nature'.

That criticism goes to the heart of reversibility. If the Scheme can only be accommodated by changing the structure and ecological function of the receiving landscape for six decades, the environmental effect is not temporary in any meaningful sense merely because photovoltaic panels are removable.

The soils assessment demonstrates the same problem. Chapter 15 expressly makes reversibility part of its significance methodology and treats temporary reversible effects as lower magnitude, while acknowledging that supposedly temporary development can produce permanent damage where disturbance causes lasting soil degradation. Chapter 20 itself records irreversible loss or downgrading of BMV agricultural land. That is direct evidence that 'temporary development' and 'reversible effect' are not synonymous.

The 60-year period is also not one continuous low-intensity operational phase. The Applicant anticipates complete replacement of the solar panels at least once and replacement of the BESS up to five times. Its Noise Chapter expressly records those replacement assumptions. The transport evidence indicates that complete panel replacement could itself last 12–24 months and involve substantial workforce and HGV movements, while repeated BESS replacement may require heavy lifting, hazardous-material movements, temporary compounds and renewed access across the Scheme.

Those are foreseeable construction-like interventions repeated across a landscape whose soils and habitats will by then have been altered for decades. The environmental consequences cannot be dismissed as routine maintenance.

More fundamentally, the Scheme is not wholly temporary at all.

The Applicant’s own description provides that the National Grid substation and Grid Connection Infrastructure are intended to remain after solar decommissioning. Underground cables may remain; where conductors are removed, ducts and joint bays may still remain. Foundations and other below-ground infrastructure may be cut off at approximately 1.2 metres rather than fully excavated. Permanent accesses and drainage associated with National Grid infrastructure may remain, while established hedgerows, woodland and mitigation planting may also be retained.

The proposed National Grid substation alone may occupy approximately six hectares and include substantial electrical structures, buildings, fencing, access, drainage, lighting and foundations. Up to four new pylons, potentially around 61 metres high, may also remain as part of the transmission system.

The post-decommissioning landscape is therefore not the pre-development landscape. It may consist of solar equipment removed but a new transmission substation, pylons, overhead-line alterations, permanent accesses, retained drainage, underground infrastructure and mature screening vegetation left behind. BEPS’ Chapter 4 correctly identifies that resulting landscape as potentially remaining significantly industrialised.

The agricultural end-state is equally uncertain. Retained foundations, ducts, joint bays, drainage, altered levels and permanent access may prevent complete restoration to agricultural use. The water environment may likewise remain altered where permanent drainage, impermeable areas or underground infrastructure continue to affect runoff, recharge or groundwater pathways.

There is also no adequate basis for assuming that the Applicant itself will exist, own the land or possess the financial capacity to undertake restoration in approximately 60 years’ time. Norfolk Wildlife Trust expressly raises this concern in its Relevant Representation. It asks who will pay for decommissioning, whether the obligation is legally vested in successor entities and what mechanism ensures delivery if Island Green Power no longer owns the Scheme at the end of its operational life.

That is not a peripheral commercial question. It determines whether the asserted reversibility on which parts of the environmental assessment depend is actually secured.

The distinction is therefore fundamental:

Removability of solar panels is not the same thing as reversibility of environmental change.

The Scheme would operate for a period approaching a human lifetime. During that period children born at commencement could reach retirement age before decommissioning. Trees and hedgerows planted as mitigation would mature; ecological communities would reorganise; farmland would undergo decades of changed management; repeated equipment replacement would occur; drainage and groundwater conditions could change; historic openness could be lost; and parts of the grid infrastructure would remain permanently.

The importance of that transformation is heightened by the character of the receiving environment. This is not an interchangeable industrial site. The evidence assembled throughout this Written Representation identifies an historically coherent South Norfolk agricultural landscape containing nationally important bat populations, ancient woodland, species-rich hedgerows, rare farmland birds, sensitive water systems, BMV soils, historic settlements, listed churches and long-established field and lane patterns. NWT's own evidence says that this landscape is 'dense with nature' and that the present Scheme seeks to reshape that landscape to fit the project.

That is the wrong direction of travel.

A nationally important historic and ecologically sensitive landscape should not be permanently reshaped to accommodate a privately promoted energy project whose principal generating equipment is itself justified as temporary, particularly where the Applicant has not demonstrated that this precise location, footprint and scale are necessary.

The correct conclusion is therefore:

A 60-year intervention capable of permanently altering soils, mature vegetation, ecological assemblages, hydrology and historic landscape structure cannot be dismissed as environmentally temporary merely because part of the electrical equipment is eventually removable. Where the mitigation needed to accommodate the Scheme itself permanently changes the place, and substantial grid infrastructure may remain indefinitely, 'temporary' is not an answer to residual harm.

20.10 Some harms are inherently unmitigable

Chapter 20 repeatedly treats mitigation as though it converts environmental harm into an acceptable residual effect. That is not always possible. Some resources cannot be recreated once lost, and some relationships cannot be restored by planting, management plans, recording or compensation.

Historic openness is one example. Historic England describes the Scheme area as an extensive agricultural landscape containing important rural churches, listed buildings and conservation areas focused on medieval settlement. It accepts that the Scheme will alter the settings of designated heritage assets and that residual harm is likely to remain after mitigation. Screening can reduce visibility of infrastructure, but it cannot necessarily restore the historic relationship between church, village, lane and open farmland. Indeed, dense new planting may itself destroy that openness.

Archaeology is still clearer. Historic England confirms that parts of the Order Limits remain unevaluated and that previously unknown remains potentially equivalent in significance to designated assets may yet be found. Archaeological excavation and recording may preserve information, but they do not preserve the archaeological resource itself. Where preservation in situ is possible, avoidance is qualitatively different from mitigation after destruction.

Ecology presents the same problem. Norfolk Wildlife Trust warns that habitat creation cannot automatically replace mature hedgerows and established

commuting routes, and that relatively small breaks may alter barbastelle movement and landscape permeability. It also identifies risks from lighting, disturbance, insufficient buffers and fragmentation. A new hedge planted elsewhere is not functionally equivalent to an established dark corridor linking maternity roosts, woodland and feeding habitat. Nor can new planting recreate ancient woodland setting, veteran-tree relationships or centuries-old soil and mycorrhizal systems.

The same applies to established Countryside Stewardship habitat. Land already managed for farmland birds and biodiversity is part of the existing ecological baseline. Replacing it with a different grassland type beneath solar panels is not restoration of the same function. Open-country habitat for skylark or lapwing cannot necessarily coexist with enclosure, panels, fencing and new woody planting.

Soils are similarly non-substitutable. Chapter 20 itself admits ‘irreversible loss or downgrading’ of BMV agricultural land. Once soil structure, drainage or agricultural grade has been permanently degraded, later landscaping does not recreate the lost agricultural resource.

Water provides the starkest example. If piling, trenching, HDD, contamination mobilisation or BESS-related pollution were to damage a private drinking-water supply or groundwater body, the consequence would not be retrospectively cured by an environmental management plan. The Environment Agency continues to require further work on groundwater, deep foundations, private and public water supplies, contamination, cabling and pollution prevention. Those are receptors where prevention is essential because remediation after harm may be technically difficult, prolonged or impossible.

The same principle applies to tranquillity and the lived rural landscape. Sixty years of industrial-scale change to views, traffic, noise, lighting and agricultural character cannot be compensated by saying that the panels will eventually be removed. A generation experiences the altered landscape once; that lost experience cannot be restored retrospectively.

The conclusion is therefore simple:

Mitigation may reduce an impact. It does not necessarily restore the resource lost.

Chapter 20 repeatedly treats ‘mitigated’ as though it means ‘environmentally restored’. It does not. Where the affected resource is historic openness, archaeological fabric, ancient ecological function, maternity-colony habitat, BMV soil, established stewardship habitat or vulnerable groundwater, the proper response is avoidance. If avoidance has not been exhausted, the residual effect has been understated.

20.11 Transport demonstrates why ‘not significant’ is not the same as acceptable or deliverable

Chapter 20 states that no significant residual transport effects are predicted during construction. That conclusion is directly undermined by the Relevant Representation of National Highways.

National Highways formally objects to the DCO. It requires further detail on the operation of SRN junctions, particularly the A47/A140 junction; more detailed cumulative assessment of construction traffic; further information on the Construction Worker Travel Plan; and stronger drafting of Requirement 15. It expressly states that its objection remains unless those matters are resolved.

That alone demonstrates the weakness of Chapter 20’s summary. The statutory highway authority responsible for the Strategic Road Network does not accept that the construction transport case is resolved.

BEPS Chapter 11 identifies the same problem at local level. Important elements of the routeing strategy remain disputed or undefined, including Hall Lane, Sites 7–10, passing places, vegetation clearance, highway boundaries, AIL routes, local access geometry and the physical works needed to deliver large transformers and other indivisible components.

AILs make the point particularly stark. An ordinary traffic impact may sometimes be reduced by changing timings or reducing daily movements. A transformer cannot be divided. If there is no route that is physically available, legally secured, structurally suitable and environmentally acceptable, that equipment cannot reach the Site.

This is not an EIA significance issue. It is a binary deliverability issue.

The transport case also demonstrates why mitigation cannot be considered in isolation. Rerouting HGVs away from narrow lanes may require new internal haul roads, additional land take, hedgerow removal, drainage works, culverts or watercourse crossings. Solving a highway objection may therefore create ecological, heritage, soil or hydrological effects elsewhere.

Chapter 20’s single line of ‘no significant residual effect’ conceals that unresolved design problem.

An EIA significance label cannot establish that the Scheme can physically be constructed.

Where both National Highways and the local highway evidence continue to identify material unresolved routeing, junction, cumulative and AIL issues, Chapter 20’s transport conclusion should be given little weight.

20.12 Aviation and major-infrastructure risk cannot disappear into ‘Other Environmental Matters’

Chapter 20 similarly states that there are no significant residual effects under the catch-all heading ‘Other Environmental Matters’. That conclusion conceals several unresolved safety and infrastructure interfaces whose consequences could be severe.

