

Policy Statement on clearances between Transmission lines and Photovoltaic Solar farm developments	
Pol_St_	Applicable to: Ireland
Policy Owner: TEM	Category: Overhead Lines
Issue No. 1	Month Year: November 2017
Revision No. 0	Review Period: 3 years
Background	<p>The recent emergence of photovoltaic (PV) solar farms as a feasible generation option in Ireland has led to a significant number of planning applications and proposed developments near transmission lines. Depending on their proximity, these developments may have an impact on the transmission lines from a maintenance and system security perspective. EirGrid have produced this policy to clarify their requirements in relation to the clearance required between transmission lines and PV solar farm developments.</p> <p>In relation to all developments within 23 metres of the centreline of a transmission line, there is a statutory obligation for the developer to notify ESB prior to the erection of any structure. This notification shall be made in writing at least two months prior to commencement of construction works.</p>
Definitions	<p>Transmission line: An overhead electricity line designed for voltages above 110kV.</p> <p>Solar farm : A development consisting of Photovoltaic Solar panels normally mounted on metal frames that are fixed to the ground.</p>
Policy & Principles	<p>110kV Solar farms shall not encroach within 5 metres of the outer conductor of a 110kV transmission line.</p> <p>Solar panels located between 5 metres and 8 metres of the outer conductor of a 110kV transmission line shall be limited to a height of 3 metres.</p> <p>Solar farms located within a 50 metre radius of the centre of a 110kV angle / tension type structure shall have demountable type panels installed in this area to allow for quick dismantling so that conductor restringing can be</p>

carried out.

Solar farms shall not encroach within 10 metres of a stay wire for a support structure.

220kV

Solar farms shall not encroach within 10 metres of the outer conductor of a 220kV transmission line.

Solar panels located between 10 metres and 14 metres of the outer conductor of a 220kV transmission line shall be limited to a height of 3 metres.

Solar farms located within a 100 metre radius of the centre of a 220kV angle / tension type structure shall have demountable type panels installed in this area to allow for quick dismantling so that conductor restringing can be carried out.

400kV

Solar farms shall not encroach within 15 metres of the outer conductor of a 400kV transmission line.

Solar panels located between 15 metres and 22 metres of the outer conductor of a 400kV transmission line shall be limited to a height of 3 metres.

Solar farms located within a radius of 100 metres of the centre of a 400kV angle / tension type structure shall have demountable type panels installed in this area to allow for quick dismantling so that conductor restringing can be carried out.

General

The setback requirements are illustrated further in the diagrams at the back of this document.

Solar farms shall not encroach within 23 metres of the centreline of a transmission line for a distance of 23 metres on both sides of an intermediate type support structure (this applies to all transmission line voltages).

Solar farms shall not encroach within 23 metres of the centreline of a transmission line for a distance of 50 metres on both sides of an angle / tension type support structure (this applies to all transmission line voltages).

Solar farm developers shall liaise with EirGrid to ensure there is unhindered access to transmission lines for emergency maintenance at all times. If this access is being provided through the solar farm then a 4.5 metre wide access road shall be provided.

Solar farms developments near transmission lines shall provide a risk assessment to EirGrid demonstrating how they have mitigated the following hazards:

	<ul style="list-style-type: none"> • Earth potential rise from a fault on the transmission system • Cleaning and Maintenance of solar panels • Rise in air temperature above solar panels 															
Justification	To ensure that solar farm developments near transmission lines and structures do not compromise the security and maintainability of the transmission system.															
Application	This policy is applicable to all solar farms developments. The responsibility lies with the Solar Farm developer to identify potential hazards through a design risk assessment.															
Derogation	Derogation requests from this policy will be by exception and will follow the derogation policy issue 1 (internal document, signed May 2013)															
Revision History	<table border="1"> <thead> <tr> <th>Version</th> <th>Date</th> <th>Summary of Changes/ Reasons</th> <th>Authors</th> <th>Approved By (Inc. Job Title)</th> </tr> </thead> <tbody> <tr> <td>v1.0</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>	Version	Date	Summary of Changes/ Reasons	Authors	Approved By (Inc. Job Title)	v1.0									
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Illustration 1- Layout Diagram – 110kV setback distances

