

Occupier's Guidance Wayleave Rates for 2024-25

Produced by The Andersons Centre

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Guidance Wayleave Payment Rates for Occupiers of Farmland 2024-25

ENA Recommended Rates		
Fixture	Arable	Pasture
POLE	£27.04	£3.04
1ST STAY	£7.77	£1.94
ADD STAY	£3.89	£0.96
A/H POLE	£31.88	£3.24
TOWER UNDER 2.6M (1)	£56.91	£6.63
TOWER 3.8M (2)	£59.43	£6.87
TOWER 4.6M (3)	£65.56	£7.42
TOWER 5.3M (4)	£68.79	£7.72
TOWER 6.9M (5)	£73.77	£8.21
TOWER 7.6M (6)	£80.49	£8.87
TOWER 9.1M (7)	£85.98	£9.39
TOWER 10.7M (8)	£94.18	£10.11
TOWER 12.2M (9)	£102.81	£10.87
TOWER 13.7M (10)	£111.60	£11.63
TOWER 15.2M (11)	£120.80	£12.41
TOWER 16.8M (12)	£130.75	£13.24
TOWER over 16.8M (13)	£135.95	£13.61
PB1 Single unstayed	£27.04	£3.05
PB2 Double - unstayed	£51.79	£6.03
PB3 - Multi stayed	£159.06	£15.93

Changes to Occupiers' Guidance Wayleave rates from 2023/4 to 2024/5

The change of wayleave rates from 2023 to 2024 is complicated by a smoothing intervention that took place in 2023 to reduce the fall of 2023 rates which were caused by poor farming conditions in the reference year, 2020.

Calculated rates for 2024 all rise across the board compared with 2023. However, as the 2023 wayleave rates were retained at 2022 levels, the impact is varied, being the higher of either last year's rate or this year's calculated rate.

For the 2023-year, arable rates fell substantially across the board. This was because the calculation was based on the 2020 crop-year. There was heavy rain in autumn 2022 (the wettest winter on record since 1837). Thereafter, the rain stopped and the soils quickly drained, and, the early summer sun parched the soils and starved the spring crops. Machinery values did not rise noticeably in the reference manual (CAAV Machinery costings), possibly because of lockdown.

The decision was taken to freeze rates from the 2022 year to smooth the payments to land occupants, preventing a large rate fall.

For the pylons in pasture, the model used to calculate rates became redundant and a new one was required. This new method came out as lower than the previous one. Calculated pylon pasture rates fell in 2023 as a response. But pasture rates were similarly frozen to keep things in line with the arable decision.

For this year, 2024 rates, the reference year is 2021. Machinery inflation was considerable as were other machinery costs. Crops were abundant and prices good and hay price rose further. All calculated rates have risen for 2024, compared with 2023.

The proposed arable payment rate for 2024 is the higher of either the frozen 2022 rate or that calculated for 2024. All credit will be used to offset the 2025 wayleave.

For the pasture pylon rates, the fall in 2023 rates were such that the higher 2024 calculations do not recover the drop, indeed, it may take several years for this to happen. So, the calculated 2024 rates are proposed payment rates for pasture pylons. For wooden fixtures, the proposed rate is the 2024 calculation plus the negative credit retained from 2023. This explains the fall in wayleave rates for pylons in grassland but not in any other fixture or land use.

In summary, the 2024 calculated pasture pylon rates, go up as the table above shows, but as last year's payments were frozen from 2022, and the new method has been implemented, they come out lower. The 'credit' given to pasture farmers with pylons will be clawed back in 2025, making their payments lower again in 2025 for one year.

Summary of Changes to the Guidance Wayleave Payments for Occupiers of Farmland for 2024-25

This section provides a summary and explanation of the main changes to the 2024-5 occupiers' guidance wayleave payment rates which have been discussed and agreed between the ENA and NFU, and subsequently recommended by the ENA to its members. A more detailed, general guide to guidance wayleave payment rates is provided in the next section.

The guidance wayleave rates for 2024 are all higher for both arable rates and grassland payment rates compared with 2023. This is for a series of reasons. This text explains the changes to the computations and the figures that have led to this.

Reference Year

The reference year for calculating the guidance wayleave rates for 2024 is 2021/22. This encompasses the 2021 harvest. This lag is because historically, the most recent complete set of data required for the calculation was 2 years.

The change in farming environment from 2020/21 to 2021/22 was significant. The 2020 harvest was poor, following a wet 2019 autumn and very dry spring in 2020 for most of England. The cropped area was therefore low with large areas of spring cropping. The following year had a good harvest with higher sales prices. Also, over the period, the costs of buying and operating machinery rose very fast. All this means that the figures fed into the Wayleave calculation model, were higher than the previous year and the wayleave calculations therefore also come through higher.

Removal of 5-year averaging and upwards only adjustments

Reminder: As a result of changes agreed between the NFU and ENA in 2019/20, the 5-year averaging of rates and upward-only adjustment agreement was removed from the calculation in 2020. This means that rates can now go up more sharply than before, but can also fall.

However, as a result of sharp falls in the calculated wayleave formula for last year, it was decided to freeze the 2022 rates on the basis that rates are expected to rise quickly after 2022, to smooth the payment rates over the 3-year period from 2023 to 2025. Any additional rates that recipients received last year will be deducted from rates in 2025 as this will be a high rate year.