Norfolk Gliding Club maintains a specific aviation-safety objection to Site 1. It identifies four distinct risks: glint and glare, thermal updrafts, engine failure after take-off and bird strike. NGC states that the Applicant’s aviation consultant addressed only the first and that its modelling was based on simplified powered-aircraft circuit assumptions that do not reflect actual mixed glider and powered-aircraft operations at Tibenham.

NGC’s concern is not merely amenity. It says each of the four identified mechanisms has the potential to contribute to fatal accidents and argues that emergency-landing requirements and actual operational patterns around Tibenham have not been properly incorporated into the assessment. A conclusion of ‘no significant residual effect’ cannot substitute for resolution of an aviation-safety objection raised by the aerodrome operator.

The same defect applies to nationally significant utility infrastructure. National Gas Transmission confirms that its FM05 Yelverton–Stowmarket high-pressure feeder main and associated cathodic-protection equipment lie within or adjacent to the Order Limits. It requires protective provisions, unrestricted access for maintenance and emergency repair, and compliance with its engineering standards. Its objection remains unresolved pending agreement of those protections.

At Site 5, that pipeline lies close to proposed solar and 400 kV infrastructure. The concern is therefore not an abstract utility clash but the interaction between excavation, cable works, heavy traffic, foundations and an operational high-pressure gas transmission asset.

The Scheme also introduces major new electrical infrastructure: project substations, a National Grid substation, 400 kV equipment and a large BESS. Those works are concentrated in areas also containing private water supplies, aquifers, existing utilities and residential receptors. The Environment Agency continues to require further detail on BESS and substation pollution controls, groundwater, deep foundations and private and public water supplies.

The Applicant therefore has multiple interfaces between new high-voltage infrastructure, high-pressure gas infrastructure, aviation, groundwater, water supply and local communities. The consequences of failure may be low-probability, but that does not make them insignificant.

The proper conclusion is:

A single ‘no significant residual effect’ line cannot extinguish unresolved aviation, gas-transmission, BESS, 400 kV, groundwater and

utility risks whose consequences are potentially severe even where probability is low.

Chapter 20 compresses materially different safety regimes into one reassuring summary. That is not a substitute for demonstrating that each interface is understood, controlled and deliverable.

20.13 Chapter 20 imports uncertainty from outline and post-consent mitigation

Chapter 20 defines residual effects as those remaining after embedded and additional mitigation. That formulation is only meaningful if the mitigation relied upon is sufficiently defined, effective and secured.

In important respects, it is not.

The Applicant expressly defers Foundation Works Risk Assessments for the BESS, substations and other deep or piled structures until after consent, following ground investigation. It likewise proposes post-consent hydrogeological risk assessment for HDD or trenchless crossings where aquifers, watercourses or sensitive ecological receptors may be affected.

The Environment Agency's Relevant Representation shows that the problem is broader. It states that some permitted preliminary works capable of causing environmental harm are not presently covered by the CEMP, creating an 'un-mitigated risk of environmental harm'. It also objects to the phrase 'substantially in accordance with' because it weakens enforceability, seeks to be named as consultee on key requirements, and says further information is necessary before Flood Risk Activity Permit disapplication can be supported.

That is highly significant. The competent environmental regulator is not simply asking for drafting tidiness. It is identifying gaps between the mitigation assumed in the ES and the controls currently secured by the DCO.

The same pattern recurs elsewhere: final access and traffic arrangements remain subject to further agreement; ecological management and protection depend on later detailed plans; lighting controls are not fully fixed; drainage details remain outstanding; archaeological mitigation depends on further evaluation; replacement activity is deferred to future management; decommissioning details remain incomplete; and statutory undertaker protections are still being negotiated.

National Gas, for example, continues to object pending satisfactory protective provisions for the FM05 pipeline. National Highways requires stronger Requirement 15 and further traffic evidence. Historic England identifies further archaeological evaluation and cable-corridor work.

Those unresolved controls are precisely the measures on which many 'not significant' conclusions depend.

A residual effect is not established merely because the Applicant predicts that future mitigation will work. It is established only when the mitigation relied upon

is sufficiently defined to assess, capable of working in combination with other controls, and secured so that the assessed outcome cannot later be exceeded.

Where the significance conclusion depends on future investigation, future route selection, future detailed design or future agreement, Chapter 20 presents a predicted outcome as though it were an established residual effect.

That is premature. The uncertainty belongs in the significance conclusion; it cannot simply be removed from it by assuming successful post-consent mitigation.

20.14 Chapter 20 fails to capture cross-topic receptor harm

The greatest structural weakness is that Chapter 20 summarises effects by technical discipline rather than by receptor. That risks missing the actual environmental experience of the Scheme.

A resident does not experience separate landscape, noise, transport and lighting chapters. The resident experiences the combined consequence of changed views, construction traffic, operational noise, lighting, loss of tranquillity and long-term industrialisation of the surrounding countryside.

A medieval church does not experience heritage effects in isolation. Its setting may be changed simultaneously by panels, substations, new planting, construction traffic, noise, road works and the loss of open agricultural relationships. Historic England’s evidence confirms that setting includes the wider landscape and that residual and cumulative heritage harm remains relevant.

A barbastelle colony experiences the same Scheme through multiple pathways: hedgerow severance, lighting, noise, vehicle movement, woodland-edge change, altered foraging habitat and changes to aquatic prey. Norfolk Wildlife Trust specifically warns that a physically retained hedge may cease to function if it is illuminated, severed or repeatedly disturbed, and questions assumptions that small hedgerow gaps are harmless to landscape permeability.

A chalk stream or tributary likewise receives cumulative pathway effects from sediment, runoff, HDD, cable crossings, altered drainage, groundwater changes and accidental pollution. The Environment Agency’s RR treats those matters as interconnected, identifying outstanding issues across flood risk, water quality, groundwater, contamination, ecology and fisheries.

A private water supply may simultaneously be exposed to piling, trenching, contamination mobilisation, altered recharge, drainage changes and BESS or transformer pollution pathways. The EA’s earlier assessment identified 35 private supplies within 250 m whose precise locations or abstraction strata were not known.

The same interaction occurs in transport. A revised haul route may reduce traffic through one village but require additional hedge removal, culverting, soil

disturbance or works within a conservation area elsewhere. BEPS' Chapter 11 identifies exactly this transfer-of-harm problem.

Chapter 19 of this Written Representation therefore makes the correct methodological point: the receiving environment does not recognise the Applicant's chapter boundaries. Common receptors and systems experience the Scheme as a whole. Historic England and Norfolk Wildlife Trust likewise identify cumulative effects operating across the same historic landscapes and ecological networks.

The danger of Chapter 20's structure is obvious. Each individual effect can be classified as minor or not significant within its own methodology while the receptor experiences a materially greater combined burden.

That is especially serious for East Pye because the Scheme is dispersed across a large, interconnected rural landscape. Its effects accumulate spatially, temporally and functionally.

Chapter 20 cannot be a reliable 'summary' where the actual combined burden on the receptor has never been assessed as a whole.

The decision-maker must therefore look beyond the significance labels in Tables 20.1–20.4 and ask a different question: what will happen to the person, place, species, waterbody or heritage asset when all of East Pye's effects are experienced together? On the evidence of the RRs, that question remains inadequately answered.

20.15 External cumulative effects are materially understated

Chapter 20 materially understates the external cumulative effects of East Pye because it does not assess the Scheme against the actual development pressure already identified by the statutory consultees.

South Norfolk Council stated that the cumulative effects of East Pye with Tasway Energy Park, Norwich to Tilbury and other consented and proposed energy developments had not been adequately explored. Norfolk County Council likewise identified an exceptional concentration of energy infrastructure, including Tasway, The Droves, High Grove, Norwich to Tilbury and Hornsea Project Three-related grid works, and raised concern about the clustered effects on Norfolk's environment and communities.

The LLFA was equally clear. It expressly supported inclusion of proposed but unconsented solar and BESS schemes because of the number of similar developments in the area and the similarity of their programmes. Its concern was not theoretical: concurrent construction may affect the same downstream drainage systems and increase flood risk over a much wider area.

Chapter 20 nevertheless excludes cumulative construction and decommissioning landscape effects because the timing of other schemes is said to be unclear. That is the wrong response to uncertainty.

Uncertainty over whether construction programmes overlap is not evidence of no cumulative effect. It is a scenario requiring assessment.

Tasway illustrates the problem. It is geographically and functionally relevant because it potentially affects the same Great Moulton/Tivetshall energy-infrastructure area, the same rural landscape, the same highway network, overlapping ecological systems, heritage and settlement receptors, and the area around Tibenham Airfield. South Norfolk Council and Norfolk County Council both identified it as requiring cumulative consideration.

Its uncertain future does not justify excluding it. The Applicant itself relies upon uncertain future elements of East Pye, most obviously the BESS, despite its different grid status. BEPS Chapter 19 therefore identifies a clear inconsistency: uncertainty is tolerated when the Applicant wishes to claim East Pye's future benefits, but relied upon to exclude another scheme from the cumulative assessment.

Norwich to Tilbury is equally important. It is not a point development but a major linear electricity-infrastructure project affecting the same wider rural landscape. Its potential effects include additional pylons and grid infrastructure, further visual industrialisation, effects on heritage setting, vegetation and hedgerow loss, ecological fragmentation and construction traffic on parts of the same network. The relevant question is not whether Norwich to Tilbury is a different type of project. It is whether the same receptor experiences both.

The same applies to other solar and BESS projects. Their cumulative effects extend beyond intervisibility. Repeated schemes can remove agricultural land from production, fragment bat and bird habitat, increase demand for substations and transmission infrastructure, add noise and lighting, compete for construction labour and accommodation, and place further pressure on shared rural roads and drainage networks.

Housing and other infrastructure must also form part of the real future baseline where they affect common receptors. A settlement may simultaneously experience East Pye, strategic housing growth, new grid infrastructure and other energy development. The consequence may be progressive enclosure, increased traffic, altered drainage and permanent loss of rural setting even if no single project is decisive in isolation. BEPS' cumulative analysis correctly identifies that significance depends on whether developments affect the same road, watercourse, ecological network, heritage setting or settlement—not whether they appear as separate entries in a project schedule.