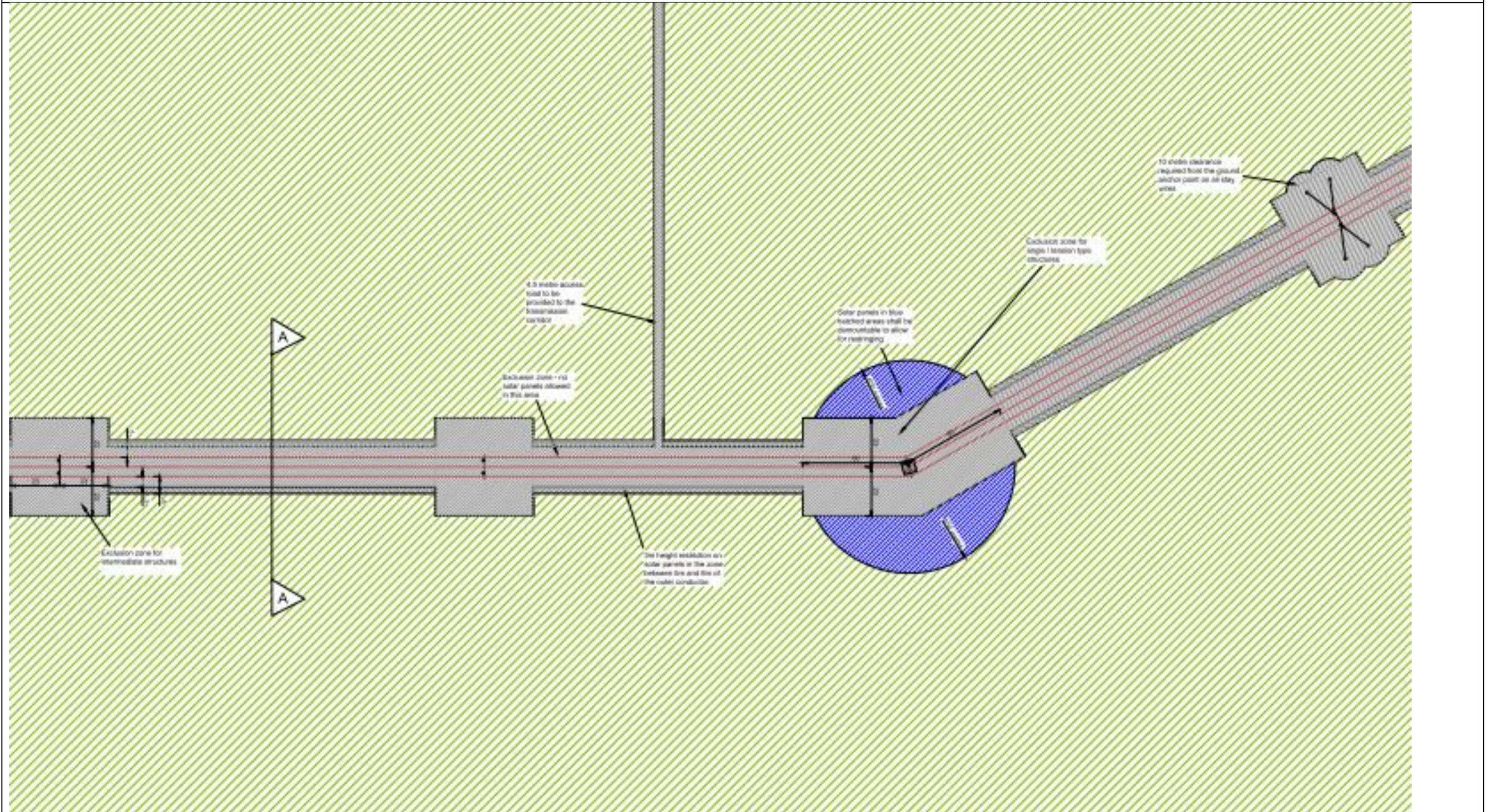


Illustration 2- Section Diagram – 110kV setback distances