Timeloss

Rates for Timeloss are higher across all fixtures for arable and grassland for 2024. This is for wooden fixtures and pylons.

Timeloss calculations are based on the additional time taken to navigate a structure compared with uninterrupted land, the marginal cost of using the machine and labour operating it, and the number of passes of each machine requires for each crop type.

The capital cost of machinery is taken from the annual Central Association of Agricultural Valuers (CAAV) data. In the 2021/22 year, the capital prices were increased considerably in this publication, this pushes up depreciation and repair costs. Labour is taken from the CAAV document which uses the Annual Survey of Hours and Earnings (ASHE) data. Wages rose in 2021/22 as expected. This had an impact on timeloss and other heads of payment.

Irrigation

Irrigation constitutes a very small percentage of the guidance wayleave because only a small area of farmland is irrigated. The rate decreased by 8%. In monetary terms, it equates to up to only 2p per fixture. The fall is because of the change in crops in the rotation with fewer irrigated hectares. There is no irrigation in the permanent pasture guidance wayleave calculation.

Area Loss

This head of payment has increased considerably for arable fixtures and not changed for pastureland. Area loss rates are based on the pre-rent and finance calculations of the crops in the model. With

much higher arable margins in 2021, the rates have risen, by approximately 35% in the arable rates. The Pasture rates are unchanged. The margin for pasture is based on an estimation of the value of grassland. This is calculated by using the value of traded hay, which is the most traded grass-based forage and for which there is a national market price. This rose by 2% in 2021, again, largely based on the shortage caused by the inclement weather that spring. However, the percentage of pasture that was improved fell, also by approximately 2%, negating any gains in the head of payment.

Yield Loss

Yield Loss is a relatively small head of payment. The rise in arable yield loss is between 20% and 30% for 2024 (in monetary terms, 10p per pole and £2.30 for a very large pylon). The pasture rates did not change noticeably for same reasons as explained in 'Area Loss' above.

Wasted Inputs

In 2021, the costs of inputs, particularly fertiliser were starting to rise. Wasted input rates therefore rose in arable guidance wayleaves for all structures. In the arable wayleave the rise has been between 5% and 8%, and in the grassland wayleaves, 8% to 10%. Most seed, fertiliser and spray costs rose in 2021/22 from the previous year.

Inputs into permanent pasture are small. Some hectares receive considerable amounts of fertiliser, but more hectares receive none at all, making the impact small. When the proportion of pasture that has not been improved changes, it has a greater impact on pasture wasted input rates than a small shift in fertiliser rates.

Weed Control

This head of payment is higher this year for all arable fixtures and wayleave types by approximately 2%. This is almost entirely because of the rise in value of the labour. Other costs have increased with inflation. The greatest component of this cost is the time spent travelling to and from the fixtures and applying the weed control around it.

Health and Safety (H&S)

Health and Safety costs rose by about 6%. They are almost entirely overhead charges such as mapping fixtures, writing Health and Safety protocols and procedures, training staff and visitors and explaining to people how to avoid injury. This is largely the same work regardless of how many fixtures there are. The figure that affects H&S more than any other is the typical farm size and therefore usual number of fixtures on an average sized farm. As this changes, the total overheads are divided between varying numbers of fixtures.

Detailed Guide to Guidance Wayleave Payments for Occupiers of Farmland

Introduction

The wayleave payment made for an electricity fixture in an agricultural field is compensation on two bases; the owner's component and the occupier's payment. The rates are discussed annually between the ENA and the NFU, CLA and FUWⁱ. The ENA recommends settlements to its member companies and it is then a matter for each company's discretion whether to adopt the recommendation. The occupier's component is made at one of two different rates depending on land use; arable rotation or permanent grassland. New guidance rates for occupiers have been calculated between the ENA and NFU for arable and grassland. They are based on a series of heads of payment of costs incurred because of the obstacle in the field. They are:

1. **Time loss:** This is calculated by measuring the additional time required to navigate an agricultural implement over a stretch of field with an obstructing fixture, compared with the time required to navigate the same size stretch of field without the obstacle
2. **Irrigation:** this takes account of the additional incumbrance of having to redirect irrigators to avoid fixtures within a field
3. **Area loss:** Area loss is the component that compensates for the land area immediately surrounding a fixture (or beneath it in the case of a pylon) that is not cropped because it is too close to, or within, the fixture
4. **Yield loss:** This head of payment assumes a given yield loss within a certain vicinity of each fixture, which varies depending on the fixture type, size and crop type.
5. **Wasted input:** from both unavoidable overlaps of seed, sprays and fertiliser and on land not cropped
6. **Weed control:** the cost of weeding the area around and within the electrical fixture.
7. **Health and Safety:** This compensates for additional health and safety work and cost because of the presence of electricity fixtures on farm. The calculations are based on assessing best practice.

The calculations of these costs are detailed and complex, covering the entire crop rotation in England and Wales. They include all land uses with arable crops categorised into 26 individual arable crops and 5 categories of permanent grassland. In the calculations for each head of payment, the arable land area is allocated into fifteen groupings of crop types. This includes winter cereals (of which there are eight crops included), spring cereals (of which there are six crops included). The other rotation categories are vining peas, potatoes, sugar beet, fodder beet, brassicas and beans, field vegetables, forage crops, fallow land, temporary grass and cover crops. The permanent grass is divided into sub-groups of grazed improved grass, harvested improved grass, improved grass in establishment and 'unimproved' grass. The categorisations were created either because of the variation in value of the crops or the range of cultivation types that could be grouped together.