Historic England has separately identified cumulative interaction with Tasway as requiring consideration in relation to heritage. The significance lies in progressive change to the same historic rural landscape, not merely simultaneous visibility of two developments. The cumulative erosion of setting may be materially greater than the Applicant's asset-by-asset conclusions suggest.

Transport provides another direct contradiction. National Highways remains dissatisfied with the cumulative construction-traffic assessment and requires greater granularity at the strategic-network level. Its objection identifies unresolved effects at the A47/A140 junction and requires further assessment before its concerns can be removed. Chapter 20 cannot credibly describe

cumulative transport effects as negligible while the strategic highway authority says the cumulative evidence is insufficient.

South Norfolk Council also identified a major cumulative workforce issue. Its consultation response recorded that only 73 of the Applicant's then-estimated 1,006 direct and indirect jobs were expected to be taken by people living in South Norfolk, while around half the construction workforce was expected to come from outside the region. It specifically raised pressure on temporary accommodation when East Pye is considered with offshore-wind infrastructure, Hornsea Project Three, National Highways schemes, Norwich to Tilbury and other solar farms.

The cumulative assessment must therefore deal with competition as well as benefit: competition for skilled labour, accommodation, road capacity, emergency services and environmental capacity.

Water effects make the same point. The LLFA identifies Saxlingham Nethergate, Woodton, Long Stratton and Hempnall as communities with existing or recent flood problems and warns that several Scheme areas lie upstream of those receptors. In that context, cumulative drainage effects cannot be dismissed by assessing each solar or BESS scheme separately.

The cumulative question is ultimately simple. East Pye will not be constructed or operated in an empty landscape. It will exist alongside other solar projects, BESS compounds, electricity-transmission infrastructure, housing growth, road schemes and other NSIPs affecting many of the same receptors.

Chapter 20 does not adequately assess that reality.

The correct cumulative test is not whether each neighbouring project is certain to proceed on precisely the same programme. It is whether reasonably foreseeable development could combine with East Pye to intensify harm to the same landscapes, settlements, roads, heritage assets, ecological networks, labour markets and catchments. On the evidence of South Norfolk Council, Norfolk County Council, the LLFA, Historic England and National Highways, that possibility is real and materially under-assessed.

20.16 The beneficial effects are presented more confidently than the adverse effects

Chapter 20 applies materially different levels of confidence to adverse and beneficial effects.

Adverse effects are repeatedly reduced on the basis that mitigation will work, planting will mature, effects are temporary or reversible, detailed controls will be agreed later, or impacts fall below a chosen significance threshold. Benefits, by contrast, are credited at face value despite depending upon equally uncertain assumptions about habitat establishment, employment, skills, grid operation, carbon displacement and long-term project delivery.

The imbalance is visible in Chapter 20 itself. Construction employment in South Norfolk is classified as Major Beneficial; skills are Moderate Beneficial; numerous ecological receptors are Moderate Beneficial; the operational water effect is Major Beneficial; and the climate effect is Beneficial.

Those conclusions are far more certain than the underlying evidence warrants.

The socio-economic case is the clearest example. Chapter 14 assigns a Major Beneficial construction effect to workplace-based employment in South Norfolk and a Moderate Beneficial significant effect to skills. Yet the same table records resident-based employment effects in South Norfolk, Norfolk and the East of England as **Negligible and Not Significant**. That distinction is critical. Jobs physically associated with a project are not the same thing as jobs actually accruing to local residents.

South Norfolk Council's consultation evidence reinforces the point. Of the Applicant's then-estimated 1,006 direct and indirect jobs, only 73 were expected to be taken by South Norfolk residents, while 501 were expected to be filled from outside the region. The Council therefore raised concern about accommodation and cumulative labour effects rather than treating the headline employment number as an unqualified local benefit.

BEPS Chapter 14 identifies the same methodological weakness. The employment case depends on headline workforce figures and assumptions about displacement, leakage and additionality that are not transparently demonstrated. The claimed skills benefit is not backed by binding local-employment targets, quantified apprenticeship commitments or enforceable local supply-chain expenditure.

The result is revealing: uncertainty about how many local people actually benefit does not prevent a Major or Moderate Beneficial classification, while comparatively modest adverse effects on accommodation or tourism are classified as Minor and Not Significant.

Tourism is treated in the same way. South Norfolk Council identifies a substantial rural visitor economy based on historic towns, Saxon and Norman churches, the Waveney Valley, Boudicca Way, walking and cycling routes, accommodation and heritage attractions, and says East Pye has not adequately assessed direct, indirect or cumulative effects on that offer. Chapter 20 nevertheless reduces tourism effects to Minor Adverse and Not Significant while assigning significant weight to employment and skills benefits.

The ecological case is even more asymmetric. Chapter 20 awards repeated Moderate Beneficial effects to bats, skylark, rivers, woodland, hedgerows, ponds and other receptors because of future habitat creation and enhancement. Yet, as Chapter 8 of this Written Representation demonstrates, the baseline remains incomplete, the Norfolk Barbastelle Study Group seeks further survey, no full botanical survey has been undertaken, and Norfolk Wildlife Trust considers further information and design refinement necessary before ecological acceptability can be established.

The Applicant therefore discounts present ecological harm because future mitigation is expected to succeed, while simultaneously crediting that same future mitigation as a significant benefit.

The water case follows the same pattern. Chapter 20 assigns a Major Beneficial operational effect because agricultural fertiliser and chemical use will reduce. Yet the LLFA continues to identify incomplete drainage information, underestimated impermeable area, unresolved infiltration assumptions and existing flood-sensitive communities downstream of Scheme areas. The benefit is treated as established; the risk remains subject to future work.

Climate benefit is likewise not as secure as Chapter 20 suggests. BEPS Chapter 6 identifies unresolved questions concerning whole-life GHG accounting, energisation, curtailment, BESS delivery, replacement cycles and the actual quantity of useful exported electricity. It also challenges the fragmentation of cumulative climate effects across water, soil, ecological and infrastructure assessments. A generic assumption that the Scheme displaces more carbon-intensive generation cannot substitute for a robust calculation of what East Pye will actually export over its life and under what grid conditions.

The asymmetry is particularly stark where the BESS is concerned. The Applicant relies on the BESS as part of the integrated project case despite its unresolved connection position, yet uncertainty about other projects such as Tasway is used to exclude them from cumulative assessment. BEPS Chapter 19 rightly describes this as selective treatment of uncertainty.

The same evidential standard should apply in both directions.

If uncertainty about mitigation, programme, future behaviour or delivery is sufficient to reduce confidence in an adverse effect, equivalent uncertainty must also reduce confidence in a claimed benefit.

Chapter 20 does not do that.

The Applicant applies confidence asymmetrically: adverse effects are discounted because mitigation may work, while benefits are credited despite depending on future habitat establishment, workforce behaviour, skills delivery, grid utilisation, BESS availability, carbon displacement and long-term management.

That imbalance matters directly to the planning balance. The harms identified throughout this Written Representation are immediate, site-specific and in several cases admitted by the Applicant: significant landscape change, irreversible BMV loss, ecological fragmentation, heritage harm and extensive construction disturbance. Many of the claimed benefits, by contrast, are prospective and conditional.

They should not be given greater evidential certainty merely because they appear in the beneficial column of Chapter 20.

The proper approach is to apply the same test to both sides of the balance: **is the effect demonstrated, deliverable and secured?** Where the answer is no, the claimed benefit should be given correspondingly limited weight. The

same evidential standard should therefore be applied to asserted renewable-energy, storage, ecological, water and socio-economic benefits as is applied to adverse effects: future benefit should not be treated as certain where its delivery remains conditional, unquantified or unsecured.

20.17 Residual harms must be weighed against the benefit of this Scheme, not generic renewable-energy need

BEPS does not dispute the national need for renewable generation. The relevant question is narrower and more important: whether the Applicant has demonstrated a need for this particular 500 MW transmission-connected Scheme, at this particular location, in this particular form and scale, sufficient to justify the environmental harm identified throughout this Written Representation.

It has not.

The Applicant's own alternatives case treats 500 MW as the starting requirement rather than an outcome of environmental optimisation. Chapter 5 records that the land search was directed towards finding sufficient land to accommodate the preferred 500 MW project, and alternatives were then rejected where they could not reproduce that capacity. Smaller schemes, alternative configurations and options that would deliver less than 500 MW were not meaningfully tested against the environmental advantages they might provide.

That sequencing matters. It means that the question the Applicant effectively asked was how to fit 500 MW into the assembled land package, not what scale of development this landscape could sustainably accommodate.

The need case does not cure that defect. BEPS' Chapter 5 records no identified South Norfolk-specific or T7-specific deficit that East Pye is required to fill. The Applicant relies on national renewable-energy need at a high level, but has not demonstrated that refusal of East Pye would create a quantified shortfall in the T7 pathway or prevent regional solar objectives from being met. BEPS' evidence identifies T7 as already heavily subscribed for solar, particularly transmission-connected solar, and records a wider pipeline materially above the relevant regional planning figures.

The central question remains unanswered:

What regional deficit would arise if East Pye were not built?

The Applicant has not identified one. It has not shown that T7 would fail to meet its pathway, that existing Gate 2 and pipeline projects would be insufficient after reasonable attrition, or that an additional 500 MW must therefore be delivered in this part of South Norfolk.

Nor does Gate 2 status establish that necessity. BEPS' evidence distinguishes queue or connection status from locational planning need. The regional solar pipeline is already substantial, and the Applicant has not demonstrated that its

connection position amounts to evidence that this particular project is environmentally necessary in this location.

The BESS does not materially strengthen that case. The Applicant relies on storage benefits when presenting the Scheme as an integrated energy project, but the BESS presently has Gate 1 rather than Gate 2 status. Gate 1 does not establish that this BESS, at this location and connection point, satisfies NESO's locational, capacity or duration requirements for future storage. Nor has the Applicant demonstrated that this particular short-duration BESS is required to meet an identified regional storage requirement. There therefore remains a real possibility of the solar generation proceeding without the full storage benefits relied upon in the Applicant's integrated project case, or of the BESS being delayed, reduced or omitted.

That distinction matters directly to Chapter 20. General national policy support for electricity storage is not evidence of specific system need for this BESS. Claimed climate, flexibility and system benefits should therefore be weighted according to what is actually demonstrated and secured for the proposed storage component, rather than assuming that every potential BESS benefit will necessarily be delivered.