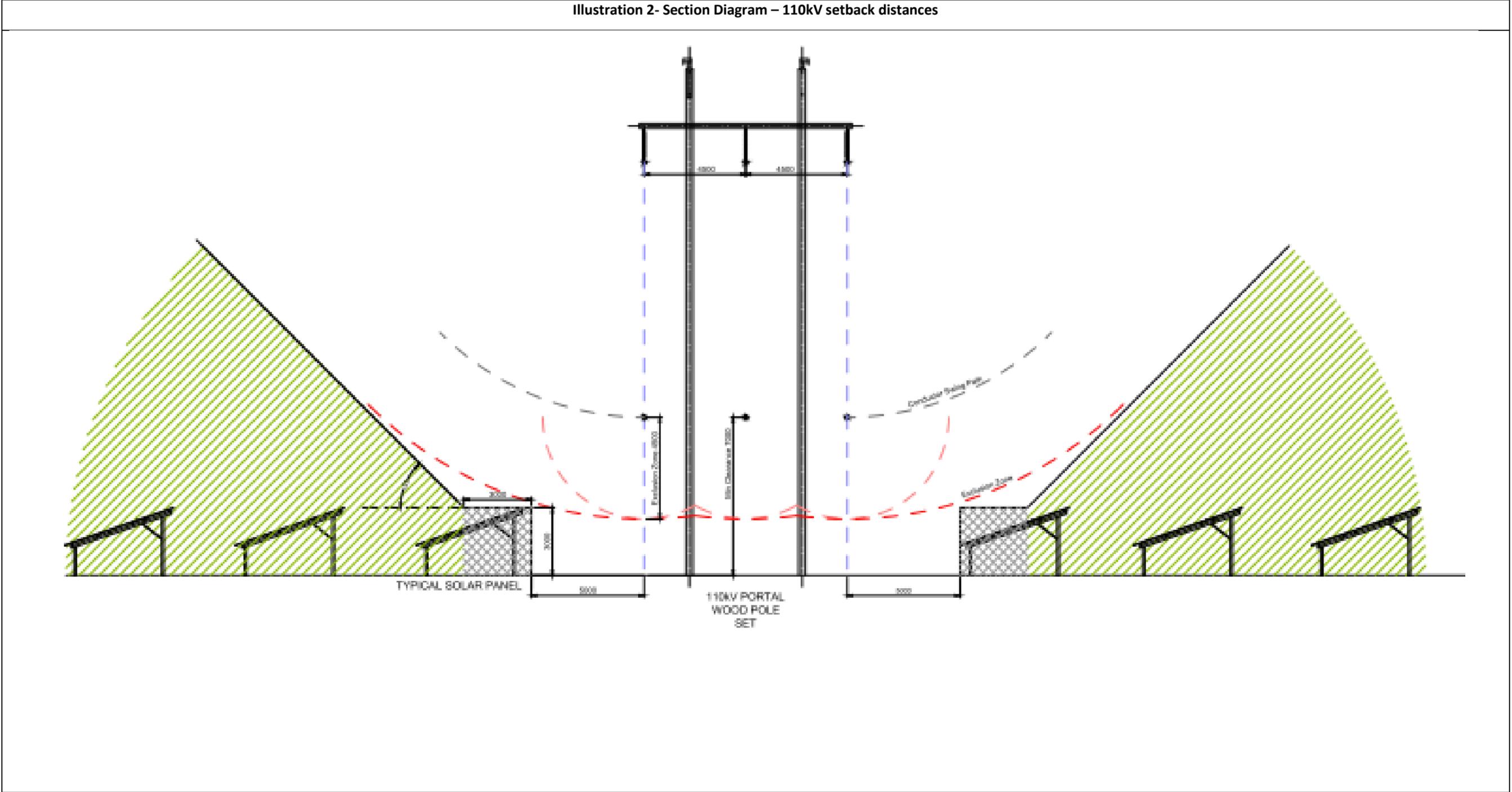


Illustration 3- Layout Diagram – 220kV setback distances

