From: Gary Jones Solicitors
Sent: Monday, January 29, 2024 10:31 PM
To: Climate Change, Environment, and Infrastructure Committee | Pwyllgor Newid Hinsawdd, yr Amgylchedd a Seilwaith <SeneddClimate@senedd.wales>
Subject: Undergrounding new power lines

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FAO: The Chair
The Climate Change, Environment, and Infrastructure Committee,

We refer to our previous exchange of correspondence with the CCEI Committee.

As part of an information gathering exercise, we have received a scanned copy of a statement of evidence from Mr Jason Thomas of ATP Cable Plough, which specialises in laying pipes and cables within the UK and the rest of Europe. Please find attached a copy of the statement of evidence received. Mr Thomas has authorised that we copy to you and to your colleagues sitting on the CCEI Committee.

The statement illustrates the method and operation of cable ploughing, and associated equipment.

The statement is also relevant to:

. Use at 400 KV;
. Reduced environmental impact;
. Speeding up delivery;
. Minimising community objections;
. Reduced costs;

The statement confirms:

. That whether using cable plough or open trenching for 400KV, exactly the same specifications for 400kv projects can be achieved. The end result is the same. It is simply the method of installation which is different. The ducts and cables which can be placed using a cable plough, are at a diameter, and can be placed at a depth, with spacing, bedding, and surround materials, which is the same as per specification drawings for the open trenching of underground 400KV;
. That cable plough can satisfy requisite specifications to underground 400KV but can do so in a way which is significantly less impactful on the environment and biodiversity, which is quicker and can reduce costs.

Paragraph 7, sub paragraphs (i) – (p), provide more detail, supporting and clarifying that 400KV can be placed underground by cable ploughing.

Paragraph 12, sub paragraphs (k) and (l) are relevant to costing comparatives.

We recently organised for a freelance cameraman to film cable ploughing in action. It is helpful to have footage which is of broadcasting quality. Working from that material, we have prepared two short videos. The links to the videos can be found at the head of this email. The videos, and the photographs attached which accompany the statement, help to illustrate some of the information confirmed the statement.

We understand that Mr Thomas has corresponded with the CCEI Committee offering to attend before the Committee, but has not yet received a response. The statement confirms the willingness of Mr Thomas to assist on an ongoing basis and how best he can assist. No doubt the Committee will wish to liaise with Mr Thomas.

We received confirmation, within earlier correspondence, that once the Committee should receive response to correspondence sent from the Committee to the Minister for Climate Change in respect of cable ploughing, and upon the CCEI Committee receiving more information from ATP, a meeting would be set up, in order that we can discuss with you directly the issues raised in our correspondence. As these conditions have now been addressed, we would be grateful to meet with you, and would be obliged if the Clerk to the CCEI Committee can contact us to make arrangements accordingly.

Gary Jones
Solicitor (Non-Practising)
Llanarthne Area Community Pylon Group

ATP

Statement

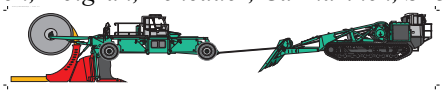
I Jason Lloyd Thomas, of Glanafon, Dolgran, Pencader, Carmarthenshire SA39 9BX, confirm as follows:
1. I am the Managing Director and sole shareholder of the company called 'A Thomas Plant Hire Limited.' The Company registration number is 06550558. The registered office is Glanafon, Dolgran, Pencader, Carmarthenshire SA39 9BX. The company is often referred to as 'ATP Cable Plough'.

2. Experience and expertise:-
a) The evidence set out in this statement is derived from:

- My direct involvement in cable ploughing;
- My direct involvement in laying cables, pipes and ducts using open trenching;
- My knowledge of industry practices, gained from direct experiences, accumulated knowledge, and many industry contacts, established over many years.

b) My company was incorporated on 01.04.08. The business involves specialised construction activities. The company is a specialist utility plough contractor operating in the UK and in the rest of Europe. Our cable ploughs are used to install a variety of service media. These include fibre optic and communication ducts for telecoms, gas, water and sewerage pipes, in addition to electricity cables. On incorporation in 2008, my company absorbed the unincorporated business in which I had been involved for many years, which began with my grandfather in the 1960s.
c) Prior to 2014 my business utilised conventional ploughs rather than the more modern technology. In 2014, my company acquired the first of the four spider ploughs which we now own. The cost exceeded 2.1 million. A second machine was acquired in 2016. A third machine was purchased in 2018 but sold on due to its smaller size in 2021. More recently we acquired a further two machines. I understand that there may be in the region of forty-five machines throughout the world. Therefore, we have an eleventh or thereabouts of the world supply.
d)I have approximately 27 years' experience in laying cables underground, including an extensive experience of laying cables using excavation and open trenching methods, and an extensive experience of laying cables using various cable plough machinery. I have extensive experience of the placement underground of various utility media, including electricity cables.
e) I have attached as a schedule to this statement a list of works and projects in which my company has been involved. The list is not exhaustive.

3. The reasons for this statement:
a) The Chair of the Climate Change Environment and Infrastructure Committee (the Senedd/Welsh Parliament) sent me a letter requesting information relevant to cable ploughing.
b) I have received several enquiries, during 2023 and continuing into 2024, some general, and some specific, about cable plough machinery and technology.
c) In contrast, prior to last year, interest tended to be limited to enquiries from District Network Operators or contractors requiring our services. However, in 2023, there was a sudden emergence of interest in cable ploughing,



from politicians, from developers and industry figures, and from the media. This seems to reflect the wish at local and national level to explore an appropriate and balanced grid system whilst achieving minimised impact.
d) The questioning about cable ploughing includes:

- How does it work?
- Is it available?
- Is it proven technology used for recent and current projects in Wales, the UK and Europe?
- Can it minimise impacts?
- Can it reduce environmental impact, especially compared to the use of pylons with overhead lines and compared to undergrounding using open trenching and excavation?
- What does it cost?
- Is it more expensive than other alternatives?
- Does it allow costs to be reduced?
- What is the speed of delivery?
- Is it a feasible, viable, and beneficial alternative to pylons?