The alternatives evidence is equally important. The Scheme remains dispersed across ten Sites and extensive cable corridors notwithstanding exceptional concentrations of environmental constraints. BEPS' Chapter 5 concludes that the project was defined first and the environmental consequences managed afterwards. The Applicant did not demonstrate that the most harmful Sites could not be deleted, that the Scheme could not be materially reduced, that a more compact development closer to the point of connection was impossible, or that comparable renewable capacity could not be delivered through less constrained schemes or regions.

The Applicant itself says that its design principles seek to achieve its required generation and storage levels while responding to local context. That formulation reveals the underlying hierarchy: the generation target is treated as fixed and the landscape is required to accommodate it.

That is precisely backwards where the environmental consequences are this severe.

National need for solar cannot answer why development remains on BMV land, close to internationally and nationally protected species networks, within sensitive historic settings, across vulnerable water catchments and along roads which remain the subject of highway objection. Nor can generic renewable-energy need demonstrate why 500 MW is the minimum necessary capacity rather than the Applicant's preferred commercial project.

The proper planning balance must therefore compare the actual environmental cost of East Pye with the actual, secured and location-specific public benefit of East Pye.

It must not compare those harms with the national need for renewable energy in the abstract.

The question is not whether 500 MW can be mitigated into this landscape. It is why 500 MW must be imposed on this landscape at all.

On the evidence before the Examination, that case has not been made.

20.18 The proportionality failure

The planning balance fails because the environmental price of East Pye is concrete, extensive and in several respects irreversible, while the asserted need for this location and scale remains unproven.

The Applicant's own Chapter 20 records significant landscape effects across large parts of the Scheme, including effects remaining at Year 15. It records long-term Moderate and Major adverse effects on landscape character and visual receptors, including Site 1, Sites 7 and 8, promoted routes, PRoWs and residential receptors.

The Applicant also expressly admits long-term **'irreversible loss or downgrading'** of BMV agricultural land. BEPS' Chapter 5 records approximately 829.1 hectares of BMV land within the solar sites, approximately 78.7% of that land area.

The historic-environment consequences are similarly substantial. The Scheme would alter an agricultural landscape containing medieval settlement patterns, Grade I and Grade II* churches, listed farmsteads, conservation areas and historic lanes and field relationships. Historic England continues to identify residual heritage harm and incomplete archaeological evaluation. The fact that Chapter 20 ultimately labels those effects 'not significant' does not make the historic landscape unchanged.

The ecology evidence is still more serious. The Applicant's own surveys identify a nationally important bat assemblage and a landscape used by multiple barbastelle maternity colonies. Norfolk Wildlife Trust continues to require substantial redesign and further information, including on bat connectivity, botany, ancient woodland, lowland fen, verges and farmland birds. The Norfolk Barbastelle Study Group considers the maternity-colony network insufficiently surveyed. No full botanical survey has been undertaken. Those are not minor residual uncertainties; they go to whether the baseline and mitigation hierarchy are complete at all.

Water and groundwater risks likewise remain unresolved. The Environment Agency continues to require further work on foundations, groundwater pathways, cabling, private and public water supplies, contamination and pollution control. Chapter 20 nevertheless records no significant construction water effect and a Major Beneficial operational water effect.

Transport and aviation remain unresolved gateway issues. National Highways continues to require further cumulative and junction evidence, while Norfolk Gliding Club maintains a substantive safety objection concerning Tibenham operations. The ExA itself has required Statements of Common Ground with National Highways, the Environment Agency, Historic England, Natural England, Norfolk Wildlife Trust, Norfolk County Council, National Gas and the aviation parties because material issues remain outstanding.

The whole-life effects are also understated. East Pye is proposed for up to 60 years and includes foreseeable panel and BESS replacement, renewed traffic and construction activity, and permanent or potentially permanent grid infrastructure. The environment would therefore experience not one short construction episode but initial construction, decades of operation, periodic replacement and eventual decommissioning.

External cumulative pressure compounds all of this. Tasway, Norwich to Tilbury, other solar and BESS proposals, strategic housing and infrastructure potentially affect the same roads, landscapes, heritage settings, ecological networks, labour market and catchments. Yet Chapter 20 excludes some cumulative effects because programme overlap is uncertain.

Against those harms, the Applicant has not demonstrated why South Norfolk must accommodate this additional 500 MW scheme or why its dispersed ten-Site form must be retained.

That is the proportionality failure.

Norfolk Wildlife Trust expresses the design problem with particular clarity. It considers this landscape poorly suited to the development proposed and says that the plan should be reshaped to suit the landscape, rather than the landscape reshaped to suit the Scheme. BEPS' WR records that NWT continues to seek deletion of Site 3, larger buffers, protection of dark corridors and verges, additional botanical and hydrogeological work and wider design refinement before ecological acceptability can be established.

Chapter 20 demonstrates the reverse approach.

The fundamental 500 MW project remains. The ten-Site geography remains. The extensive cable network remains. The receiving environment is then progressively screened, planted, buffered, managed, routed, drained and engineered around it.

The Scheme retains its fundamental scale and dispersed form, while the receiving environment is progressively screened, planted, buffered, managed, rerouted and re-engineered around it.

That is not evidence that environmental constraints have shaped the project. It is evidence that the landscape is being required to absorb the project.

The distinction is decisive because several of the resulting harms cannot be restored. BMV soils may be irreversibly downgraded. Archaeological remains cannot be replaced after destruction. Ancient woodland relationships and mature bat corridors cannot be recreated on demand. Historic openness cannot be restored simply by removing panels after six decades if mitigation woodland, altered field relationships and permanent grid infrastructure remain. Damage to vulnerable groundwater or private supplies, if it occurs, may be difficult or impossible to reverse.

Nor has the Applicant demonstrated an equivalent locational necessity on the benefits side of the balance. There is national need for renewable generation,

but no demonstrated need that requires these particular harms to be accepted here.

The proportionality balance is therefore not between ‘environmental harm’ and ‘net zero’. It is between the specific environmental harm of East Pye and the specific additional public benefit of East Pye compared with less harmful alternatives and the substantial existing regional pipeline.

On that test, the Scheme has not been justified.

20.19 The proper residual-effects conclusion

Chapter 20 should not be accepted as an accurate statement of the environmental balance.

First, the Applicant’s own summary admits widespread, long-term and sometimes irreversible harm. Significant landscape and visual effects remain after mitigation and beyond Year 15, while BMV agricultural land is expressly subject to irreversible loss or downgrading.

Second, the repeated findings of ‘no significant residual effect’ are not reliable where the underlying evidence remains incomplete, disputed or dependent upon later mitigation. The continuing positions of the Environment Agency, Natural England, Historic England, National Highways, Norfolk Wildlife Trust, Norfolk County Council, National Gas and aviation interests demonstrate that material environmental and deliverability issues remain unresolved. The ExA’s requirement for Statements of Common Ground with those bodies confirms that these matters remain live issues for Examination.

Third, the Applicant’s own surveys frequently establish a receiving environment more sensitive than its residual conclusions acknowledge: nationally important bats, multiple barbastelle maternity-colony networks, ancient woodland, BMV soils, sensitive aquifers and watercourses, historic settlements and churches, and extensive significant landscape effects.

Fourth, Chapter 20 divides that environment into technical topics when the receptors themselves are interconnected. Landscape, heritage, ecology, soils, water, roads and communities form one receiving environment. Harm transferred from one discipline to another is still harm.

Fifth, the Applicant has not demonstrated a locational or scale-specific public benefit sufficient to explain why these particular environmental consequences should be accepted. National policy establishes substantial need for renewable generation in general; the narrower issue is the weight properly attributable to this Scheme. The Applicant has not established that refusal of East Pye would create a regional solar shortfall, that this particular 500 MW transmission-connected capacity is necessary within T7, that the BESS presently satisfies the corresponding Gate 2 strategic-alignment test, or that substantially less harmful alternatives could not provide renewable generation without the same concentration of environmental harm.

The result is that Chapter 20 understates the true residual effects before the planning balance is even undertaken.

East Pye is described as temporary, but the environmental transformation required to accommodate it would not be temporary. The Scheme risks replacing an ‘ancient countryside’ agricultural landscape and functioning ecological network with a newly engineered landscape of panels, substations, fencing, access infrastructure, drainage systems, screening woodland and permanent grid infrastructure. Some of the resources affected cannot be recreated on a meaningful human timescale. Others cannot be recreated at all.

Norfolk Wildlife Trust’s criticism therefore captures the central defect: the project is reshaping the landscape to accommodate the Scheme rather than reshaping the Scheme to respect the ancient, nature-dense landscape. That is particularly difficult to justify where the underlying project is presented as temporary and the Applicant has not demonstrated that its full 500 MW scale must be delivered here.

Chapter 20 therefore understates rather than summarises the true residual effects of the Scheme. Its tables should not be treated as the environmental balance. The evidence across the ES, the statutory and specialist representations and this Written Representation establishes a materially greater pattern of long-term, cumulative, interacting and in some cases irreversible harm. The planning balance cannot compare the Scheme’s specific harms with the entirety of national renewable-energy policy. The harms are those caused by East Pye; the countervailing benefit must therefore be the benefit demonstrated for East Pye. No identified T7 solar deficit requiring this 500 MW Scheme has been established, and the solar element’s Gate 2 position should not be treated as equivalent to a planning finding that this particular development, at this location and scale, is necessary; still less does it establish equivalent strategic need for the Gate 1 BESS.

Where that harm has not first been avoided, and the demonstrated Scheme-specific benefits are insufficient to justify the resulting residual effects, BEPS submits that the proper conclusion is refusal of development consent.

20.20 Compulsory acquisition cannot be justified by optionality

The deficiencies identified in Chapters 1, 4, 5 and 20 have a direct consequence for the Applicant’s compulsory-acquisition case.

Section 122 of the Planning Act 2008 requires the Secretary of State to be satisfied both that the land sought is required for the development, or to facilitate or be incidental to it, and that there is a compelling case in the public interest for compulsory acquisition. The Applicant’s own Statement of Reasons recognises those statutory tests and asserts that the extensive powers sought are necessary and proportionate.