The calculation is updated annually, based on single-year figures. The same year is used for each of the datasets to ensure the figures are aligned and are taken from the farming activities and prices from 2 years' earlier. For example, the figures for 2024 are compiled from the 2021/2022 agricultural year because that was the most recent year with a complete set of data available from all sources when the model was created.

Reference Year

The year the data is drawn from for calculating the guidance wayleave rates for 2024 is 2021/22. This encompasses the 2021 harvest. This lag is because historically, the most recent complete set of data required for the calculation was over 2 years.

The change in farming environment from 2020/21 to 2021/22 was significant. The 2020 harvest was poor, following a wet 2019 autumn and very dry spring in 2020 for most of England. The cropped area was therefore low with large areas of spring cropping. The following year had a good harvest with higher sales prices. Also, over the period, the costs of buying and operating machinery rose very fast. All this means that the figures fed into the Wayleave calculation model, were higher than the previous year and the wayleave calculations therefore also come through higher.

Fixtures

The calculations vary according to the size and shape of each fixture. The largest difference is between the wood pole fixtures and pylons. The direction of approach, field layout, operation in question and indeed crop, will affect the impact that the size of the structure whether a pole or pylon has on the time taken to navigate the structure and the area affected.

Resources Used

The analysis makes use of data published by the following sources;

- The Central Association of Agricultural Valuers (CAAV) annual detailed machinery costings,
- Farm Business Survey (FBS) annual financial costings
- Agrobusiness Consultant's Agricultural Budgeting and Costings Book (ABC)
- English and Welsh June Census crop area figures for crop area calculations
- Pesticides Usage Survey (PUS for UK)
- British Survey of Fertiliser Practice (BSFP)
- Several other sources of information are used as evidence within the model. This includes various academic publications, Natural England costings, the Agricultural Engineers Association, data from agricultural press publications, data from agricultural markets, and other survey results.

The costs are explained in more detail here:

Summary of Heads of Payment

Time loss

The time loss component of the guidance wayleave is calculated by measuring the additional time required to navigate an agricultural implement over a stretch of field with an obstructing fixture, compared with the time required to navigate the same size stretch of field without an obstacle. It accounts for the value of that time lost (£/hour). This takes account of the marginal machinery costs as well as labour charge, based on the calculated cost of operating the respective implement combined with the delay. This includes a relevant proportion of the capital cost, repairs and spares, depreciation and fuel. The time loss calculations combine all the machinery operations with assessments of machine sizes and operation frequencies. Costs used are laid out in the CAAV annual machinery costings manual with assessments of the frequency of each machine type and size. A more detailed explanation is to be found in Appendix A

Irrigation

This head of payment takes account of the costs incurred by irrigation in a field. It is calculated in a similar manner to time loss. It uses published data on how much cropping is irrigated in a typical year and how many times.

Area Loss

Area loss is the component that compensates for the land area immediately surrounding a fixture (or beneath it in the case of a pylon) that is not cropped because it is too close to, or within, the fixture. An assessment of the lost crop from additional wheelings and tramlines put in to navigate the structure is also included. This varies depending which crop is being grown and which fixture is being navigated. This head of payment calculates the pre-rent and finance cost of the uncropped land around the fixture plus the output lost by the additional tramline area. A more detailed explanation is in Appendix B

Yield Loss

This head of payment assumes a given yield loss within a certain vicinity of each fixture, which varies depending on the fixture type, size and crop type. The yield loss payment calculates a fixed yield loss percentage from the average yield of each crop that given year, multiplies it by a set area around each fixture, thus working out an overall decline in total output, which is compensated for at the value of the crop grown. Root crop yields are not reduced because of a high area loss calculation, but instead a quality downgrade adjustment is made. A more detailed explanation is to be found in Appendix C

Wasted Inputs

There are occasions when inputs may not be placed in precisely the correct place when an obstacle is in a field, obscuring the passage of the machinery. It includes the 3 inputs; seed, sprays and fertiliser. A formula is in place to assess the land area which is double-drilled. There is an overlap of spray applications in a similar manner. Fertiliser might be either placed on the same ground twice by the manoeuvring process, land on the uncropped area or might even bounce off the obstacle, thereby landing in the wrong place all of which are compensated for. An allowance is made for the percentage of liquid fertilisers, which are accounted for in the same way as sprays. A more detailed explanation is in Appendix D

Weed Control

There are various ways in which the weeds that grow around, or within an electricity fixture are controlled. Some farming systems (for example many that involve livestock) have minimal specific weed control methods beyond grazing, others involve spot spraying with knapsack sprayers, with quadbikes, other farm vehicles or simply walking from one to another fixture. Strimmers are also occasionally used. The frequency of each weed control form and how often weeds around fixtures tend to be managed per season are known (from survey) and accounted for in a similar manner to the time loss calculation. The likelihood that the weed controlled around fixtures may on occasion be combined with the weed control of non-fixture features is also accounted for. Appendix E gives a detailed explanation.

