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Engineering Recommendation G57

Issue 2 2019

Cable laying on agricultural land

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Amendments since publication

Issue	Date	Amendment
Issue 2	February, 2019	<p>Minor revision of Issue 1 to re-format into the latest ENA document template and make minor amendments to the technical requirements.</p> <p>This issue includes the following principal technical changes.</p> <p>Foreword added. Text taken from Introduction, which is deleted.</p> <p>Clause 2: New clause. References Normative references added to the document.</p> <p>Clause 3: New clause. Term and definitions for “good agricultural land” and “deep ploughing” added.</p> <p>Clause 4.1: New clause to add guidance that:</p> <ul style="list-style-type: none">(i) Cables should be installed in accordance with ENA TS 09-2.(i) Staff should follow the precautions to prevent spread of animal and poultry diseases given in ENA ER G29.(iii) Updates from Defra on biosecurity guidance should be consulted for additional advice during an outbreak of notifiable diseases.(iv) Reasonable requirements of the owner and/or occupier of the land should be followed and field drains, fences, walls and gates disturbed or dismantled during the progress of the work should be promptly reinstated. <p>Clause 4.2 (Issue 1, Clauses 2.1): Recommended laying depth amended to be at a depth that locates the cable warning tape, protection tape or protection tiles at a depth of at least 900 mm to ensure that the integrity of the full cable installation is not placed at risk. Figure 1 added to illustrate the recommended trench layout.</p> <p>Clause 4.3 (Issue 1, Clauses 2.2): Text added that marker posts should be accordance with the requirements of ENA TS 12-23.</p>

Contents

Foreword.....	5
1 Scope.....	7
2 Normative references.....	7
3 Terms and definitions.....	7
4 Recommendations.....	7
4.1 General.....	7
4.2 Depth of Cover.....	8
4.3 Marker Posts.....	8
4.4 Supply of records to the owner and/or occupier of the land.....	9
Bibliography.....	10

Figures

Figure 1 — Schematic of recommended trench layout.....	8
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Foreword

This Engineering Recommendation (EREC) is published by the Energy Networks Association (ENA) and comes into effect from the date of publication. It has been prepared under the authority of the ENA Engineering Policy and Standards Manager and has been approved for publication by the ENA Electricity Networks and Futures Group (ENFG). The approved abbreviated title of this engineering document is “EREC G57”, which replaces the previously used abbreviation “ER G57”.

This document replaces and supersedes ENA ER G57 Issue 1.

This document provides recommended laying depths for cables in good agricultural land and has been produced to take account of a request from the National Farmers' Union (NFU) that new cable be laid at a sufficient depth to allow for:

- a) deep ploughing and cultivation, and
- b) the mechanical installation of drainage systems at depths of up to 910 mm (tile drains and pipes may be at a depth of 910 mm linked by mole drains just above this level).

Three main considerations determine the recommended cable depths:

- i. Much of the permanent pasture is suitable for ploughing and cropping and may be changed to arable land.
- ii. There is awareness by farmers of the importance of proper drainage.
- iii. Powerful machinery is available which permits drainage systems to be placed at greater depths.

The document is also relevant to installed cables (not just the laying of cables) as the recommended laying depths are indicative of in-situ assets. It is important to note that as these are indicative depths, the actual cable depths can only be determined from specific records available from the network operator responsible for the cable.

Where the term “shall” or “must” is used in this document it means the requirement is mandatory. The term “should” is used to express a recommendation. The term “may” is used to express permission.

NOTE: Commentary, explanation and general informative material is presented in smaller type, and does not constitute a normative element.

1 Scope

This Engineering Recommendation provides guidance on laying cables across agricultural land. It recommends the minimum laying depth of cables when laid across good agricultural land to provide sufficient depth to safeguard against damage from deep ploughing and cultivation, and from the mechanical installation of drainage systems.

2 Normative references

[N1] Department for Environment Food & Rural Affairs (DEFRA), *Guidance document: Controlling disease in farm animals* at <https://www.gov.uk/controlling-disease-in-farm-animals>

[N2] ENA TS 09-2, *Specification for the supply, delivery & installation of power cables with operating voltages in the range 11 kV to 400 kV and associated auxiliary cables*

[N3] ENA TS 12-23, *Polyethylene warning tape, polyethylene protection tape and polyethylene protection tiles for buried electricity supply cable*

[N4] ENA ER G29, *Farm hygiene: precautions to prevent spread of animal and poultry diseases¹*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

3.1

good agricultural land

arable land and pastureland agreed to be good agricultural land but not pastureland agreed to be permanent

3.2

deep ploughing

ploughing when a soil depth of > 0.5m is required

[Public Health England, Food Production Systems Handbook, 2015]