BEPS submits that neither proposition has yet been demonstrated.

The first difficulty is need. The Applicant relies on national renewable-energy policy but has not demonstrated a specific locational necessity for East Pye in this part of South Norfolk. BEPS' need evidence shows that the T7 solar pipeline is already substantial, that Gate 2 status does not itself establish an unmet regional deficit, that the associated BESS presently remains at Gate 1 rather than Gate 2, and that the Applicant's case has relied in part on maintaining project 'optionality' and allowing for future 'attrition' within the wider pipeline.

Those concepts may have a role in national energy-system planning. They are much harder to reconcile with compulsory acquisition of identifiable private land.

Compulsory powers are not a mechanism for reserving land so that a privately promoted project can remain one of several possible future options. Nor should private rights be overridden merely so that additional generation is available if other projects later fall away. Where the Applicant cannot demonstrate that East Pye itself is required in this location, the public-interest justification for coercive acquisition is materially weakened.

The distinction is fundamental:

System optionality is not land necessity, and possible future attrition elsewhere is not proof that this land must be compulsorily acquired now.

The second difficulty is more immediate. It is not yet clear that all of the land and rights sought would actually be required even if East Pye proceeded.

The proposed National Grid connection is the clearest example. The DCO seeks compulsory powers for a specific Site 1B transmission solution comprising a National Grid substation, access, landscaping, drainage, temporary compounds, overhead-line works, cable infrastructure and pylon-related land and rights. Yet NGET's Relevant Representation indicates that the final connection solution remains subject to wider regulatory, technical and commercial considerations; that other Gate 2 outcomes may alter its size, design or location; that a proposed replacement connection agreement is not expected to require the Applicant to provide the land and consent in the manner previously assumed; and that granting the DCO would not itself oblige NGET to use the proposed Site 1B substation.

That creates an obvious section 122 problem. The Applicant seeks compulsory powers over land for infrastructure which the future network owner has not confirmed it will construct or use.

BEPS' Chapter 4 correctly identifies the consequence: if the final NGET solution changes, land may have been compulsorily acquired for a substation, cables, access, landscaping, drainage, pylon works or construction areas which are no longer required.

The possibility that land might prove useful to some future connection solution is not the statutory test. The Applicant must demonstrate that the land or rights sought are required for the development for which the Order is being made.

The same concern applies to transport. The Applicant's final construction-access strategy is not fixed. Important local routes, AIL arrangements, passing places, visibility splays, highway works and the access strategy for Sites 7–10 remain unresolved or subject to further agreement. BEPS Chapter 11 identifies potential reliance on revised internal haul routes and other future route changes in response to highway-authority concerns. Those changes may alter which land is required for access, highway modification, vegetation clearance, drainage, temporary possession and associated rights.

A compulsory-acquisition schedule based on an unresolved transport strategy therefore risks acquiring land first and determining later whether that land is actually needed.

That reverses the statutory logic.

The Applicant must first establish the development and access solution with sufficient certainty; only then can the Secretary of State determine whether each compulsory interest is necessary and proportionate.

The problem is compounded by the Scheme's broad design flexibility. East Pye may potentially proceed with different solar configurations, delayed or reduced BESS, altered connection infrastructure, different construction routing and later design refinement. Yet the Book of Reference and Land Plans seek powers now over the full land package necessary to preserve those options.

That may be commercially convenient. It is not necessarily a compelling case in the public interest.

Compulsory acquisition is an exceptional interference with private property rights. Compensation does not answer the antecedent question of necessity. The Applicant's own Statement of Reasons claims that only land for which lesser powers would be insufficient has been included for permanent acquisition. That assertion must be tested plot by plot against the Scheme that can actually be shown to be deliverable, not against every configuration the Applicant wishes to keep available.

This is especially important where the consequences extend beyond financial loss. The powers affect agricultural holdings, BMV land, farming operations, access, utilities and private rights in a landscape where the public benefit of this particular project remains contested. BEPS' existing Relevant Representation therefore correctly identifies the danger of extensive coercive acquisition for one of a number of potentially interchangeable projects promoted principally on generic national need and optionality rather than demonstrated locational necessity.

The connection uncertainty makes the position still more serious. The Applicant's own WR analysis concludes that land and powers unnecessary to the final confirmed NGET solution should be removed from the Order, that cable works serving the substation should not commence until the connection point is fixed,

and that compulsory acquisition for Site 1B transmission works should not be exercised until NGET has confirmed the solution.

BEPS submits that equivalent discipline is required across the Scheme.

Before any compulsory-acquisition powers are recommended, the Applicant should be required to demonstrate, plot by plot:

- the precise authorised work for which the land or right is required;
- why that work is necessary to the confirmed Scheme rather than merely one possible implementation scenario;
- especially why acquisition of freehold rather than a lesser right or temporary possession is necessary;
- that the final National Grid connection and access strategy actually require that land;
- and what mechanism removes or prevents exercise of the power if the final design no longer requires it.
- Where those matters cannot be demonstrated, the relevant land or rights should be deleted from the Order.

The relationship with Chapter 20 is direct. The Applicant asks the Secretary of State to accept residual environmental harm because the Scheme is said to deliver substantial public benefits. But it simultaneously seeks compulsory powers before some of the infrastructure creating both those harms and those land requirements has been fixed. That is not a minor procedural defect. It goes to proportionality.

The State should not authorise compulsory acquisition of private land for optional infrastructure serving a project whose locational necessity is itself unproven, whose final National Grid connection is not confirmed, and whose construction access strategy remains materially unresolved.

Where East Pye is being retained as additional system ‘optionality’ against possible future ‘attrition’, the appropriate risk bearer is the promoter, not the affected landowner. Private property should not be compulsorily acquired merely to preserve commercial or system options that may never be exercised.

Unless the Applicant can demonstrate both that East Pye is sufficiently necessary in this location to establish a compelling public-interest case and that every interest sought is genuinely required for a confirmed and deliverable version of the Scheme, the compulsory-acquisition powers should be refused or materially reduced.

20.21 Remedies sought

The principal remedy sought is refusal. Chapter 20 cannot safely be treated as the final environmental balance because many of the conclusions it presents as settled remain dependent on incomplete baselines, disputed significance

judgments, outline mitigation, future investigation and unresolved statutory-consultee concerns.

That is not a rhetorical criticism. Norfolk Wildlife Trust states expressly that, notwithstanding the Applicant's conclusion of no significant adverse residual ecological effects, further information and design refinement are required before the Project can be regarded as ecologically and environmentally acceptable. It identifies unresolved issues concerning nationally important bats, habitat connectivity, roadside verges, ancient woodland, lowland fen, lighting and HDD locations, and warns that habitat creation cannot automatically replace established commuting routes and mature landscape features. The Environment Agency likewise continues to identify unresolved matters concerning fish, European eel, aquatic invertebrates, riparian habitats, groundwater, contamination, construction methods and the enforceability of mitigation, including measures relied upon to support claimed ecological and water benefits. National Highways maintains that the strategic junction, cumulative traffic, worker-travel and AIL cases are not yet adequately demonstrated. These positions are incompatible with treating Chapter 20's repeated 'no significant residual effect' conclusions as an established evidential endpoint.

The Examining Authority should therefore require a single revised residual-effects assessment before any recommendation in favour of consent is made. It should not be another table reproducing the conclusions of Chapters 6–18. It should be an audit of whether those conclusions remain defensible when the evidence before the Examination is considered as a whole.

That revised assessment should, at minimum:

- identify every residual-effect conclusion that depends upon outline, future or post-consent mitigation, investigation or design, and identify precisely what measure is relied upon, where it is secured in the DCO, when it will be delivered, the performance standard required, who is responsible for it, how effectiveness will be monitored and what happens if it fails;
- reconcile every 'no significant residual effect' conclusion in Chapter 20 with outstanding objections, qualifications or requests for further information from the Environment Agency, Natural England, Historic England, Norfolk Wildlife Trust, Norfolk County Council, National Highways, National Gas and relevant aviation interests, rather than assuming that an ES significance judgment disposes of a continuing regulatory or deliverability objection;
- reassess ecology against the Applicant's own finding of a nationally important bat assemblage and the evidence that the Scheme occupies a connected landscape of hedgerows, woodland, watercourses, dark corridors and multiple barbastelle maternity-colony territories, rather than treating habitat parcels independently; it must also address the absence of a full botanical baseline and the continuing specialist evidence that further barbastelle survey is required before functional use of the landscape is adequately understood;
- distinguish BNG or habitat-unit uplift from ecological functionality and identify expressly where new grassland, planting or habitat creation cannot be shown to provide temporal, spatial and functional equivalence for ancient woodland relationships, mature hedgerows, dark bat corridors, stewardship bird habitat, rare botanical assemblages or established aquatic networks;

- reassess the water-environment conclusions against the Environment Agency's outstanding concerns regarding groundwater, private and public abstractions, piling and foundation pathways, underground cables, pollution prevention, BESS and substation runoff, fisheries, aquatic invertebrates and riparian mitigation. The Agency's evidence shows that some claimed improvements are not yet consistently secured in the management documents relied upon to deliver them.
- identify expressly every effect which is irreversible, non-restorable or incapable of equivalent compensation, including irreversible BMV loss or downgrading, archaeological destruction, degradation of established ecological function, loss of historic openness, permanent or retained grid infrastructure and any groundwater or private-supply impact for which restoration cannot be assumed;
- reassess the Scheme over its full life rather than treating construction, operation and decommissioning as isolated phases. That assessment must include solar-panel replacement, repeated BESS replacement, renewed heavy traffic and compounds, cumulative disturbance to soils and habitats, the ecological status of mitigation habitat at decommissioning, retained infrastructure and the actual secured post-decommissioning end-state;
- assess combined effects at receptor level. Residents, heritage assets, bat colonies, watercourses, private water supplies and PRoW users experience one Scheme, not separate ES chapters. The revised assessment must therefore identify where individually 'minor' or 'not significant' effects combine through noise, lighting, traffic, visual change, hydrology, fragmentation, pollution and loss of tranquillity to produce a materially greater overall effect;
- undertake a robust cumulative reassessment with Tasway, Norwich to Tilbury, other relevant solar and BESS proposals, housing and infrastructure development wherever they share landscapes, roads, ecological networks, catchments, heritage receptors, workforce or accommodation markets. The LLFA itself supported the inclusion of proposed but unconsented schemes because of the number of similar solar and BESS projects and the potential for overlapping programmes and downstream flood effects. Uncertain timing should therefore be tested through reasonable scenarios, not used as a reason to exclude cumulative effects;
- and, critically, distinguish genuinely unavoidable residual effects from harms that remain only because the Applicant has retained its preferred scale, Sites, routes or infrastructure. For each material adverse effect, the Applicant should identify what avoidance option was considered, whether deletion, relocation, rerouting or reduction was technically possible, why it was rejected, and why mitigation was preferred over avoidance.