Health & Safety

This compensates for additional workload and cost because of the presence of electricity fixtures on farm. This includes the contribution to H&S policies and risk assessments, annual reviews and map preparation and updates. It includes additional staff training and instructions to contractors. For this head of payment, an average size farm with a typical number of electrical fixtures is used. A more detailed explanation is in Appendix F

Additional Explanatory Notes for Occupiers

- Electricity wayleave payments represent compensation for annual losses for interference on agricultural land caused by the presence of electricity lines in England and Wales.
- Arable land includes grassland that is part of the arable rotation, thereby up to and including 5 years old and the rotation then broken by another crop.
- Payment for an 'Additional Stay' will be applied when 2 stays on a single fixture are within 45° of each other.
- The higher 'Additional Stay' payment for a stay will apply to a single stay where the annexed pole is outside the cultivated area or where a stay is installed at more than 45° to an adjacent stay.
- Rates for Painter Brother (PB) single unstayed fixture are the same as for poles, a PB-double unstayed structure, assumes a double-limb structure with a gap between the two limbs of up to and including 6 metres and a PB multi-stayed structure assumes up to and including 12 stays based on a ground area of 23 metres square.
- Measurements of towers are taken from the exterior angle of the concrete bases at ground level. If part of a tower extends into a field, then a pro-rata payment will be applied.
- For each tower size category, the following land area has been used to calculate compensation:

○ T1 up to 2.6m x 2.6m	○ T8 over 9.1m ² to 10.7m ²
○ T2 over 2.6m ² to 3.8m ²	○ T9 over 10.7m ² to 12.2m ²
○ T3 over 3.8m ² to 4.6m ²	○ T10 over 12.2m ² to 13.7m ²
○ T4 over 4.6m ² to 5.3m ²	○ T11 over 13.7m ² to 15.2m ²
○ T5 over 5.3m ² to 6.9m ²	○ T12 over 15.2m ² to 16.8m ²
○ T6 over 6.9m ² to 7.6m ²	○ T13 over 16.8m ² (to 18.3m ²)
○ T7 over 7.6m ² to 9.1m ²	
- Where supports of two separate lines are within 30 metres of each other in the same enclosure, the occupier's compensation payment for those supports will be increased by 50%. This only applies to supports for which annual payments are made.
- Enhanced occupier's payments for commercial top fruit orchards, hop gardens and cherry and plum orchards, where supports interfere with the movement of machinery are paid at 150% of arable payment.
- Farming systems which include crops which involve exceptionally intense and multiple cultivations or other special factors may be considered for enhancement of advisory rates on merit. Any such claims should be made to the relevant electricity company.

Rates and Example Table

The guidance occupiers' wayleave payment calculations for fixtures on arable and pastureland are based on a series of loss headings which are summarised in Table A. Table A represents the apex of an extensive pyramid of further, detailed calculations. The values under each loss heading in Table A are derived from a number of separate summary tables in which losses across a range of crop types are represented. One of the many summary tables, relating to wooden poles, is provided below in Table B for illustrative purposes. Each value in Table B is derived from a catalogue of separate sub-tables, many of which have sub tables beneath them.

The end figure represents losses due to the wooden pole across all arable or grassland farming operations, intensive and extensive alike for a farm encompassing all farming systems. This approach has been applied to the calculation of guidance wayleave payments for many decades. It is considered to be, and has been accepted as, a fair and reasonable method of compensating for losses across a range of crop types.

Each cost item in the table has been calculated by reference to weighted averages reflecting a wide range of farming systems and so it must be regarded as unrepresentative of a specific farming business with its own, bespoke costs profile. The concept of average-based payments ensures equality and fairness for all wayleave grantors.

Table A: Summary table of Rates for key Electricity Fixtures with Constituent Costs