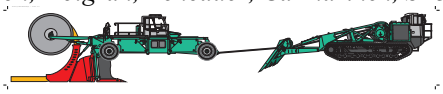
e) I am providing this statement as a platform for the evidence which I can provide to Government and to Parliamentary Committees, but also as a means of response to other more general sources of enquiry.

4. This introductory statement will concentrate on:

- How cable ploughing machines work, what they can do (including the size of the ducts and the cabling and the voltage which they can accommodate), the availability, and the potential offered by cable ploughing;
- The reduced impacts which cable ploughing can offer, including reduced land disruption and reduced environmental impacts;
- The 'build speed' which is available;
- How and why costing reductions could be secured by using cable ploughing;

5. My company uses machines manufactured by FOECK. The manufacturer could be a source of useful data by way of confirmation of my evidence as to the capacity and capabilities of its machines.

6. Method of operation:
a) The front vehicle is a winch which can be tracked depending on the terrain. The cable plough follows behind, and is winched forward from the leading vehicle. Both the winch and the plough can be driven separately and independently, but the independent operation of the plough is very limited; the tracked crawler, as the front vehicle, has a significant traction and pulling strength.
b) The cable plough can be used to lay cable direct directly into the ground. Alternatively, the cable plough can be used to lay pipes or ducts, and relevant to electrical installations, the cables can be pulled through the ducts once the ducts have been laid.
c) Cables or ducts can be carried on the cable plough. When laying electricity cable directly into the ground, the earth cable and the accompanying fibre optic cable can be carried on separate coils on the front of the cable plough, and both cables feed into the cable chute together with the main cable, so that they are laid together. Likewise with warning tape and the protective plate. Depending on volume/size, or the nature of the project, cables or ducts or



additional coils can be fed into the cable plough from a drum carried on an independent drum carrier which can be a tractor or tracked crawler drawn cable trolley. It is possible for additional coils to be dropped if required, using land or air transport, at particular strategic points, ahead of the machinery, to be collected at intervals as the machinery proceeds along the agreed route. Another option, is for the duct to be laid out, uncoiled, running adjacent to the immediate route of the cable plough, and the duct or pipe can then be lifted manually and fed into the cable plough which will lay it in the prescribed way.

d) The cable plough machine places the cable or duct in a sensitive way, installing the cable or duct within a groove cut in the ground.

e) If the cable is to be laid directly into the ground, or if a duct is to be laid, then if the specifications provided from the client require the cable or duct to be laid on a bed of stone dust or other material or if dust or other material is to be used as a surround or cover for the cable or duct, the cable or duct can be laid simultaneously together with the dust or other support materials as required. When a bed or surround or cover comprising stone dust or other materials is required, we have a machine running alongside or behind the cable plough which carries the selected bedding material which then passes via a conveyor into a chute fitted to the blade of the plough. The machine can carry thirteen ton of stone dust which feeds in a controlled way into the plough via the conveyor and thereafter into the slit or groove immediately as it is being opened. The process is controlled and timed so that if a bed of material is required the material is placed in the slit whilst the cable or duct remains suspended until the bed has been laid.

f) We carry out operations to correspond with the specific design drawings provided to us by the client. Each of the Tier 1 contractors will have cable designers who will specify their preference for the materials and design to be used. Cable designers can perhaps on occasion be more cautious than they need to be, and there is a need for balance in order to achieve a safe and efficient project without undue cost. We make the observation that if the specification drawings can avoid the use of a bed or surround of materials, to be compensated by a cable or duct of increased diameter, this can speed up even further the process of laying the cable or duct and can reduce the machinery required for a project. There is less likely to be a requirement for bedding if laying ducts, but this can depend on the preference of the designer. We do not hold out an expertise in cable design, but cable manufacturers have the expertise as to cable specifications required for higher voltage. If the designer may prefer to dispense with backfill by stepping up the cable size, then we can then proceed without a separate vehicle to carry the bedding materials, and without the requirement to wait for refilling of the vehicle each time its content is used. Also, if ducts are laid out on the ground in readiness, the machinery required for a project can be limited, to the front winch, the plough, and the excavator following to close up, which allows for even quicker progress to be made and for minimised impact.

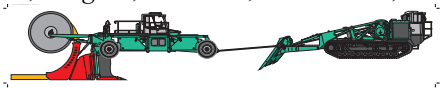
g) GPS is used to vary the height of the cutting blade adjusting automatically to the ground surface. The unique design of the combined blade and guidance system means that pipes and cables are laid exactly in accordance with regulations – whatever the speed of travel.

h) The slit opened by the plough is closed by the tracks of the excavator which follows behind. It is just flattened back over. If we are ploughing firm ground, the excavator may need only drive over the slit to close it back. If the ground is wetter, or if ground conditions are such that there is a need for more attention to prevent scarring, there may be some bucket work with the excavator but limited to ensure a smooth surface ready for seeding.

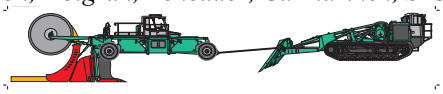
i) With the associated machinery described, the cable plough cuts, installs and backfills in one operation. The process can be completed all in one pass, as cable plough technology has significantly advanced.

7. Actual and potential use:

a) We have used cable plough machinery to lay a variety of electricity cables, including cables at 220kV, 132kV, 66kV, 33kV and 11kV.