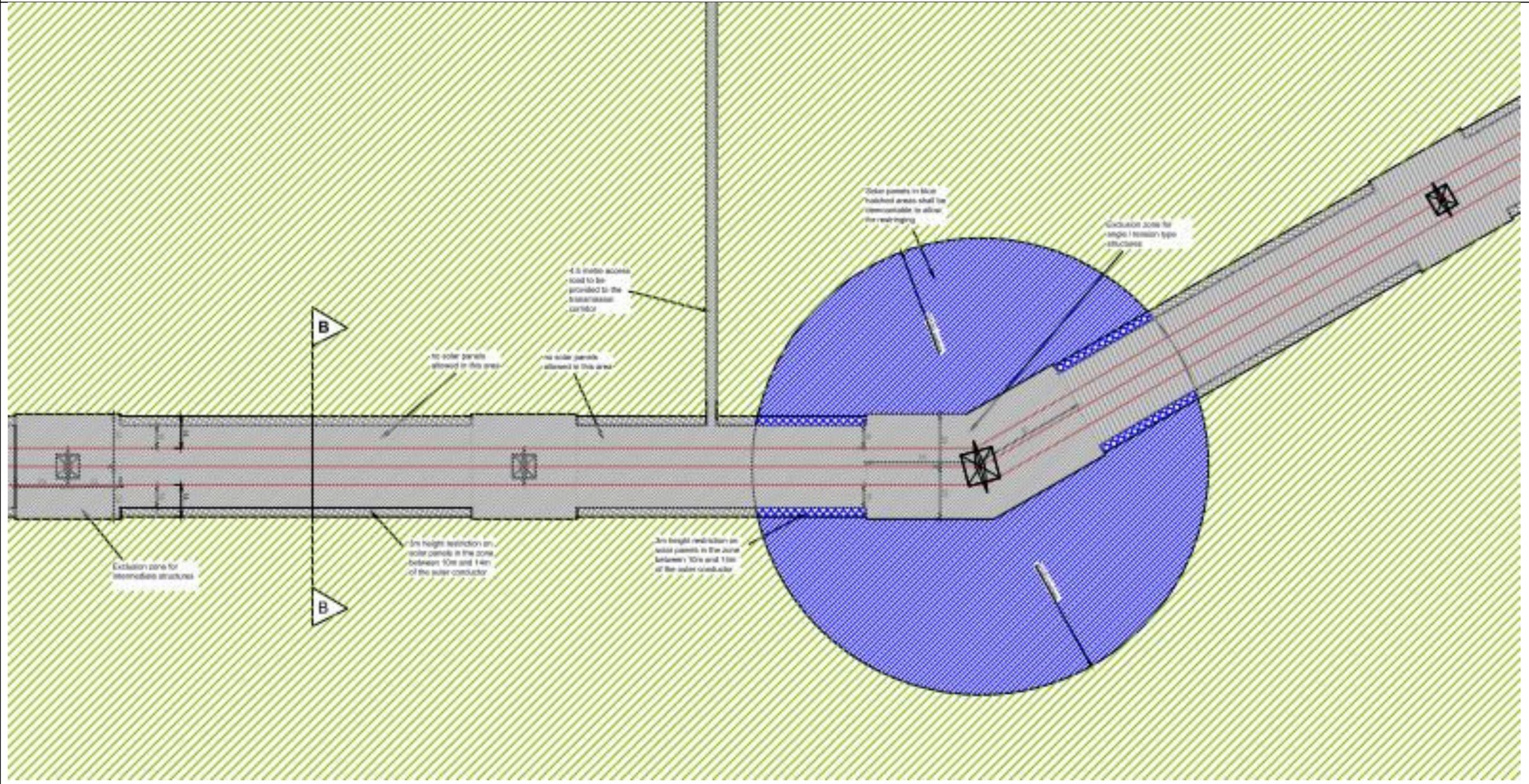


Illustration 4- Section Diagram – 220kV setback distances