That final requirement is essential. Chapter 20 should not be allowed to label harm 'residual' until the Applicant has demonstrated that it really is residual. Where a Site can be deleted, an access route moved, BMV land avoided, development pulled away from ancient woodland or maternity-colony habitat, infrastructure relocated, or the Scheme reduced in scale, the remaining harm is not yet unavoidable.

The same principle must apply to uncertainty. Where the evidence necessary to establish significance is still outstanding, the answer cannot be to assume that future work will validate the Applicant's existing conclusion. The Environment

Agency’s evidence illustrates the danger directly: important ecological and water conclusions depend on controls that remain incomplete or inconsistently secured. NWT likewise says the Project still requires further information and design refinement before ecological acceptability can be established. The proper consequence of unresolved evidence is therefore reduced confidence in the conclusion, not increased reliance on the Applicant’s prediction.

The Examining Authority should also require the revised residual-effects assessment to identify the planning consequence of each unresolved issue. Some matters may be capable of being cured through an enforceable requirement. Others require pre-consent survey or redesign. Others may require deletion of land or works from the Order. Where mitigation depends upon a future investigation that could reveal that the authorised development is environmentally unacceptable, the matter is not suitable for ordinary post-consent discharge.

This distinction is particularly important because the Scheme is already heavily dependent on future controls. BEPS’ WR records continuing reliance on post-consent Foundation Works Risk Assessments, hydrogeological assessment, detailed ecological management, final access and traffic controls, replacement management, decommissioning arrangements and protective provisions. A residual-effects assessment that simply assumes all of those future processes will produce an acceptable solution is circular.

The Applicant should therefore be required to demonstrate one coherent and deliverable final case in which the landscape, ecological, heritage, water, soil, transport, noise, utility, aviation and decommissioning assumptions can all be satisfied simultaneously. It is not sufficient that each chapter contains a theoretically acceptable mitigation solution if those solutions have not been reconciled with one another.

If that cannot be done, Chapter 20 cannot support consent.

The position is particularly compelling because the Applicant’s own summary already admits substantial residual harm, including extensive significant landscape effects and irreversible BMV loss, while the specialist and statutory representations demonstrate that significant uncertainty remains in areas which Chapter 20 labels non-significant. The proper planning balance cannot therefore proceed on the assumption that the residual harm is confined to the matters acknowledged in Tables 20.1–20.4.

Nor should the Examination permit the Applicant to cure that problem simply by adding further layers of mitigation. NWT’s criticism goes to the underlying design issue: the present Scheme seeks to reshape the landscape to accommodate the project rather than reshape the project to respect the landscape. Where the mitigation hierarchy has not been exhausted, the correct remedy is further avoidance and redesign, not increasingly elaborate management of a fundamentally overextended Scheme.

Accordingly, if the Applicant cannot demonstrate through a revised, evidence-based and internally reconciled assessment that the remaining adverse effects are genuinely unavoidable, that the mitigation relied upon is defined and secured, that the combined and cumulative effects are acceptable, and that

those harms are proportionate to a demonstrated need for East Pye at this location and scale, the residual-effects case fails.

If that exercise cannot demonstrate that the remaining harms are genuinely unavoidable, adequately mitigated and proportionate to a demonstrated need for East Pye at this location and scale, the correct application of the mitigation hierarchy and planning balance is not further mitigation. It is refusal of development consent.

Conclusion

BEPS's Written Representation has considered East Pye Solar across the whole of the Application: its claimed need, site selection, design, environmental assessment, construction, operation, replacement, decommissioning, cumulative effects, draft DCO and compulsory-acquisition powers. The conclusion which emerges from that evidence is clear.

East Pye Solar is not a finished project awaiting detailed implementation. It remains an incompletely defined and incompletely assessed development whose essential engineering, environmental and delivery solutions are still being determined. At the same time, the evidence already establishes substantial and, in important respects, significant harm to the landscape, ecology, historic environment, agricultural land, tranquillity and communities of South Norfolk. Those two findings must be considered together.

The Applicant asks the Secretary of State to accept environmental harm on the basis of benefits and mitigation which depend upon a Scheme that is not yet sufficiently settled, while simultaneously asking for a DCO and extensive compulsory powers broad enough to accommodate whatever solution ultimately emerges.That is the wrong statutory sequence.

Development consent should follow demonstration that an environmentally acceptable and deliverable project exists. It should not be granted first so that the Applicant can discover afterwards whether one can be achieved.

The Application is unfinished in matters that determine whether the Scheme is acceptable at all

The unresolved matters are not confined to contractor detail. The final National Grid connection solution remains unsettled. NGET has not confirmed that the proposed Site 1B substation is the final solution; the replacement connection agreement is not expected to require East Pye Solar to secure the substation land or consent; and development consent for the proposed substation would not oblige NGET to use it. Yet the Application seeks consent and compulsory powers for substantial permanent transmission infrastructure, including a substation of approximately six hectares and potentially four new pylons reaching approximately 61 metres.

The solar and BESS elements do not have equivalent connection status. Solar has Gate 2 Phase 2 prioritisation; the BESS remains at Gate 1. The DCO nevertheless permits an integrated Scheme whose BESS could be delayed, reduced, altered or potentially omitted. The environmental assessment, benefits case, land requirement and statutory powers have not been reconciled comprehensively with those materially different implementation scenarios.

Nor has the construction project itself been defined through one binding reasonable worst-case envelope. The Application does not yet provide a consolidated maximum for simultaneous work fronts, piling, deep foundations, concrete, cable excavation, HDD operations, dewatering, compounds, hardstanding, haul roads, vegetation removal, abnormal loads, replacement

works and other activities which determine the environmental effects actually experienced.

Transport provides the clearest physical manifestation of the problem. East Pye depends upon 65 construction accesses and crossings across an exceptionally constrained rural road network. Norfolk County Council states that the submitted strategy for Sites 7–10 does not adequately address the highway constraints, does not provide sufficient mitigation and ‘cannot be supported’. It requires a materially different architecture based upon greater use of Cable Route Corridors and internal haul roads. National Highways separately maintains an objection requiring further work on strategic junctions, cumulative traffic, traffic limits, worker travel, abnormal loads and DCO controls.

The Applicant therefore has neither an agreed submitted routeing strategy nor a demonstrated alternative. A CTMP cannot create a missing road, secure land outside the Order Limits, establish the structural capacity of an untested route, or retrospectively assess ecological, heritage, drainage and PRoW effects created by a different haul-road system.The same pattern occurs repeatedly elsewhere.

The water assessment lacks a sufficiently robust site-wide hydrogeological conceptual model. The private-water-supply baseline remains unreliable. HFCL identifies 15 principal deficiencies and concludes that there is a ‘significant lack of confidence’ that effects upon the water environment are properly understood or capable of mitigation. WFD screening is contested; groundwater-dependent terrestrial ecosystems remain incompletely assessed; piling, HDD, dewatering and firewater pathways remain unresolved; and the water source for a project in a seriously water-stressed region is not securely established.

The ground-conditions case remains substantially desk-based despite development involving thousands of piles, deep substation and BESS foundations, cable trenches, HDD, former military land, Principal Aquifers, possible PFAS and other contamination, UXO and private groundwater supplies. Later Foundation Works Risk Assessments and intrusive investigations may determine whether particular foundation systems or locations are acceptable at all. That is not detailed design. It is evidence required to establish whether the authorised development can safely be constructed.

The ecological baseline is likewise unfinished. No full seasonal botanical survey has been undertaken despite specialist evidence concerning important assemblages in precisely the roadside verges, historic lanes, hedgebanks and margins most exposed to engineering works. Aquatic survey work was affected by unusually dry conditions. Evidence of a breeding white-clawed crayfish population in the River Tas system was not adequately reflected in the original baseline. Further work remains necessary to understand the functional use of the landscape by barbastelle maternity colonies.

That last issue is particularly serious because the Applicant’s own evidence establishes the ecological importance of the area. Its bat assessment scores the assemblage at 22 out of 28, above its threshold for national importance. Eleven species were recorded; barbastelle was recorded at every static detector and generated 11,699 passes. Multiple maternity-colony Core Sustenance Zones overlap the Scheme, and independent licensed radiotracking has confirmed a further substantial maternity colony at Little Wood.

The Applicant is therefore not seeking consent in circumstances where ecological sensitivity is speculative. National importance is established. What remains incomplete is the evidence necessary to determine whether the Scheme can be constructed through that landscape without damaging the ecological function which gives it that importance.

EMF provides another example. PINS refused to allow the issue simply to be scoped out and required assessment of human and ecological receptors. Yet there is still no Scheme-specific maximum-case EMF model for the actual 132 kV and 400 kV system, no receptor-specific contours for the combined infrastructure and no completed crossing-specific aquatic assessment at Hempnall Beck of the kind sought by the Environment Agency and Inspectorate.

Air quality follows the same pattern at a different scale. Most measured evidence comes from Long Stratton rather than the low-traffic rural environment in which much of East Pye would be constructed. Cumulative HDV increases of 806 AADT are predicted on identified A140 links—more than eight times the Applicant's own 100-HDV screening threshold—yet no quantitative dispersion modelling follows. The National Grid substation now also permits a diesel generator of up to 500 kVA even though operational combustion emissions were originally scoped out on the stated basis that no combustion plant was proposed.

These are not isolated omissions. They reveal the recurring architecture of the Application: uncertainty is acknowledged, significance is nevertheless concluded, and the evidence needed to test that conclusion is deferred.