b) When laying lower voltage electricity cable, it is more usual for the client specification to provide for the cable to be placed directly into the ground within a single slit and without ducting.
c) If required to lay a second lower voltage line within a parallel slit then the two slits can be kept just 400mm apart.
d) For higher voltage cables at 132kV or above we would expect the client specification to provide for a duct or pipe to be laid whereby the cable is pulled through after the duct is first laid. This is the process we would anticipate for all higher voltage projects, including 132kV and 400kV, based on the projects we have undertaken and based on the various design drawings which we have received.
e) The most recent 132kV we undergrounded by way of cable plough was a double circuit. For this particular project involving 132kV, we were required to reference the WPD cable installation manual CA 6A. The manual permits for double circuits to be placed within the same duct, but expresses a preference that for double circuits each circuit is placed within a separate duct and that the ducts are kept separate. The cross sectional drawing on page 20 of the manual shows 132kV phases in trefoil, whereby each set of cables is shown as 100mm in diameter spaced 650mm apart. For this project, the cable for each single circuit consisted of the three phases in trefoil, tightly together, within a separate duct, each placed into an individual slit. Therefore two slits, each carrying one duct. The ducts were laid at a depth of 1.2m, and the centre to centre distance was 1.5m.
f) We would consider a ducted system as appropriate for 132kV or over. The pipes or ducts are installed firstly using the cable plough and then the cables are pulled through into the ducts. This would also allow cables to be switched out in the event of a fault, or to allow for replacement with larger cables in the future (future proofing). If required, cables can be brought to site at strategic joint bay locations and pulled into ducts
g) The 'Sea Green' project in which we were involved was a 220kV link, comprising three circuits. The system was ducted and completed via the cable plough system. The ducts were 225mm in diameter. The communication ducts laid at the same time were 110mm.The machine also installed the master tile with a 100mm separation from the electrical duct and marker tape (warning tape) 100 mm above the stock board. The client for the Sea Green project came to us and asked-can you do it that way. Whilst we will advise or discuss with a designer, based on the experience and knowledge which we have accumulated, responsibility for the design rests with the client and we will install as per the specifications received from the design team engaged by the client as appropriate.
h) For cabling up to 220kV, the designer/client may prefer a trefoil design, whereby the three phases are arranged in a vertical triangular shape, or the designer may prefer a design whereby the three phases are laid out horizontally. Phases can be placed horizontally or in trefoil, depending on the specifications preferred for the job.
i) To date, we have not laid underground electricity cable at 400kV or 275kV, using cable ploughing, simply because there has been no call to do so as yet from the transmission operators. So far as we are aware, no-one in the UK has laid 275kV or 400kV using cable plough, simply because the client has not asked for it. The important questions are, can it be done at 275kV and at 400kV, and if so, should it be done?
j) Based on my experience and use of cable plough technology, I am aware of what the technology can offer and achieve, in terms of the size of cables which can be handled and laid by the cable plough machines. The machines can accommodate cable, pipe or ducts, with a diameter of 620 mm max which can be placed at a maximum depth 2.8m. The width of the slit is dictated by the size of the chute opening affixed to the blade on the plough. Chutes can be manufactured to accommodate specific cable or duct specifications. By way of a useful comparison, specification drawings received in respect of more than one open trenching project at 400kV specify the ducts required to carry 400kV cable as just 250mm in diameter.
k) I have reviewed various specification drawings for the undergrounding of 400kV using the older method of open trenching/excavation. The important point to emphasise, is that using the cable plough, we can achieve the same end result as if the cables had been laid consistent with the specification drawings for open trenching, save by using cable ploughing, we can avoid the disruption and impact associated with open trenching, we can deliver far more quickly, and at a significantly reduced cost. Cable plough is just a different means of installation. A different method,



in order to arrive at the same end result. Using the cable plough we can achieve exactly the same end result as if the installation was consistent with specification drawings received for open trenching, whereby the pipes or ducts can be at the same depth and are placed at the same distance apart and can be placed within the same bedding, as shown in the design drawings prepared for the installation of 400kV by way of open trenching. The method of installation need not affect the end result, which can be the same whether undergrounding using a cable plough or open trenching. The placement of 400kV cables underground using open trenching has already been verified and there are various projects in the UK which involve the undergrounding of 400kV cables. The undergrounding of 400kV using open trenching, is indicative, that it is feasible and practical to lay 400KV underground. We simply confirm that we can place the cables/ducts underground, with the same end specification, using cable plough as a preferred alternative.

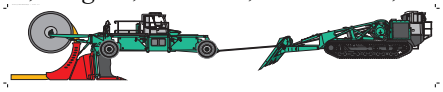
l) For cables at 400kV, retaining each phase within a separate duct, to comply with the specification drawings which I have reviewed, there would be three slits, each containing an individual phase within its own individual duct. The centre to centre measurements between each of two outer ducts and the central duct would be between 400mm and 725mm.Each of the three ducts would be 250mm in diameter. Based on the design drawings, the total width for a circuit of 400kV including the spacing between three ducts could be circa 2.2m. My understanding is that it is possible to lay another circuit of 400km alongside the first circuit, keeping the spacing between the outer ducts of each circuit at an approximate 5m dependant on design requirements. Therefore, two circuits at 400kV could be laid within a strip of circa 9.4 m in width.

m) The specification drawings which I have reviewed, for 400kV placed using open trenching, allow for a maximum depth of 1100 mm between the top of the duct and ground level whereby the depth of the slit to accommodate this, together with a duct of diameter 250mm on a bed of 100mm, would be 1450mm, which is easily achieved using the cable plough which permits for ducts to be laid at a depth of up to 2.8m.

n) Each cable plough machine can provide for one slit per run. Therefore, if laying a double circuit at 132kV or 220kV, the cable plough would complete one slit over a stretch of ground and then return to complete the second slit over the same stretch parallel to the first slit. The GPS technology used allows for precision. If laying 400kV, as per the specifications described earlier in this statement, keeping each phase within a separate duct and each duct to remain separate, over any given stretch of ground the cable plough would need to pass over three times, opening, installing and backfilling one slit during each of the three manoeuvres. However, on any given project, more than one cable plough machine can be used to expedite, each working on a different section of the route. Also, there would be an individual design for each project, and should undergrounding using cable ploughing be adopted as the starting point for national policy for the delivery of new electricity infrastructure, no doubt this would encourage innovation in the design process to simplify the design consistent with good practice.

o) I am aware that should a length of cable be laid within varying ground or geological conditions, the designer may prefer to insulate all or part of the cable towards a comparable heat loss throughout the overall length, promoting a consistency of transmission despite the different types of ground condition along the route. Improved transmission and heat release can also be regulated depending on the depth of the installation and the diameter of the conductor. These are not areas within my expertise, as the function of my company is to install and not to design. I can simply re-iterate, that the fact that 400kV has been placed underground within the UK, and design drawings for undergrounding 400kV have been prepared, approved and utilised, is indicative that 400kV is operational underground, and cable plough offers an alternative method of installing, whatever the voltage of the new cables to be laid, providing for an end result consistent with the depth, spacing, bedding and diameter preferred within specifications for projects involving open trenching at 400kV.