England & Wales		Arable							Grass						
2024	Arable Time Loss	Arable Irrigation	Arable Area loss	Arable Yield loss	Arable Wasted inputs	Arable Weed control	Arable H&S	Arable Total	Grass Time Loss	Grass Area loss	Grass Yield loss	Grass Wasted inputs	Grass Weed control	Grass H&S	Grass Total
Pole	£14.54	£0.15	£3.77	£0.49	£2.87	£1.93	£3.30	£27.04	£0.93	£0.02	£0.04	£0.20	£0.14	£1.64	£2.95
H-Pole	£16.85	£0.15	£5.09	£0.59	£3.93	£1.96	£3.30	£31.88	£0.99	£0.07	£0.06	£0.28	£0.154	£1.64	£3.18
Pole & Stay	£18.13	£0.16	£5.53	£0.61	£4.53	£2.01	£3.30	£34.28	£1.00	£0.06	£0.06	£0.31	£0.19	£1.64	£3.25
Isolated Stay	£2.52	£0.00	£0.68	£0.04	£0.63	£0.61	£3.30	£7.77	£0.16	£0.02	£0.01	£0.04	£0.04	£1.64	£1.91
Additional Stay	£1.26	£0.00	£0.34	£0.02	£0.31	£0.30	£1.65	£3.89	£0.08	£0.01	£0.00	£0.02	£0.02	£0.82	£0.95
less than 2.6m x 2.6m	£29.98	£0.17	£11.71	£0.32	£8.12	£2.05	£3.30	£55.64	£4.13	£0.08	£0.02	£0.55	£0.21	£1.64	£6.63
from 2.6m x 2.6m to less than 3.8m	£31.02	£0.17	£12.49	£0.36	£8.49	£2.14	£3.30	£57.97	£4.28	£0.10	£0.02	£0.58	£0.26	£1.64	£6.87
from 3.8m x 3.8m to less than 4.6m	£32.75	£0.18	£13.92	£2.96	£9.12	£2.17	£3.30	£64.39	£4.52	£0.14	£0.22	£0.64	£0.28	£1.64	£7.42
from 4.6m x 4.6m to less than 5.3m	£34.05	£0.18	£15.08	£3.19	£9.61	£2.21	£3.30	£67.63	£4.69	£0.17	£0.24	£0.68	£0.30	£1.64	£7.72
from 5.3m x 5.3m to less than 6.9m	£36.05	£0.19	£17.03	£3.55	£10.40	£2.31	£3.30	£72.83	£4.97	£0.24	£0.26	£0.75	£0.35	£1.64	£8.21
from 6.9m x 6.9m to less than 7.6m	£38.04	£0.20	£19.18	£6.10	£11.23	£2.35	£3.30	£80.41	£5.24	£0.33	£0.46	£0.82	£0.38	£1.64	£8.87
from 7.6m x 7.6m to less than 9.1m	£39.95	£0.21	£21.42	£6.58	£12.05	£2.47	£3.30	£85.98	£5.51	£0.41	£0.49	£0.89	£0.45	£1.64	£9.39
from 9.1m x 9.1m to less than 10.7m	£42.63	£0.23	£24.89	£7.25	£13.27	£2.61	£3.30	£94.18	£5.88	£0.53	£0.54	£1.00	£0.53	£1.64	£10.11
from 10.7m x 10.7m to less than 12.2m	£45.32	£0.24	£28.72	£7.92	£14.56	£2.76	£3.30	£102.81	£6.25	£0.67	£0.59	£1.11	£0.61	£1.64	£10.87
from 12.2m x 12.2m to less than 13.7m	£47.92	£0.25	£32.76	£8.57	£15.86	£2.93	£3.30	£111.60	£6.61	£0.82	£0.64	£1.22	£0.71	£1.64	£11.63
from 13.7m x 13.7m to less than 15.2m	£50.52	£0.26	£37.15	£9.22	£17.24	£3.11	£3.30	£120.80	£6.96	£0.97	£0.69	£1.34	£0.81	£1.64	£12.41
from 15.2m x 15.2m to less than 16.8m	£53.20	£0.28	£42.03	£9.90	£18.72	£3.33	£3.30	£130.75	£7.33	£1.13	£0.74	£1.47	£0.94	£1.64	£13.24
from 16.8m x 16.8m	£54.59	£0.28	£44.69	£10.24	£19.51	£3.33	£3.30	£135.95	£7.53	£1.22	£0.76	£1.53	£0.94	£1.64	£13.61

Table B: Summary Guidance Occupiers' Wayleave for Single Pole in Arable Land

Summary of All Fixtures for 2024 Wayleaves	Winter sown c. crops	Spring sown c. crops	Vining peas	Potatoes	Sugar beet	Fodder beet	Brassicas, beans and fresh peas	Field vegetables	(Forage) maize	Fodder /Forage & Catch	Established ley Silage	Established ley Grazed	Ley in Establishment	Fallow	Cover & Catch crops	Arable Total
Total Area	2,411,234	881,509	28,966	105,064	95,249	31,024	43,904	8,472	223,981	71,661	387,037	354,982	170,199	232,276	111,181	5,045,558
Area Percent	47.8%	17.5%	0.6%	2.1%	1.9%	0.6%	0.9%	0.2%	4.4%	1.4%	7.7%	7.0%	3.4%	4.6%	2.2%	100.0%
Single Pole																
Timeloss	£17.51	£15.50	£14.95	£42.18	£22.27	£16.68	£18.85	£35.32	£17.63	£8.31	£2.73	£2.73	£8.39	£1.31	£4.73	£14.54
Irrigation	£0.03	£0.03	£0.00	£3.42	£0.72	£0.00	£3.59	£3.59	£0.00	£0.00	£0.03	£0.03	£0.03	£0.00	£0.00	£0.15
Area Loss	£4.87	£3.20	£2.77	£17.41	£2.61	£5.92	£27.96	£27.96	£1.67	£1.30	£0.19	£0.28	-£0.01	£0.00	£0.00	£3.77
Yield Loss	£0.70	£0.47	£0.51	£0.76	£0.00	£0.00	£0.87	£0.87	£0.47	£0.21	£0.26	£0.00	£0.14	£0.00	£0.00	£0.49
Wasted Inputs	£3.21	£2.11	£2.72	£11.88	£4.41	£3.51	£8.01	£8.01	£3.01	£1.44	£2.47	£1.29	£2.01	£0.06	£0.50	£2.87
Weed Control	£1.93	£1.93	£1.93	£1.93	£1.93	£1.93	£1.93	£1.93	£1.93	£1.93	£1.93	£1.93	£1.93	£1.93	£0.00	£1.93
Health & Safety	£3.30	£3.30	£3.30	£3.30	£3.30	£3.30	£3.30	£3.30	£3.30	£3.30	£3.30	£3.30	£3.30	£3.30	£0.00	£3.30
																£27.04

Appendices ~ Detailed Notes

Appendix A ~ Time Loss

Time loss accounts for the costs incurred from the additional time and manoeuvres taken when navigating a structure. The time loss head of payment accounts for labour and machinery. It is only the costs actually incurred that can be compensated for under the regulations of statutory compensation not the opportunity cost of that time. To calculate the costs of time loss, four key pieces of information are required.