Mitigation is repeatedly being asked to do the work that avoidance and design should already have done

The same problem appears in the mitigation case. East Pye has not been designed by first identifying the environmental capacity of the receiving landscape and locating development within it. The evidence shows a 500 MW-scale project and land package progressively fitted around the constraints.

The land search began around Norwich Main before that connection point was shown to be viable. When Norwich Main proved incapable of accommodating the proposed project, the land search was not restarted. Instead, the connection search moved until a solution could be found which preserved the assembled land package. Great Moulton was selected partly because the existing Sites remained within reach. That history explains much of what follows.

Ancient woodland requires buffers. Barbastelle habitat requires dark corridors and retained connectivity. Roads require passing places, call-forward systems, marshals and internal haul routes. Sensitive views require woodland screening. Noise requires four-metre barriers, quieter equipment, fan restrictions, orientation, attenuators and enclosures. Groundwater requires future foundation-risk assessments. BESS risk requires later detailed firewater and safety design. Heritage harm is screened rather than avoided.

Each measure may reduce an individual effect. Collectively they demonstrate that the chosen landscape is struggling to accommodate the development. That is the opposite of the mitigation hierarchy.

Avoidance should occur through site selection, scale and design before reliance upon mitigation, restoration and compensation. Yet many of East Pye's most important receptors cannot reliably be restored or compensated for: ancient woodland setting and connectivity; mature hedgerow networks; established maternity-colony support habitat; rare botanical assemblages; functioning chalk-stream systems; historic landscape relationships; and the structure of heavy BMV agricultural soils developed over generations.

BNG does not answer those objections. Habitat units cannot establish compliance with European Protected Species legislation, restore an ancient woodland relationship, demonstrate that a barbastelle metapopulation remains functional or remove the risk of deterioration of a waterbody.

Screening does not answer the landscape and heritage objection either. The Applicant's own LVIA records Major Significant effects at Sites 1, 7 and 8 and significant effects remaining at Year 15 across important landscapes and visual receptors. Planting which hides industrial infrastructure by replacing open agricultural character with woodland is itself landscape change. Concealment is not preservation.

Some of the principal harms are already established

The decision-maker is therefore not balancing uncertain harm against certain benefit. A substantial part of the adverse case is already established. The Applicant itself identifies extensive Significant landscape and visual effects, including Major effects and effects persisting to Year 15.

Independent heritage evidence identifies less-than-substantial harm to 36 designated assets—32 listed buildings and four Conservation Areas—compared with the Applicant's identification of harm to only two designated assets. The disagreement includes Grade I and Grade II* buildings and goes directly to the Applicant's treatment of open agricultural setting, historic approaches, functional relationships and landscape character.

Approximately 829.1 hectares of the surveyed land is BMV agricultural land, comprising approximately 397.4 hectares of Grade 2 and 431.7 hectares of Grade 3a. The soils are predominantly slowly permeable, seasonally wet clay and clay loam. Relevant technical evidence shows that heavy soils have low resilience to structural damage and that sufficiently deep compaction can be difficult or economically impracticable to reverse. The proposition that agricultural quality will simply return after 60 years therefore remains an assumption rather than a demonstrated outcome.

Noise modelling identifies 15 receptors above SOAEL during night-time HDD, with effects extending to Major Adverse. In the exceptionally quiet rural acoustic environment, operational acceptability is itself dependent upon extensive engineered mitigation.

Transport remains formally disputed by both the local and strategic highway authorities.

The ecological assemblage is nationally important.

Water and groundwater uncertainty has been independently identified as sufficiently serious to produce a ‘significant lack of confidence’ in the assessment.

Site 1 concentrates BESS, project and National Grid substations, 400 kV infrastructure, aviation constraints associated with Tibenham Airfield, private water supplies, the Principal Aquifer, the Waveney catchment, the London–Norwich railway, BMV land and nearby homes. Site 5 similarly combines 400 kV infrastructure, a national high-pressure gas transmission main, drainage pathways into the River Tas system, white-clawed crayfish, private water supplies, homes, a nursery and nationally important bat habitat.

Those are not impacts invented by applying an unduly precautionary approach. They are the consequences of putting very large energy infrastructure into an unusually receptor-dense rural landscape.

The whole-life case makes the description of the Scheme as ‘temporary’ increasingly untenable

The planning balance must also address what East Pye actually means over 60 years. The Scheme permits major panel replacement, repeated BESS replacement, transformer and electrical replacement and recurring construction-type interventions. The land is therefore not simply disturbed once and then left undisturbed until removal. Nor does decommissioning restore the entire development.

The National Grid substation and Grid Connection Infrastructure are intended or capable of remaining permanently. Underground ducts, joint bays, foundations, access, drainage and other infrastructure may remain. Mature screening and ecological planting may permanently alter the character and future use of the land.

The Applicant has now clarified that private land agreements contain decommissioning securities capable of revaluation or top-up and intended to provide protection against default or insolvency. That is relevant, but it does not demonstrate a single publicly enforceable, Scheme-wide mechanism capable of decommissioning and restoring a multi-landowner NSIP if the undertaker fails.

It remains unclear who would coordinate whole-Scheme restoration in that event; whether every holding is protected to the same standard; whether security covers soil, drainage and contamination remediation as well as equipment removal; whether the enforcing authority can access it; and what happens if actual restoration costs substantially exceed the amount secured.

Reported development-uplift or overage provisions in land agreements require clarification for the same reason. Such provisions cannot determine future planning use. But if the contractual structure contemplates future development of land whose reversibility and restoration to agriculture are relied upon in the present planning balance, the Applicant should explain the relationship clearly.

‘Temporary’ should therefore be given limited weight where industrial use lasts for six decades, replacement creates repeated construction phases, major

transmission infrastructure survives indefinitely and restoration of the affected heavy agricultural soils has not been demonstrated.

The Applicant’s benefits case cannot carry the weight placed upon it

BEPS recognises the urgent national need for renewable electricity established by EN-1. But national need for a class of infrastructure does not make the environmental consequences of an individual project irrelevant, nor does it establish that every proposed 500 MW transmission-connected solar project is necessary in every location.

The evidence concerning East Pye Solar materially limits the weight which can properly be placed upon claims of project-specific or locational necessity.

The T7 evidence shows a substantial solar pipeline. Ofgem’s April 2025 material recorded 660 MW built, 122 MW under construction, 380 MW consented and 3,418 MW at planning-submitted stage against the revised combined 3,300 MW T7 solar allowance. In its medium Gate 2 scenario the entire regional allowance was capable of being filled by projects which were already built, under construction, consented or planning-submitted, without requiring projects merely holding land rights.

The significance of East Pye’s subsequent Gate 2 status must also be understood in its proper context. The original Clean Power 2030 analysis anticipated approximately 90% of solar on distribution networks. Separate transmission and distribution regional allocations were subsequently amalgamated after DESNZ, through developer lobbying (including by IGP/MAcquarie), identified a mismatch between the increasing transmission solar pipeline and the original modelling. That process altered the treatment of the pipeline, allowing more transmission solar to progress than NESO’s CP2030 had intended; it did not itself increase the national solar requirement.

BEPS does not invite a finding of impropriety from the documented industry engagement preceding that change. However, East Pye Solar’s Gate 2 status is not independent proof that this particular Scheme is indispensable or that its environmental harms are unavoidable.

The Applicant’s claimed climate benefit also requires materially less confidence than the planning case assumes. BEPS’s Chapter 6 identifies internal arithmetic and unit inconsistencies in the whole-life calculation, including a headline lifetime carbon saving that cannot be reproduced from the Applicant’s stated generation, comparator and whole-life emissions figures. The assessment also freezes the 2031 grid-carbon comparator over a 60-year operational life despite acknowledging future grid decarbonisation. BESS replacement, land-use change, curtailment, water supply and other whole-life assumptions remain material.

Climate benefit remains an important benefit of renewable generation. But the magnitude of the specific benefit claimed for East Pye cannot properly be given decisive weight where the calculation itself is not yet reproducible from the stated inputs.

The socio-economic benefits are similarly less certain than the headline presentation suggests. Construction employment is temporary; local employment and procurement outcomes are not secured at the levels claimed; and the Applicant has not established a comparable baseline for the existing rural businesses, tourism and visitor economy which may bear the adverse effects.

The planning balance must therefore compare the actual demonstrated benefits of East Pye Solar with the actual harms of East Pye Solar. It must not place the whole weight of national decarbonisation policy on one project and then treat every local environmental consequence as necessarily subordinate.

Chapter 19 and Chapter 20 expose the central failure of the Application

When the chapters are read together, the Applicant's residual-effects case becomes increasingly difficult to sustain. Chapter 19 does not independently test the Scheme as a functioning environmental system. It largely imports significance conclusions reached within the individual topic chapters, screens out effects already classified as negligible and acknowledges that 'the scale of the effect interaction has not been identified'.

That is particularly problematic for a project whose harm is generated through repetition and interaction. The same hedgerow may be landscape structure, historic boundary, bat corridor and highway constraint. The same heavy clay soil controls agricultural productivity, drainage and groundwater recharge. The same haul road may affect residents, archaeology, ecology, soil, water, PRoWs and heritage. The same landscape planting may screen infrastructure while itself harming openness, heritage setting or ground-nesting-bird habitat.

The environment does not experience those effects chapter by chapter. Nor does a resident living beside East Pye SOlar experience 'noise', 'traffic', 'landscape' and 'air quality' as separate planning disciplines. They experience one development.

Chapter 20 then produces the most revealing inconsistency of all. The Applicant accepts extensive Significant landscape effects, including Major Adverse effects and continuing Year 15 effects, yet reports essentially no significant residual cultural-heritage effect; no significant water effect despite unresolved private-water-supply, hydrogeological, WFD and firewater issues; no significant transport residual effect despite the outstanding highway-authority positions; and substantial ecological benefit notwithstanding a nationally important bat assemblage, incomplete botanical and aquatic baselines and unresolved functional effects.

That is not a coherent environmental balance. It is the consequence of fragmentation, optimistic mitigation assumptions and significance judgments made before the underlying uncertainty has been resolved.