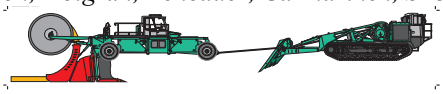
p) I am aware that cable plough can also be used for transmission using direct current (DC) rather than Alternating Current (AC).Only two phases are utilised for DC, so if the specification was to lay the two phases within separate



ducts whereby each duct would be placed in a separate slit the process would involve two parallel slits rather than the three parallel slits required for 400kV in AC.
q) We are often requested to lay fibre optic cable simultaneous with the installation of electricity cables. We have done this many times, and the installation is relatively easy. It involves feeding the fibre optic cable or the ducting for the fibre optics together with the electricity ducts or cables using the feeder on the plough. The fibre optic duct or cable will usually position above or on the shoulder of the electrical installations. We have not encountered a problem laying fibre optic cables with new electricity cables, which can be common practice.

8. Facility for inspection, repair or maintenance:
a) Joint bays allow access for joining cable lengths together and allow access to the cable or into the duct once laid. Maintenance, repair or replacement should not be necessary unless a section of cable is defective and as cables are pre-tested, before they are laid, to ensure that they are satisfactory, the chances of laying a bad conductor should be negated.
b) The location of Joint bays for 400kV, 275kV and 132kV cables and for 66kV, respectively, would be broadly the same. Joint positions are placed on average every 750m, but in the UK can range from 400m to 1500m dependant on cable size and terrain. Depending on the lengths of cables used, or specific to an individual project, the distance of the joint bays may vary. For convenience and ease of access joint bays are often placed adjacent to a hedge or field entrance.

9. Conditions and obstacles:
a) We have posted on our web site, within the section entitled 'Our work', photographs and descriptors relevant to various project works which we have undertaken. A small selection of the photographs from our company web-site, are reproduced for ease of reference, within a schedule attached to this statement.
b) The cable plough equipment is suitable for various soil conditions, including sand, gravel, and moor. Difficult ground conditions have been encountered and managed. The hydraulically adjustable ripper shoe, allows the desired depth to be maintained continuously, even with changing soil conditions. This allows work to be carried out without interruption and avoids costly reworking.
c) The cable plough machines can adapt to difficult terrain. The enormous pulling force of the mobile winches and the tractive force is a big advantage, together with the adjustable outriggers on the plough. If laying high voltage, it is important that the tracked crawler is well grounded, but the flexibility and manoeuvrability of the machines, provides a potential to work on significant terrain and gradient. We have been comfortable using on gradients up to 45 degrees. The adaptability of the cable plough enables it to cope with a variety of surfaces, whether flat, hilly, or undulating terrain. The photographs for the Boat of Garten project, displayed on our web- site, are indicative of what can be achieved in terms of gradient and terrain.
d). Obstacles such as ditches and water crossings have been encountered. By way of example, we were involved in the Henstridge project for UK /DNO in June 2019. Hedge crossings and ditches were passed in a number of locations on the route removing the need for horizontal directional drilling (HDD), offering considerable cost savings to our client. All sites ploughed were reinstated within twenty-four hours to minimise the environmental impact.
e) The machinery is capable of operating in wet and adverse areas, such as across marshland, through ditches and even into rivers. For small rivers or tributaries, as the cable plough is classed as trenchless, we can plough across the river bed. We can negotiate water crossings up to a depth of 1.9 m. If a river is wide or deep or protected then horizontal drilling would be an alternative and horizontal drilling can be used to accompany or supplement the work with the cable plough. ATP does not undertake drilling work but works in unison with whichever drilling company is



contracted. The need for drilling would be limited because of the potential which the cable plough machines can offer. We were involved in the De Weel project in the Netherlands in 2021. Ditch crossings eight metres wide and with one and a half metre depth of water were successfully passed in a number of locations. The project passed through sensitive and valuable arable land. The route was also reinstated within twenty-four hours to minimise the environmental impact and to assist with top soil / sub soil protection.

f) When encountering hard rock or rock layers, we were able to break it out first before continuing to cable plough. It may also be possible to route around hard rock. We were involved in the Boat of Garten (Vista) project in February 2020, as sub -contractor for Morgan Sindall which was the Tier 1 contractor. Ground conditions were particularly hard in places with boulder fields and fractured rock sections, and a covering of deep peat in others. The plough tied in well with HDDs and joint bay positioning.

g) Cable ploughing close to obstacles is possible. The underground cables can be laid using cable ploughing at short distances from objects such as walls or hedges. The photographs on our web-site are illustrative of the precision which is possible, such as the photograph for the Sandford project which shows cable ploughing in close proximity to a fledgling hedge.

h) Road side projects are possible using the cable plough, providing the roadside verges have not already been utilised for a variety or collection of service media. A minor road can be opened up during the short period of time which is permitted, and ploughed through before filling with sand and putting plates over so the road is passable pending resurfacing. More major works involving placement under road surfaces can be carried out with the requisite controls.

i) If pipework is encountered, then depending on depth, the pipework can be capped with concrete and cable ploughed over, or alternatively a mini digger or drilling can be used so that cabling can be run under it. Land drains are not always on a plan, or a plan showing the position of land drains may not be accurate. If we cut through a land drain, the exact location is recorded. After the duct or cable has been laid, the slit is folded back down, but a specialist drainage firm will then attend to repair the break in the drainage pipe. If damaged during the passage of the cable plough, the ground beneath the drainage pipe, save for the small dimension of the blade, will have remained compacted, therefore providing good support for the land drain including the replacement connection. The contractor would excavate the small depth to find it but in the course of the repair would not excavate underneath it, thereby retaining stability. In contrast, if a land drain is broken during open excavation, the section of replacement land drain would be situate on a base which is insufficiently compact, whereby within the replacement section water could hold or a blockage could occur if the replaced pipe begins to sag because it is not sufficiently supported.

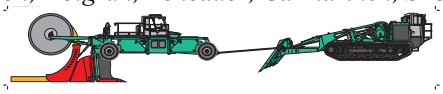
10. Reduced environmental impact:

a) The process of cable ploughing, is environmentally friendly compared to traditional open cut methods of service laying, and compares favourably when contemplating the environmental damage and land impacts which can be associated with overhead lines supported by cables.

b) Cable ploughing enables designers to soften the impact of schemes when designing, reducing disruption to geological structure. With only a narrow cut into the ground, there is little damage.