4 Recommendations

4.1 General

Cables should be installed in accordance with the requirements of ENA TS 09-2 [N2]. When working on agricultural land, all staff involved should be made aware of and follow the precautions to prevent spread of animal and poultry diseases provided in ENA ER G29 [N4]. Prior to commencing any work, the latest updates from the Department for Environment, Food & Rural Affairs (Defra) [N1] on biosecurity guidance to staff visiting farms should be consulted for additional advice during an outbreak of notifiable diseases

The reasonable requirements of the owner and/or occupier of the land should be followed. Field drains, fences, walls and gates disturbed or dismantled during the progress of the work should be promptly reinstated.

¹ ENA ER G29 has been withdrawn and is no longer maintained. It is archived and available to ENA Member Company's upon request.

4.2 Depth of Cover

All new cables (except service cables) of any voltage shall be laid with a cover depth of not less than 910 mm when laid across good agricultural land.

This depth requirement takes account of the wishes of the National Farmers' Union (NFU), to safeguard farmers and/or employees by minimising the risk of striking cables during their farming activities. It is recommended that ENA Member Companies treat this as a minimum requirement and should consider laying the cable at a depth that locates the cable warning tape, protection tape or protection tiles at a depth of at least 900 mm to ensure that the integrity of the full cable installation is not placed at risk. In accordance with the requirements of ENA TS 09-2 [N2], the cable warning tapes/tiles shall be at a minimum of 75 mm above the topmost cable in the trench, as indicated in Figure 1.

By specifying the laying depth to the cable warning tape or protection tape/tiles, it limits the risk to the integrity to both the cable and blinding layer and meets the requirement that cables are laid with a cover depth of not less than 910 mm, as indicated in Figure 1. The actual depth of the cable will depend on the depth of the blinding layer and the distance between this and the warning tapes/tiles and cable laying specifications of each ENA Member Company. Companies may specify the cable depth in their own specifications if they wish.

The depths indicated in Figure 1 are indicative of the depth of any in-situ cable but should be used as a guide only. Cable records, obtained from network operator responsible for the cable, must be relied upon to be provide accurate values of cable depth.

In specific cases, laying depths that differ from those recommended above may need to be considered to satisfy reasonable requirements of the owner and/or occupier of the land. This shall be subject to the agreement of all parties.

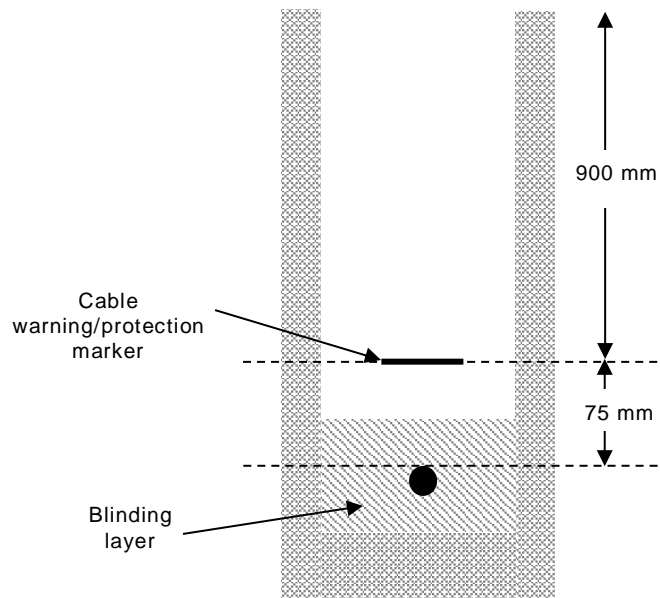


Figure 1 — Schematic of recommended trench layout

4.3 Marker Posts

Marker posts shall be erected to indicate the precise routes of all new underground cables after consultation with the landowner/occupier as to their location. The marker posts should be accordance with the requirements of ENA TS 12-23 [N3], Clause 10.

The parties concerned shall recognise that:

- marker posts should not be moved;
- the absence of marker posts does not guarantee the absence of underground cable;
- the presence of marker posts does not guarantee the presence of underground cable.

In the case of existing cables, marker posts should only be erected to indicate the recorded route in the following situations.

- i. Where feasible and practical, and
- ii. On receipt of special request adjudged to be reasonable.

4.4 Supply of records to the owner and/or occupier of the land

Copies of cable records shall be made available on request only during office hours, subject to an appointment having been made.

The cable owner/installer shall, on receipt of a justifiable request, indicate the position of existing cables on agricultural land, irrespective of voltage.

Bibliography

There are no informative references in this document.

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