

*Question MW 1.2. Minerals safeguarding - 2 Following construction, please detail what minerals extraction would be able to be undertaken below operational power lines and in the immediate vicinity of pylons, detailing various scenarios and restrictions for differing pylon heights and types.*

The following response is on behalf of Blackwater Aggregates (an IP with quarrying interest):

**Answer:**

**Executive Summary**

The total reserve excluding any disturbance caused by the Norwich to Tilbury Scheme as shown on the National Grid plan, is estimated at 4 million tonnes of sand and gravel. The extractable tonnage is critically dependent on the final alignment of the Norwich to Tilbury Scheme transmission line and the operational restrictions that may be imposed by National Grid Electricity Transmission (NGET).

- **Optimal Outcome:** With agreed control measures to extract beneath power lines, the sterilisation is reduced to the pylon footprints only.
- **Risk Outcome:** If excavation is prohibited under the line, up to **4 million tonnes** could be sterilised, rendering the site economically unviable.

**Existing Alignment**

**Sterilisation Impact based on Cable Route and Pylons**

If National Grid refused to allow the quarry's plant and equipment (i.e. A60 dump trucks and EX480 excavators or similar) to operate under the transmission line, due to existing landownership restrictions, it would render the site uneconomic to work and would therefore sterilise the entire **4 million tonnes** of sand and gravel reserve.

In consideration of the current National Grid route plan, approximately **136,500 tonnes** of sand and gravel will be sterilised if a 30m radial standoff is required from pylons TB083 and TB084 are placed where indicated on the current route plan.

If National Grid refused to allow the excavators (i.e. EX480 excavators or similar) to operate under the transmission line but permitted a haul road suitable for fully loaded dump trucks (i.e. A60 or similar) to pass under the transmission lines, it is estimated that a swathe of approximately **650,000 tonnes** of sand and gravel would be sterilised.

### Clearance required for Quarry Plant

In consideration of the existing National Grid Electricity Transmission (NGET) overhead line, specifically the cable route between pylons TB083 and TB084, safe vertical clearance must be maintained for the quarry's proposed plant and equipment.

- **Relevant Plant:** Articulated dump trucks (e.g., Volvo A60) and hydraulic excavators (e.g., Komatsu EX480 or equivalent).
- **Required Clearance:** In accordance with NGET Design Guidelines for Development Near Pylons and HVO Power Lines (Table 1: Overhead Line Conductor Clearances, Items 3 and 4), a minimum vertical clearance of 9.2 m to 10.5 m (depending on voltage and sag conditions) must be maintained between the lowest conductor and the highest part of any operating plant.

Whilst any quarrying operations under the transmission line would be subject to a site specific risk assessment, reasonable control measures could be applied to the works which would reduce sterilisation to the sand and gravel reserves.

To summarise, under the existing alignment, the following sterilisation outcomes apply depending on NGET's operational restrictions:

<b>Scenario</b>	<b>Operational Restriction</b>	<b>Sterilised Tonnage</b>	<b>Economic Viability</b>
<b>A. Controlled Access</b>	Full quarrying permitted under the line subject to SSRA and height controls.	<b>136,500 tonnes</b> (Loss limited to pylon footprints only)	<b>Viable</b> Full reserve accessible.
<b>B. Haul Road Only</b>	Excavators prohibited under the line; haul road for loaded dump trucks (A60) permitted.	<b>~650,000 tonnes</b> (Sterilised swathe where excavation cannot occur)	<b>Marginal</b> Significant reserve loss; may impact phasing.
<b>C. Total Exclusion</b>	All plant (excavators and trucks) prohibited under the line.	<b>~4,000,000 tonnes</b> (Entire reserve beneath and adjacent to the line)	<b>Uneconomic</b> Site rendered unworkable.