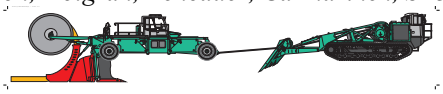
c) No soil is excavated, thus avoiding soil structure changes and subsequent compaction. There is no removal or mixing of soil layers. The cable plough displaces, rather than excavating or lifting. This makes the process significantly more environmental friendly and less disruptive.

d) An important advantage of the cable plough technique is that limited preparatory work can be required .The cable plough process can reduce the need for removal of vegetation, and can avoid altogether the removal of topsoil.



e) If there is a need to cross a hedgerow, the limited section of the hedge affected can be lifted completely and then re-instated completely within twenty four hours.
f). Another environmental advantage, compared to long-lasting construction sites required for pylons and open trenching, is the opportunity for lower fuel consumption and a reduction in the associated CO_2 emissions. With cable plough laying, the manufacturers' specification is limited to around 50 litres of diesel fuel consumed per 1,000 metres of laying distance. We have recorded fuel consumption, using HVO diesel, at 58 litres per km per slit on the Sea Green project. By comparison, installing the same distance with overhead lines and pylons, using alternative machines, such as heavy cranes, can consume far more diesel fuel and laying cables with an excavator for open trenching could involve diesel use which is 10-15 times more than cable ploughing.
g) For more difficult terrains, as all machines used are tracked as necessary, there is no requirement for haul roads, in contrast to the extensive requirement for haul roads required for pylons. The provision of haul roads, increase the carbon footprint, require the production and carriage of stone, construction work, and the excavation and removal of waste. Of course, haul roads also involve additional cost.
h) The cable ploughing techniques used, enable the installation of cable underground in a most efficient and effective way. We were involved in the Dunstable Downs AONB project, working within land owned or managed by the National Trust, and operating for KEIR/UKPN. A short video as to the project, with footage from the scheme, and comments and observations from those overseeing the project, is available on our web-site.
i) We arrange an ecology study before starting work, engaging a reputable ecologist. The ecologist will monitor as appropriate as work proceeds. We can then take the mitigating measures required by the ecologist.
j) The cable plough process can allow for a reduction in the easement width required. It can be limited to circa the width of the cable plough.
k) The sensitivity of the cable plough process can allow for shorter and more direct routes as an alternative to longer and diversionary routes which may be required for pylons and open trenching.
l) Cable plough technology can minimise land impacts, will not interfere with bird flight paths, will not prejudice Ministry of Defence flight exercises, will not prejudice visual amenity, and will not risk a prejudice to the economy, as undergrounding using cable ploughing should not affect visitor revenue and tourism, or prevent future use for agriculture, or cause property devaluation.

11. Build speed/Speed of delivery:
a) The equipment we use, together with our highly skilled teams to operate the equipment, leads to fast, efficient laying of cables, in addition to minimising ground damage and reducing environmental impacts.
b) Cable ploughing can offer a significant reduction in time money and risk. It can provide for a huge increase in productivity over and above traditional ways of working. For example, for projects we have undertaken, trenching/excavation would have taken up to three weeks per one km distance, compared to one day per one km distance using cable plough, plus no additional delay from restoring trenches prior to cable installation or de-watering excavations.
c) It was interesting to read the summary provided by a prospective developer of overhead lines with pylons within a recent report, as to the likely time features for a proposed overhead project. The description reads: 'The total duration of construction activity at any single tower site is approximately two weeks for tower foundations, a further two weeks for tower construction, and up to four weeks for conduction erection and stringing (this depends on the size of the tower and the number of conductors being strung). However, these timescales will not be consecutive as a gap of 4 weeks will be required for the foundation concrete to 'cure', a further gap will be required for all the towers in a section to be erected before any wiring works can commence. The total construction period is expected to be approximately 4 months per tower'. The report confirms, in addition, that time is required for the construction



of haul roads, and for access roads to the site of each individual pylons, and hard standings for crane platforms and tower assembly. In contrast, for the 'Sea Green' project, we averaged 1.45 km per day, opening, installing, and closing, using just one cable plough machine.

12. Reducing costs:

a) As the cable plough cuts into the ground, installs and backfills in one operation, it can complete a considerable distance in a day. The speed of progress, for so called 'build time' is important. Each project has compound costs including electricity, water, project managers, security, ecology and archaeological specialists. On a project, compound costs can be £35,000 to £40,000 per week. Therefore, the faster the job, the more economic it is.

b) The 'conventional methods' of laying pipes and cables or erecting overhead lines can be extremely labour intensive and time consuming. Because of the way the cable plough operates, it requires less manual input than traditional methods, relevant to both installation and reinstatement, and therefore relevant to costings.

c) If existing utilities which are on or above the surface, would be in proximity to new overhead high voltage lines, there is an additional cost should the existing utilities require undergrounding, whether as a legal necessity or as a sensible precaution. The secondary costs in consequence of new overhead high voltage lines should be an additional factor to be considered.

d) Undergrounded cables are protected from the elements, unlike overhead conductors and supports which are exposed to the elements and which are vulnerable in storms; thereby undergrounding using cable ploughing should reduce the need for ongoing maintenance, and should reduce the likelihood of outages, therefore diminishing the resultant costs

e) The cost of fencing, in order to protect the site, has to be factored in for pylons or for any work involving excavation or open trenching; by contrast cable ploughing does not involve excavation so the work site does not need to be fenced. This provides a considerable saving, avoiding fencing costs for both erection and removal, by using a cable plough.

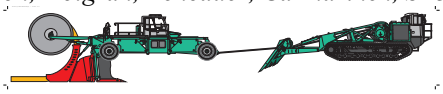
f) Compensation to landowners can be reduced, as the route does not require fencing off to facilitate cable ploughing. A period of restricted access to land which otherwise would be fenced off from the remainder of the holding, can be avoided, whereby owners can use, and pass between, land either side of the route, apart from on the day on which the installation is immediate.

g) As the cable plough can complete on average 1km and upwards per day, and ground disturbance is limited, with restoration and handback the same day or the next day, whereby the areas disturbed can be seeded and back in use quickly, whilst the land either side of the corridor can be available to the landowner with loss of use limited to one day, the compensation payments otherwise payable to landowners are reduced.

h) Cable ploughing is helpful in terms of limiting impact and costings, as it can leave land drainage pipework intact or subject to quick and effective repair, without affecting water movement, and there is no soil contamination.