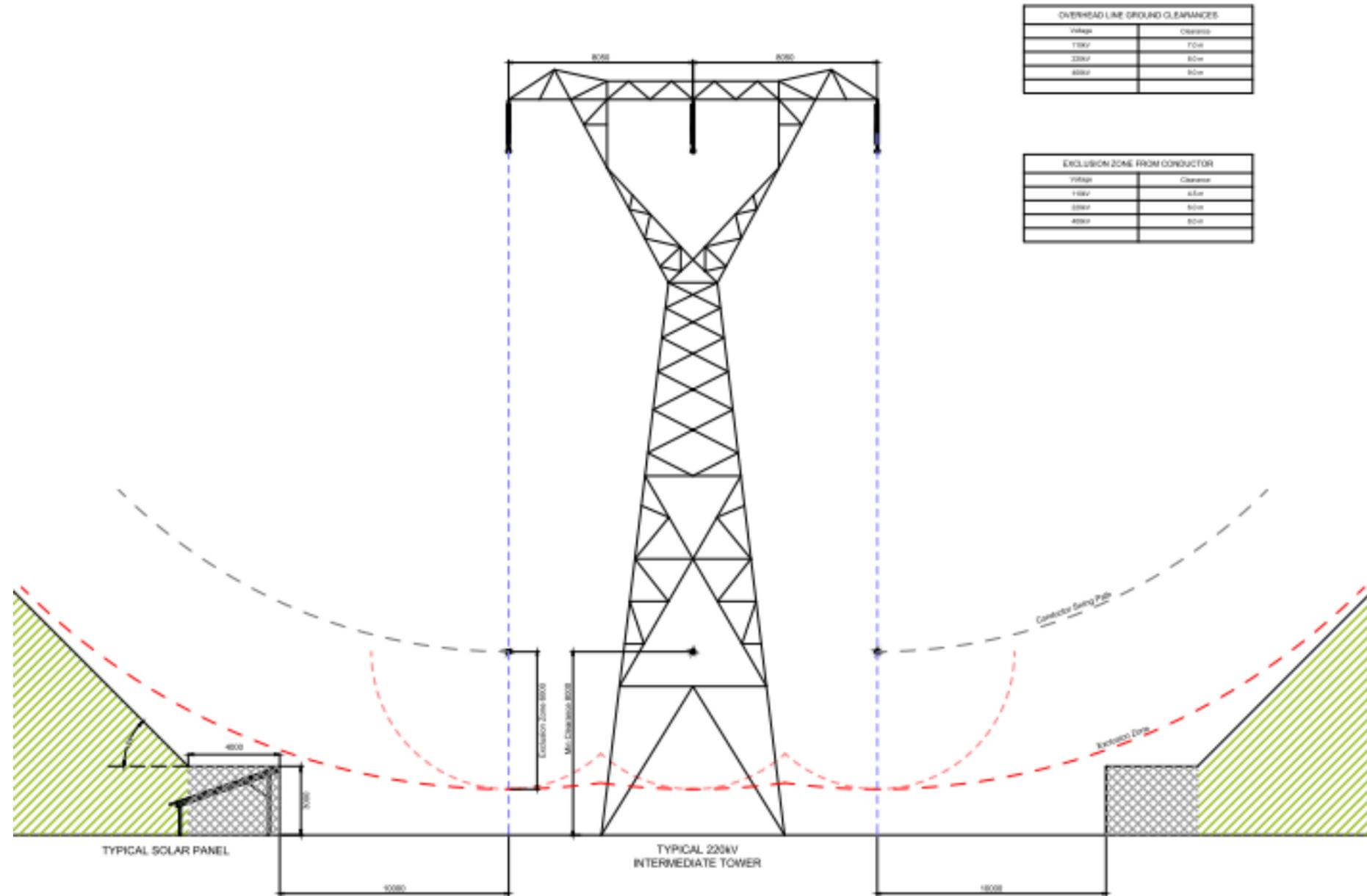


Illustration 5- Layout Diagram – 400kV setback distances