- What machinery is used to farm each crop
- How many times it is used for each crop
- What the cost of operating each piece of machinery is, including labour and tractor costs
- How long it takes each machine to navigate each type of electrical fixture.

The time taken to circumnavigate each type of electrical fixture with each type of farm machinery at each relevant size is required. This is multiplied by the cost per hour of each machine and the frequency the operation tends to be used on each crop.

Assessments have been made to measure the amount each piece of machinery is used each year to undertake field operations for each crop type. This is weighted to take account of different sizes of machine for each operation.

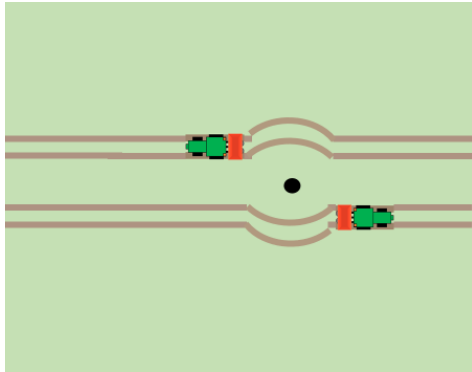
Machinery costings are accounted for on a partial basis and include the additional costs incurred from the additional time and manoeuvres taken when navigating a relevant structure. This is because the machinery would be required on the farm regardless of the presence of in-field electrical fixtures. Thus, depreciation included in the time loss allowance accounts for the devaluation of a machine from its use, rather than simply its age. Fuel is included as are repairs and spares. Partial costings do not take account of finance or insurance costs.

The CAAV maintains a schedule of agricultural machinery costings including a range of typical sizes operated in British agriculture. Detailed costings for the machines on this list are updated annually. This is used for both machinery and labour costings.

Appendix B ~ Area Loss

The losses associated with this head of payment are straightforward. The compensation calculation has regard to the footprint of the structure and accounts for the land area that is not farmed because of the structure being there and the additional wheelings and tramlines created.

For a pole as a single point in a field, (1-dimensional structure, leaving a single point in the field to avoid) the impact on arable farming is the same, regardless from which direction it is approached. For many farming processes, avoiding this structure would create an 'eye-shape' of uncropped land as follows:

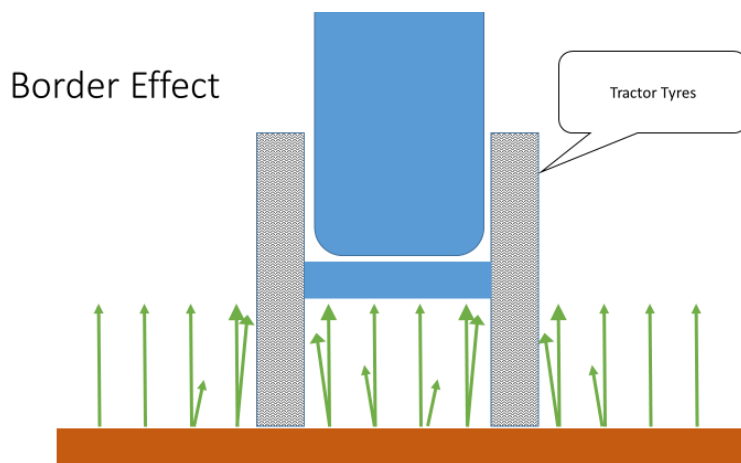


There is a variance on the shape and area of the unfarmed area, depending on the structure's alignment to the path of the machine being used, but an area is set that assumes a standard land-wastage.

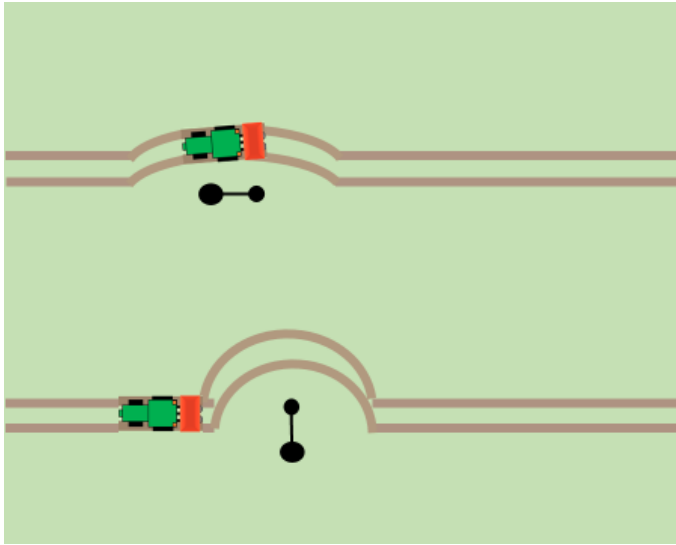
The unfarmed area varies between crops, with a considerably larger uncropped area for bed-plants such as potatoes. This is because the beds cannot be re-routed to cross other beds because of the presence of an obstacle; the planting simply stops and then restarts when the machinery is on the other side of the fixture. The un-cropped land left is often dictated by the amount of space needed by the harvesting equipment to be able to access the beds where they lead up to a structure.

The area loss calculation also includes for additional wheelings and tramlines created by the necessity to avoid the structure. This is based on calculating the additional length of tramline required to navigate the pole, less the tramlines saved (if any), multiplied by a standard width of tyre.