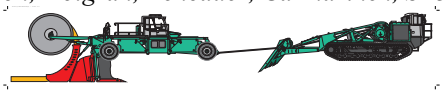
i) A significant part of the overall costings for infrastructure projects is attributable to compensatory payments to landowners based on loss of value, loss of use during construction and restoration, loss of revenue from land and permanent loss of use. Cable plough minimises property devaluation, minimises ground disturbance, and permits reduced impact, and cable ploughing reduces the period and nature of loss of use and loss of revenue. Cable ploughing can therefore significantly minimise compensation payments otherwise payable to landowners. The speed of process, the minimised land impacts, reduced preparatory work, limited restoration works, and the speed of restoration, can help drive down the significant compensatory payments otherwise associated with pylons or with open excavation or open trenching. An assessment of the reduced compensation payments attributable to use of cable ploughing, could be the subject of separate and careful enquiry.

j) There is also potential that unless land impact is minimised in the way offered by cable ploughing, single farm payments and subsidies could be affected. Further, if farmers are prevented from releasing slurry because of



restricted access to, or restricted use of, sections of their land, whether permanently or during extended periods of construction and restoration, there may be an obligation or necessity to reduce herds pending full restoration, which in turn can reduce incomes and place a pressure on the ability to service loans. I have a direct involvement in agriculture, and therefore a perception of the merits of cable ploughing as a means of reducing land impacts and minimising financial loss, for those impacted, and for the public purse or for private enterprise, wherever the responsibility shall rest for compensating consequential loss.
k) I have been asked whether the costs involved for undergrounding using cable ploughing are likely to be less than the costs of undergrounding using open cut trenching/excavation. The answer is that the cost of cable ploughing can be significantly less.
l) I have been asked whether the cost of cable ploughing new electricity cables could be comparable to the cost of pylons and overhead lines. In given circumstances the costs could be broadly similar or with no significant differential.

13. Expanding from this statement:
a) I have had to be very careful when responding to enquiries on costings, not to share any commercially sensitive information derived from projects in which my company has been involved in the past or relevant to projects in which my company may be involved currently or in the future; my commercial contacts would expect nothing less than the highest standards of confidentiality, integrity and trust, which my company has always offered.
b) I have to exercise caution in reply to questions about costings for projects in which my company has a past, pending, or current involvement, or in respect of costings of which I have knowledge, or relating to specific fees or quotations, and likewise, I have to be sensitive in respect of any correlation between sub-contractor costs and the fee mechanism applied by Tier 1 contractors. In a climate of competitive tendering, there is a need for sensitivity.
c) The need for sensitivity may not preclude the sharing of information. Before consenting to the release of information, I may need to speak with commercial partners or contractual parties if material could be considered commercially sensitive or confidential. It may be that assurances of confidentiality would be required, as a condition of the release of information. In the right circumstances there should be opportunity to inform and share knowledge and understanding on costings, based on many years of information gathering, tendering, and relevant experience. A discrete feasibility study or small working group or investigative study (a controlled forum), offering assurances of sensitivity, may be well placed to receive information on costings from those prepared to share information as part of an official and protective enquiry.
d) The evidence which I can confirm, can contribute as part of an overall picture. Matters such as whole life costs, referencing maintenance and repair, projected longevity, de-commissioning, projected outages, and the control of loss of energy and thermal resistance in transmission, are specialised topics. We each have our own areas of expertise. I can both assist in providing direct evidence, but also in directing towards other reliable sources.
e) It should help to gather relevant information widely from manufacturers, energy companies, energy associations, contractors, sub-contractors, cable designers, cable manufacturers, financiers, and funders, involved in cable plough and overhead projects in the UK and in Europe, with direct experience and knowledge, relevant as to technical implications and financial costs and viability. It can also serve to obtain evidence from research and academic sources, and from governmental departments in countries which have considered or applied the alternative technologies available. Of course, viability may not be just about comparative construction costs. It may also involve consideration of how the costs of a project can be satisfied, in the context of margins and returns and the funding support available, feasibility, and the whole life costs and implications.
f) There is often an inertia, which can prevent change, despite the fact that change would be both expedient and beneficial. There can be a lack of awareness of how technology has moved on, or a refusal to embrace the



technological advancements which have been made. Too often, there is a rigidity which holds back exploration of what is now available. There have been occasions, when I have tendered for projects for new infrastructure, offering to cable plough the power lines, but have failed to secure the contract to cable plough, purely because of an ignorance or a prejudice or resistance to change, and yet, having lost the opportunity to plough a given project, ATP has been awarded the contract for the open cutting of the scheme, at a contract price which is significantly higher than the amount which we would have received if our tender to cable plough had been accepted.

g) We have not encountered any community or public or landowner opposition in respect of our cable ploughing projects, whereas we are aware of a concerted opposition to new pylons; our experience appears to be mirrored by the commitment to the removal of pylons funded by Ofgem as part of the Visual Impact Provision scheme and the VISTA scheme. Cable ploughing, could be a means of balancing the need for new electricity infrastructure, with the importance of minimising, not only costings, but also protecting against unnecessary environmental and various other impacts.

h) I would be prepared to appear before the Senedd Climate Change, Environment and Infrastructure Committee and the Senedd Economy, Trade and Rural Affairs Committee. I would also be prepared to appear before the Energy Security and Net Zero Committee (UK Parliament), the Welsh Select Affairs Committee (UK Parliament) or before the Environment, Food and Rural Affairs Committee (UK Parliament). I have co-operated in response to an initial enquiry from the Welsh Government and would assist with any enquiry originating from UK Government or the Welsh Government. I am more confident in expressing myself verbally, and direct discussion allows the opportunity to expand and explain as appropriate.

i) The opportunity exists for policy makers and industry figures to obtain the information required to make a valued and informed decision on the use of cable plough technology and equipment to install underground new electricity infrastructure which will be required.