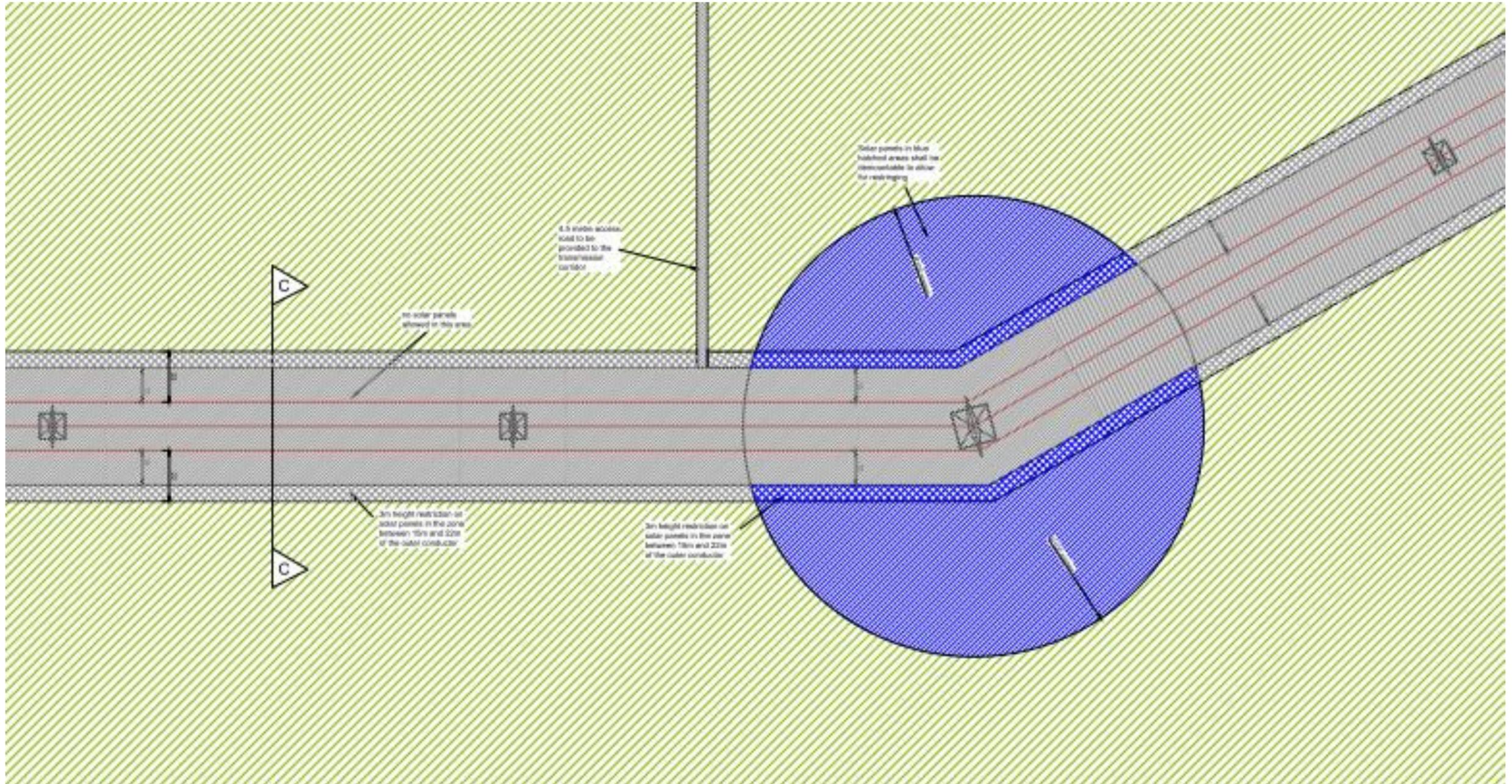


Illustration 6- Section Diagram – 400kV setback distances