Yields near a tramline are higher than average as each plant has access to more resources (light, fertiliser etc.) and this is known as border effect and is accounted for.



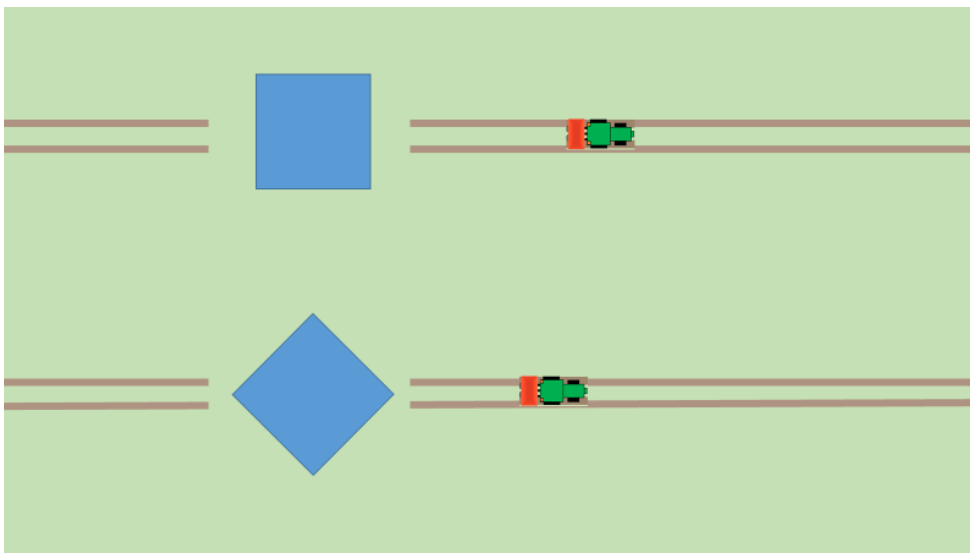
H-poles, or poles and stays are 2-dimensional (leaving a line in the field to avoid). This means that their impact will vary considerably depending from which angle they are approached in the field as the image demonstrates. The area loss calculation includes formulae which take account of these factors.



A) parallel to the tramlines, a narrow obstacle

B) approached from 90 degrees, their impact will be greater

Pylons are 3-dimensional (so create a shape in the field that needs to be avoided) and have a reduced variation of impact in relation to being approached from different angles, but the approach from 45 degrees, means they present as a diamond creates a larger obstacle than a square of the same size and so this has also been accounted for in the calculation.



For each fixture, a minimum of 1 metre stand-off around the edge of the structure is added to its area, and with smaller structures such as a poles or poles and stays, the area is assessed as the average impact on the cropping.

Appendix C ~ Yield Loss

The yield of some crops can be lower near to a pole or other fixture than in the rest of the field and this is calculated (varying percentage yield loss and distance from structure depending on electricity structure). The value of each crop is taken from Farm Business Survey data where possible or the Agricultural Budgeting and Costings book. The average yield of the FBS area covered is multiplied by the average crop price to give a total output. To this, the value of any straw is also added, to give the value of the total crop output. Some crops are not covered in detail in the FBS so in these few cases, the ABC book figures are used.

For potatoes, field vegetables and brassicas and beans, yield loss is not an issue, because the uncropped area is comparatively large. However, there is an adjustment to take account of the crop damage incurred by wheelings.

For grass and forage, a theoretical loss is calculated on harvested grass, and an estimate of the average market value is applied using published prices. There is no yield loss on grazed grass or fallow land.

Appendix D ~ Wasted Inputs

This head of payment is a large and multifaceted calculation. It involves assessing the seed, sprays and fertilisers placed either in the wrong place or unnecessarily as a result of the obstacle.

Wasted Seed

When planting a combinable crop or grass field, it is accepted that when the seed drill passes the obstacle, some seed is inadvertently placed in parts of the field that have already been planted thereby becoming double drilled. The area assumed to have been double drilled varies according to fixture type, with an individual pole starting at 57m² and increasing for other, larger and more complex structures. The area of double drilled land multiplied by the cost of seed per metre square makes the cost of the wasted seed. For potatoes and field vegetables there is no wasted seed. It is assumed the planter is turned off whilst the fixture is navigated and turned back on again once it is returned to the correct position in the soil.

Wasted Sprays

The cost of wasted sprays is calculated in the same manner as for seed. The area around a pole assumed double sprayed is calculated as 2½ times the width of the boom for a pole and more for larger structures. This is multiplied by the cost of the total spray bill in the FBS gross margin, to give the cost of wasted sprays. As the size of the fixture increases the area wasted increases.

Wasted Fertilisers

Fertiliser can be wasted through three causes;

- fertiliser that hits the fixture when it is jettisoned from the spreader, rebounds and lands in the wrong place,
- fertiliser that is thrown into the uncropped area that the drill did not reach
- fertiliser that overlaps onto land already fertilised by the manoeuvring of the machinery.

The first component is calculated as the likely proportion of fertiliser that will hit the fixture, depending how large the fixture is, and how far away it is from the spreader. Secondly, the fertiliser that is likely to fall onto the uncropped area is calculated by the cost of fertiliser per metre square multiplied with the uncropped area.