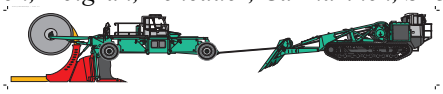
j) I would encourage more detailed enquiry into the lifetime costs of projects, considering maintenance, energy transmission losses, and the wear and tear of infrastructure, the investigation of data comparisons relevant to the carbon footprints of alternative methods and technologies, and vigorous enquiry about domestic and international projects that involve undergrounding by cable ploughing

k) This statement is made to help the process of examining and exploring the possibilities which exist, towards open minded and factual consideration of the options, so that decision making, and policy formation can be reasoned and informed. Within the right forum, in conditions of sensitivity, I would be able to expand on the information provided within this introductory statement, and also signpost to invaluable sources of additional information. Accordingly, this statement is provided, as a means of releasing information, and as confirmation of a willingness to assist further in the manner outlined within this statement.

……

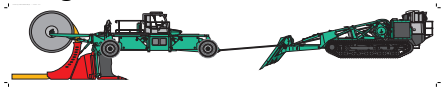
Jason Lloyd Thomas

Dated the 23rd day of January 2024.

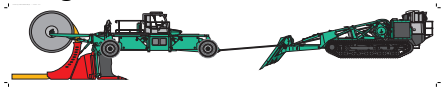


Schedule - Work Projects:

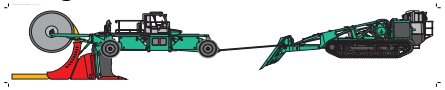
Client	Project	Voltage	Location	Type	Date
National Grid	Green Link, Pembrokeshire	11kV Green Link Substation Connection	11kV	Ploughed	Sep-23
Visser Smit Hanab	Netherlands	Ombouw G-H gas Nuon Power Diemen	12" Steel Gas Pipe	Ploughed	Aug-23
Power Systenms UK	Stokeford farm Renewables	33kV Ducted system	33kV	Ploughed	May-23
SSEN	Ash Vale	11kV Undergrounding scheme of existing OHL	11kV	Ploughed	Feb-23
Bentley	Chilton Foliat	160mm Foul Main	160mm	Ploughed	Feb-23
SSEN	Golinston Hill	11 & 33kV AONB Scheme 8.4km	11 & 33kV	Ploughed	Nov-22
SSEN	Valley of the Stones	11kV installation 8.6km	11kV	Ploughed	Oct-22
Welsh Water Morgan Sindall	Middlegate	90mm Foul Main	90mm Duct	Ploughed	Jul-22
Welsh Water Morgan Sindall	Nomans Heath	160mm Foul Main	160mm Duct	Ploughed	Jul-22
Welsh Water Morgan Sindall	Nomans Heath	110mm Foul Main	110mm Duct	Ploughed	Jul-22
Balfour Beatty	BW Undergrounding	132kV undergrounding - Portishead	132kV	Ploughed	April 21 - Aug 2023
RJ McLeod	Cumberhead	33kV Turbine Connections Approx 11km	33kV	Ploughed	Aug-22
SSEN	Killin - Vista	33kV circuits in AONB 4km	33kV	Ploughed	Feb-22



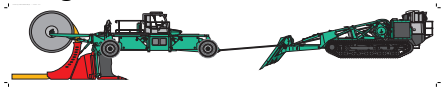
WPD	Rhadermyn Mast connection	11kV connection to new MOD Mast 8km	11kV	Ploughed	May-22
RJ McLeod	South Kyle	33kV Turbine Connections Approx 42km	33kV	Ploughed	Dec 2022 / Mar 2022
A-Hak	De-Weel Phae 2	33kV - New Connection (Multiple circuits)	33kV	Ploughed	Oct-21
SSEN	Burley, New Forest	11kV installation in AONB - 10.5km	11kV	Ploughed	Sep-21
Bentley	Norwich to Wyndham	315mm Water Main SDR11 - 12km	315mm Water	Ploughed	Feb & March 2021
A-Hak	Alphen	20kV New Connection - Twin Circuit	20kV	Ploughed	Feb-21
WPD	Ammanford Solar Park	33kV New Connection 8km	33kV	Ploughed	Feb-21
Roadbridge	Sea Green	3 x 220kV circuits 4.5km	220kV	Ploughed	Dec 2020 / Jan 2021
WPD	Whitland	11kV & 33kV Cable installation	11 & 33kV	Ploughed	Nov-20
RJ McLeod	Windy Rig Wind Farm	33kV Turbine Connections Approx 8km	33kV	Ploughed	Nov-20
RJ McLeod	Windy rig	33kV dual circuit	33kV	Ploughed	Sep-20
SSE	Petersfield River Crossing	33kV dual circuit - SDR11 Ducted complete with coms	33kV	Ploughed	Autumn 2020
SSE	Petersfield - Fernhurst	33kV dual circuit	33kV	Ploughed	Jul-20
SSE	Passfeld	11kV Undergrounding	11kV	Ploughed	Mar-20
SSE	Boat of Garten	33kV	33kV	Ploughed	Feb - May 2020
SSE	Sumners Pond	11kV New Connection	11kV	Ploughed	Feb-20
SSE	Tegleys Farm	11kV - Netwrok Upgrade	11kV	Ploughed	Oct-19