Further information

Electricity safety: Quality and Continuity Regulations 2007  
 Publication reference: OFW 02/0448 London (2011)  
 Electricity Networks Regulation: Technical Specification (TS) 43-1  
 Issue 2/1908 Overhead line design: health & safety  
 Executive Guidance Note (2014) - Avoidance of danger from  
 overhead electric lines

Clearance to objects for which a person can stand: Refer to table 10.1 (table 1) state the clearance to ground @ 4.0kV is 7.0m. The statutory ground clearance from OSGN and TSA TS 43-4 state 7.0m @ 4.0kV

Underground cables also give rise to specific safety requirements. The area directly above the cables and for a significant distance on either side must be kept clear of buildings, structures and trees, including planting

National Grid should always be contacted for detailed advice on any specific site. Further information on safety clearances can be found in the appendix

Item	Description of clearance	Minimum clearance (metres) and 400,000 volts	Minimum clearance at 275,000 volts
1	To ground	7.0	7.0
2	To normal road surface	8.1	7.4
3	To road surface designated as 1 metre high (e.g. routes)	9.2	8.5
4	To motorway or other road surface where skybridge can be used	10.5	9.8
5	To motorways or other road surface where scaffolding is to be used on: (i) normal 3-lane motorways (ii) reserved 2-lane motorways	16.3 15.3	15.6 12.6
6	To any object on which a person may stand including access, access platforms, etc.	5.3	4.6
7	To an object to which access is not required and on which a person cannot stand or lean a ladder	3.1	2.4
8	To trees under or adjacent to the grid (i) unable to support ladder/cumbar (ii) capable of supporting ladder/cumbar (iii) trees facing towards line with live conductors hanging vertically only	3.1 5.3 3.1	2.4 4.6 2.4
9	To trees in orchards and top gardens	5.3	4.6
10	To engines, stumps, guns and high pressure hoses	30.0	30.0
11	To street lighting standards with: (i) standard in normal upright position (ii) standard facing towards line with live conductors hanging vertically only (iii) standard facing towards line	4.0 4.0 1.9	3.3 3.3 2.4

Table 1 - Overhead line conductor clearances

## Alternative Alignment

Blackwater Aggregates / Stanfords LLP have met with National Grid regarding an alternative alignment for the power lines and to move pylons TB083 and TB084 outside the main extraction area (shown on the alternative route plan below). The alternative pylon locations are indicated using the yellow boxes. Whilst this reduces the risk, sterilisation remains possible if excavation restrictions are enforced.



In the event the pylons were located outside the main extraction area, and the transmission line had a clearance of between 9.2m to 10.5m (Item 3 and Item 4) across the quarry, reasonable control measures could be applied to the works which would avoid sterilising any sand and gravel, i.e. no loss of mineral beneath the transmission line.

If National Grid refused to allow the excavators (i.e. EX480 excavators or similar) to operate under the realigned transmission line but permitted a haul road suitable for fully loaded dump trucks (i.e. A60 or similar) to pass under the transmission lines, it is estimated that a swathe of approximately **330,000 tonnes** of sand and gravel would be sterilised.

To summarise:

Scenario	Operational Restriction	Sterilised Tonnage	Comment
<b>A. Controlled Access</b>	Full quarrying permitted under the realigned route.	<b>Negligible</b> (No loss of mineral beneath the line)	Optimal outcome; preserves full reserve.
<b>B. Haul Road Only</b>	Excavators prohibited; haul road permitted.	<b>~330,000 tonnes</b> (Reduced swathe compared to existing alignment)	Still represents a significant avoidable loss.

#### Current Status and Next Steps

- **Consultation:** Stanfords LLP has met with National Grid to discuss the alternative alignment and responded to the draft Statement of Common Ground.
- **Outstanding Items:** We are yet to receive a formal response from Fisher German and National Grid regarding:
  1. Acceptance of the revised route;
  2. Confirmation that controlled quarrying (Scenario A) is permissible under the line;
  3. Agreement on the specific height restrictions and safety protocols required.
  4. Responses to the draft Statement of Common Ground.

**Conclusion:** To prevent the sterilisation of a nationally important mineral resource, it is imperative that National Grid confirms acceptance of the **alternative alignment** and agrees to a Wayleave permitting **controlled excavation** beneath the line.

Signed: .....



For STANFORDS LLP

Duly authorised agents for and on behalf of Blackwater Aggregates & Gent Fairhead.

Date: .....

Thursday 9<sup>th</sup> April 2026

Name: .....



Address: .....

STANFORDS LLP

THE LIVESTOCK MARKET WYNCOWS ROAD

COLCHESTER ESSEX CO4 9HU