The third component is calculated in two ways according to fixture whether it is a pole, smaller structure or larger pylon. As a tractor spreading fertiliser manoeuvres around a fixture, it will have to take a route it would otherwise not have elected to take. This means that the fertiliser is spread onto parts that have already received sufficient. This is calculated as the time to navigate the fixture, multiplied with the forward speed of the machine, the width it spreads and therefore providing the amount spread per minute. This figure is then multiplied by the cost per square metre of fertiliser on the field for each crop.

There are several occasions when a fertiliser spreader does not hit the fixture at all and simply passes straight past. The likelihood of this is also statistically calculated and included in the costings.

For the larger structures, the process is slower largely by virtue of the headland. Calculating wasted fertiliser when navigating round a pylon involves different assumptions. The uncropped area is simply the area 1 metre beyond the edge of the fixture. There is therefore no ricochet to calculate from granules hitting the fixture. Being a headland-based circumnavigation, it can be more precise. The time to navigate a structure is considered in two ways. Firstly, on the basis that if it takes more than a short time to navigate a fixture, it is assumed that the spreader would be disengaged. This creates a maximum wasted fertiliser associated with extended time loss. Secondly, an allowance is built into the calculations to allow a short period of tractor deceleration as the fixture is approached. This takes into

account the fact that fertiliser spreading is a relatively fast process, and a heavy tractor and spreader requires a few metres to slow to a navigable speed before disengaging the spreader.

An allowance is made to account for the small but growing proportion of liquid fertiliser. and is costed in the same way as for wasted sprays.

Appendix E ~ Weed Control

Compensation is paid for the time and costs incurred in managing the weeds that grow around poles and under pylons. The main methods to control weeds are; using a knapsack combined with an ATV vehicle, a knapsack solely on foot, a knapsack combined with a farm vehicle such as a Land Rover or a strimmer combined with a farm vehicle.

To calculate the costs of each alternative, the costs of the farm worker are taken from the CAAV agricultural costings manual, along with the marginal costs of the ATV or farm vehicle. A costing for the capital and ongoing costs of the knapsack are also included. The calculation includes the following:

- Fill and calibrate knapsack
- fuel strimmer
- travel to first fixture on farm (by each respective means)
- spray or strim around the fixture
- travel to next fixture (by each respective means)
- repeat previous 2 steps for set number of fixtures
- return to farm
- clean and wash out knapsack
- clean strimmer
- return strimmer / knapsack to shed

The costs of some of these processes incurred are the same regardless of weed control process, and others vary accordingly. For example, it takes the same time (and therefore cost) to prepare the knapsack if you are walking to a fixture or taking the farm vehicle, but the strimmer option allows more time at the fixture than the spraying options.

Smaller features such as poles, attract proportionately higher payments per square metre of weed control than the larger fixtures such as pylons. These adjustments are all accounted for in the costings. The costs of each method are calculated, then multiplied by the proportion of structures that are managed in each way to generate a weighted average cost combining each method appropriately.

From the weed control survey, it is known how many times farmers apply weed control processes each year; some are multiple, some only once per season, and others less than once per year. Others do not apply weed control at all, often for good agronomic reason.

When spraying weeds other costs are incurred and include:

- a disposable overall and gloves
- a sprayer qualification is required, the 'PA6 Certification' for hand-held applicators to which a contribution is calculated based on an estimate of the cost of the certificate, divided by the number of times the individual is likely to use a hand-held sprayer.

An adjustment for treating multiple electricity structures on the same weeding trip as well as some non-electrical structures is also accounted for.

The total cost of the process is divided by the total number of fixtures in arable land to represent the typical 'average' farm.

Appendix F ~ Health & Safety

Effective health and safety management is an obligation for all farming businesses. Electricity companies provide safety guidance to landowners and occupiers. They also support the operation of safe systems of work in the vicinity of their apparatus through the incorporation in their guidance wayleave payment rates of an allowance to reflect the costs which farming businesses might incur in the discharge of those responsibilities. The allowance is calculated under three headings, Safety Management, Safety Implementation and Staff & People.

Under the Safety Management heading, an allowance is made in respect of costs associated with the business' health and safety policy and plan, recognising that these documents are relevant for a fixed period and then may be re-written. It is assumed that the policy and plan may be reviewed annually, sometimes with an expert advisor and that the plan will include a series of risk assessments, some of which will be relevant to electrical fixtures or overhead power lines. An allowance is made for these. The allowance assumes that the risk assessments may be reviewed annually and rewritten periodically, sometimes with the support of a safety advisor.

Under Safety Implementation, this recognises the cost of maintaining maps of the farm. The farmer needs a record of where the fixtures are, their type and their location. An allowance is made for the updating of maps as the number of fixtures changes. Also, it is assumed that maps are regularly reviewed to ensure they are correct and may also be provided to people who enter a farm or field so they are aware of the hazards.

Health and safety is all about keeping people safe. People must be warned about hazards and training provided to staff on safe systems of work. Therefore, an allowance is made for health and safety training for new members of staff in respect of electricity apparatus. This includes new staff, permanent and casual. An allowance is also made for an annual health and safety training meeting for staff. Briefings to contractors and delivery drivers about taking care around electricity apparatus is recognised, as is the provision of materials such as maps, instructions on how to avoid fixtures and specifically, not tipping near overhead power lines.

ⁱ NFU = National Farmers' Union
ENA = Energy Networks Association
CLA = Countryside Landowners' Association
FUW = Farmers' Union of Wales
CAAV = Central Association of Agricultural Valuers