The Application is premature because the missing information could change the Scheme

There is an important distinction between information which refines an already acceptable project and information which determines whether an acceptable project exists. Much of what remains outstanding at East Pye falls into the second category.

- Further ecological evidence could require removal or relocation of development to protect maternity-colony habitat or rare botanical resources.
- Ground investigation could require different foundations or avoidance of contaminated or hydrogeologically sensitive areas.
- Private-water-supply investigation could establish receptors or pathways requiring relocation or additional separation.
- HDD and foundation risk assessment could determine that particular construction methods are inappropriate.
- The final highway solution could require different haul roads, accesses, crossings, vegetation removal and land.
- The final National Grid solution could alter the need for permanent transmission land and infrastructure.
- Aviation assessment could require changes to infrastructure or panel layouts around Tibenham Airfield.
- Noise performance could depend upon equipment which has not yet been selected.
- The final BESS design could alter noise, fire, drainage, cooling, replacement and emergency-response requirements.

Those matters cannot safely be described as ordinary detailed design where the answer may be that an authorised Work must move, shrink, change technology or not be constructed.

The Rochdale Envelope does not permit uncertainty over the environmental acceptability or identity of the development itself. Its purpose is to permit bounded flexibility within a reasonable worst case which has already been assessed. East Pye has not yet demonstrated that bounded whole-project worst case.

The compulsory-acquisition case consequently fails for the same reason

The Applicant nevertheless seeks extensive statutory powers now. That is especially difficult to justify where land is sought for optional, severable or unresolved infrastructure.

The Applicant’s own land arrangements contemplate leasehold occupation for substantial parts of the solar development, yet the DCO seeks powers capable of acquiring freehold interests. NGET does not presently expect the replacement connection agreement to require East Pye to secure the proposed National Grid substation land. The BESS does not have the same connection status as solar.

Alternative transport arrangements may change the land required. Some authorised Works may never be constructed.

Section 122 requires a compelling case in the public interest for compulsory acquisition. That case cannot logically be established by granting the widest powers first and deciding later which land and interests the final Scheme actually needs.

The public-interest balance is particularly weak where the specific benefits remain contingent but the interference with property, landscape, ecology and agricultural land is immediate and substantial.

The planning balance weighs decisively against East Pye

The correct planning balance is therefore:

the contribution of this particular project, in a region already containing an extensive advanced solar pipeline, against the extensive and interacting consequences of placing a dispersed 500 MW-scale transmission project in this particular receptor-dense landscape.

On the adverse side of that balance stand admitted Significant landscape effects; independent evidence of harm to 36 designated heritage assets; a nationally important bat assemblage and multiple barbastelle maternity-colony networks; six adjoining ancient woodlands; unresolved white-clawed crayfish and botanical evidence; approximately 829 hectares of surveyed BMV land; heavy soils whose reversibility is not established; unresolved private-water-supply, groundwater, WFD and drainage issues; formal outstanding transport objections; night-time SOAEL exceedances during HDD; unresolved aviation and major-infrastructure interactions; permanent grid infrastructure; uncertain decommissioning and restoration; and cumulative industrialisation extending well beyond any single field or village.

Those harms are not all capable of mitigation. Some are inherent consequences of scale and location.

On the benefit side, renewable generation is strongly supported by national policy and must receive substantial weight. The relevant question, however, is the weight properly attributable to the benefits of this Scheme at this location and scale. Gate 2 status for the solar component does not establish regional or locational necessity; the BESS presently remains at Gate 1 rather than Gate 2; the final transmission solution is unresolved; the claimed whole-life carbon benefit is not yet mathematically secure; and many of the claimed socio-economic benefits are temporary or unsecured.

The balance is therefore not close.

The strongest benefits derive principally from the general policy need for renewable infrastructure rather than from any demonstrated necessity for these particular 1,200 hectares of South Norfolk to be developed in this way.

While the significant and enduring environmental harms arise from the Scheme itself. The uncertainties affect whether the Scheme can be delivered and mitigated as claimed.

National policy does not require the Secretary of State to consent the wrong renewable-energy project in the wrong place merely because renewable energy is needed.

Indeed, refusing a poorly located and designed project is part of a functioning planning system. It preserves the ability to meet the same national objectives through developments whose environmental cost is materially lower.

Final conclusion

After three volumes and twenty substantive chapters, the central defect in East Pye Solar can be stated simply.

Too much is already known about the harm, and too little is yet known about the solution.

The Applicant already knows that the Scheme would cause extensive Significant landscape effects; occupy predominantly BMV agricultural land; industrialise historic rural settings; affect a nationally important ecological landscape; require construction through a highway network which the responsible authorities do not presently accept; and introduce major permanent electrical infrastructure into locations containing sensitive human, ecological, hydrological and infrastructure receptors.

What it does not yet know with equivalent certainty is the final National Grid solution; the ultimate BESS implementation case; the complete construction envelope; an accepted access strategy; the full ecological baseline; the complete private-water-supply network; the site-wide hydrogeological model; the acceptability of foundations and HDD at all sensitive locations; the final BESS and firewater design; the Scheme-specific EMF exposure; the final operational noise sources; or a coordinated and financially secure mechanism capable of restoring the land at the end of the project.

Those are not matters which should remain unresolved after the principle of development has been granted. They are matters which determine whether the principle of this development, in this place, is acceptable. The Application is therefore premature.

It asks the Secretary of State to accept established environmental harm now in return for an environmentally acceptable implementation which the Applicant hopes to demonstrate later. That is not a sufficient basis for a Development Consent Order, still less for the extensive compulsory powers sought.

Nor should the balance be distorted by treating the national need for solar generation as though it establishes a need for East Pye Solar regardless of its consequences. The national policy need is important, but it does not **eliminate** the statutory and policy requirement to consider environmental effects,

alternatives, good design, deliverability, heritage, biodiversity, water, agricultural land and the overall public interest.

This Written Representation demonstrates that East Pye is not simply a renewable-energy project with manageable residual effects. It is a development whose extraordinary scale and dispersed form create repeated conflicts with the environmental capacity of the landscape selected for it, and whose proposed solution to those conflicts is repeatedly to defer design, survey, assessment and mitigation until later.

The proper application of the mitigation hierarchy would have led to a different location, a different land package, a materially smaller development or no development here at all.

The proper application of the planning balance leads to the same result.

The harms are extensive, cumulative, long-term and in important respects irreversible. Several are already Significant on the Applicant’s own evidence. Others remain uncertain precisely because the baseline or design is unfinished. The specific and locational benefits relied upon to outweigh them are materially less certain and less substantial than the Application suggests.

There is therefore no sound evidential basis for concluding that the adverse impacts of East Pye Solar are outweighed by its benefits. There is no justification for granting broad statutory powers in the expectation that the missing project will be designed after consent. There is no compelling public-interest case for compulsory acquisition of land and rights whose necessity remains contingent upon unresolved Works and connection solutions. And there is no planning justification for industrialising this exceptionally sensitive part of South Norfolk’s ancient countryside where the demonstrated Scheme-specific benefits have not been shown to outweigh or justify the extensive, interacting and in important respects irreversible harms identified in this Written Representation.

BEPS therefore submits that the Examining Authority should recommend that development consent for East Pye Solar be refused and that the Secretary of State should not make the Development Consent Order.

Appendix

Appendix A – Norfolk Barbastelle Study Group Survey Report - January 2025

Appendix B – [redacted], Botanist Letter to East Pye Solar, 2025

Appendix C – Norfolk Rivers Trust, Crayfish River Tas Crayfish evidence email

Appendix D – Hannah Fraser Consulting Ltd. (HFCL), *Independent Review of East Pye Solar Environmental Statement: Water Environment*, Report 31375R1

Appendix E – [redacted], *Independent Heritage Impact Assessment Report*, October 2026

Appendix F – Transmission Solar Developers lobbying DESNZ for Tx+Dx

Appendix G – Macquarie/DESNZ FOI Bundle

Appendix H – Macquarie/DESNZ Lobbying timeline

Appendix I - NESO Methodology FOI

Appendix J – NESO, *Gate 2 Criteria Methodology,* 12 June 2026

Appendix K – Natural England, *Definition of Favourable Conservation Status for Barbastelle Bat*, RP2974, Edition 1

Appendix L – Tinsley et al. (2023), 'Renewable energies and biodiversity: Impact of ground-mounted solar photovoltaic sites on bat activity', *Journal of Applied Ecology*

Appendix M – Barré et al. (2023), 'Insectivorous bats alter their flight and feeding behaviour at ground-mounted solar farms', *Journal of Applied Ecology*

Appendix N – Carvalho et al. (2025), 'Plant and soil responses to ground-mounted solar panels in temperate agricultural systems', *Environmental Research Letters* 20 024003

Appendix O – ADAS/Welsh Government, *The Impact of Solar Photovoltaic Sites on Agricultural Soils and Land*

Appendix P – ISEP, *Solar PV on Agricultural Land – Essential Components of Environmental Assessments and Reports,* 12 January 2025

Appendix Q – Wilder Ecology, *Literature review: Impacts of ground mounted solar farm/parks on biodiversity*, July 2025

Appendix R – Personal Impact Statements by BEPS members

AI Disclaimer: BEPS's submissions are based on research undertaken by multiple human research teams. Given the scale of the East Pye Solar application, the volume of documentation and the extent to which issues overlap across environmental, technical, legal and planning topics, BEPS also uses a closed-project bespoke GPT as a research and analytical tool.

The GPT is used to bring together and cross-reference research already undertaken by the BEPS human research teams; to identify connections between topics and evidence across the application; and to assist in analysing that material alongside Planning Inspectorate documents, pre-examination and examination material, evidence from statutory consultees, relevant guidance, best practice, and peer-reviewed research. Its purpose is principally to enable systematic cross-referencing across a documentary record of a scale that would not be practicable to analyse comprehensively by manual methods alone.

AI is not used as a substitute for human judgement or responsibility. Submission documents are compiled, reviewed, edited and checked by human members of BEPS before submission. Sources and evidential propositions are checked wherever material to the argument, and BEPS determines which arguments and conclusions are advanced.

BEPS accepts responsibility for the contents and arguments contained in its submissions.