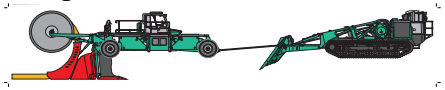
SSE	Letterbox Cottage	11kV Wayleave Termination	11kV	Ploughed	Nov-19
WPD	Treafwr WT	33kV New Connection 12km	33kV	Ploughed	Aug-19
WPD	Carmarthen Sub	Earthing	Earth	Ploughed	Jul-19
SSEN	Henstridge	11kV - Netwrok Upgrade	11kV	Ploughed	Jul-19
A-Hak	De-Weel	33kV - New Connection (6 circuits 32km)	33kV	Ploughed	Sep-19
A-Hak	Drenste (DMO)	33kV New Connection 30km	33kV	Ploughed	Feb - May 2019
WPD	Llangranog	11kV New Connection - SSSI	11kV	Ploughed	Mar-19
SSEN	Bramley	11kV Overlay	11kV	Ploughed	Feb-19
WPD	Valero	Fibre - 62mm x 2 duct installation	Fibre	Ploughed	Jan-19
WPD	Golden Hill	33kV New Connection	33kV	Ploughed	Jan-19
SSEN	Stockbridge	11kV Undergrounding - River Crossing - EA Permits and SSSI	11kV	Ploughed	Feb-19
WPD	Forest Fach Fault	132kV Cable Fault Forest Fach	132kV	Open Trench	Dec 2018 - Jan 2019
SSEN	Upavon	11kV Undergrounding - MOD site	11kV	Ploughed	Nov-18
SSEN	Bigna Park	11kV Undergrounding - River Crossing	11kV	Ploughed	Oct-18
SSEN	Foxbury	11kV Undergrounding	11kV	Ploughed	Oct-18
WPD / Balfour Beatty	Fault Works	132kV Llanelli - Cable Fault Restoration	132kV	Open Trench	Jun-18
SSEN	The Ridings	11kV Undergrounding	11kV	Ploughed	Jun-18
WPD	MYG	160mm Trifoil Duct with 32mm comms duct	132kV	Ploughed	Apr-18
Farrans	MYG	110mm Trefoil Duct with 32mm comms duct	33kV	Ploughed	Mar-18
A-Hak	Netherlands	20kV New Connection	20kV	Ploughed	Jan-18



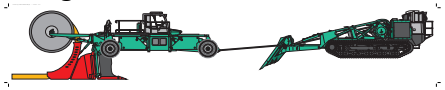
WPD / Kier	Tarnock	33kV & 11kV Undergrounding for Hinkley Point	11kV &33kV	Ploughed	Mar-18
WPD / Kier	Sandford	33kV & 11kV Undergrounding for Hinkley Point	11kV &33kV	Ploughed	Feb-18
SSEN	MOD Bordon	11kV New Connection - ANOB	11kV	Ploughed	Dec-17
WPD / Morgan Sindall	Latteridge Road - Bristol	33kV Single Circuit Networks Upgrade	33kV	Ploughed	Dec-17
SSEN	Kings Hill	11kV New Connection	11kV	Ploughed	Sep-17
SSEN	Monkton	33kV ANOB Undergrounding	33kV	Ploughed	Sep-17
JSM / SSEN	Shripney	33kV Network Upgrade - Undergrounding of OHL Route	33kV	Ploughed	Oct / Nov 2017
SSE Enterprise	Brechfa Windfarm	30km Open Cut Cable Install to turbine base and package subs - LV install and all substation 33kV Connections.	33kV	Open Trench	June - Dec 2017
WPD / BBUSL	Brechfa Windfarm Connection	Undergrounding of 11kV OHL to allow 132kV OHL New Build	11kV	Open Trench	Mar 2017 - Dec 2017
SSE PD	Petersfield Stage 2	AONB	11kV	Ploughed	Apr-17
SSE PD	Slough	AONB	11kV	Ploughed	Mar-17
A-Hak	Netherlands	20kV New Connection	20kV	Ploughed	Dec-17
WPD / BBUSL	Brechfa Windfarm	Windfarm Connection 132kV Duct installation single circuit.	132kV	Open Trench	Mar 2017 - Nov 2017
WPD / BBUSL	Carmarthen	Underground for new OHL route wind farm connection	11kV &33kV	Ploughed	Mar 2017 - Nov 2017
WPD / BBUSL	Llandeilo	Grid connection	11kV	Ploughed	Dec-16



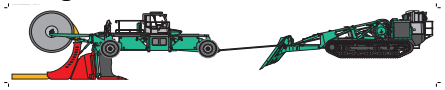
WPD / BBUSL	Solar Farm Connection - Tenby	Installation of new connection from Tenby Solar farm to WPD Transformer pole.	11kV	Open Trench	Oct-16
SSE PD	Tichborne Stage 2	AONB	11kV	Ploughed	Sep-16
Morgan Sindall / WPD	Cheltenham	Diversion works	66kV	Ploughed	Sep-16
WPD / BBUSL	Cwrt Newydd	Turbine connection	11kV	Ploughed	Sep-16
WPD / BBUSL	St Clears	Wind Turbine	11kV	Ploughed	Sep-16
WPD / BBUSL	Lampeter	Grid connection	11kV	Ploughed	Aug-16
SSE PD	Turville	AONB	11kV	Ploughed	May - August 2016
SSE PD	OXFORD	New Grid Connection	11kV	Ploughed	May - August 2016
SSE PD	EAST MEON	AONB	11kV	Ploughed	May - August 2016
SSE PD	Petersfield	AONB	11kV	Ploughed	May - August 2016
SSE PD	Church Crookham	new connection	11kV	Ploughed	May - August 2016
SSE PD	Tichborne	AONB	11kV	Ploughed	May - August 2016
WPD / BBUSL	Blaun Waun	Grid connection	11kV	Ploughed	Jul-16
WPD / BBUSL	Ammanford - Undergrounding	Undergrounding of existing 11kV & 33kV circuits below existing 132kV OHL Circuits	11 & 33kV	Open Trench	Apr-16
WPD / BBUSL	Haverford West	Grid Connection including hedge and road crossings	33kV	Ploughed	Apr-16
WPD / BBUSL	Whitland	Whitland diversion	11kV	Ploughed	Aug-16
SSE Enterprise	Clyde	Clyde Windfarm	33kV	Ploughed	Feb-16
SSE Enterprise	Aviemore	Cairngorms connection	33kV	Ploughed	Jan 16 - Feb-16
WPD / BBUSL	Trevogan	Grid connection	11kV	Ploughed	Mar-16



WPD / BBUS	Cardigan	Grid Connection	11kV	Ploughed	Jan-16
SSE PD	Southampton	AONB	11kV	Ploughed	Jan-16
SSE PD	Buckland Rings	AONB	11kV	Ploughed	Jan-16
WPD / BBUSL	Megan Wells	Overlay	11kV	Ploughed	Jan-16
ISS ltd	Sunnybridge	MOD training camp installation	Fibre	Ploughed	Dec-15
WPD / BBUSL	Tenby	Grid connection	33kV	Ploughed	Nov-15
SSE Enterprise	Moy Windfarm - Tomatin	Windfarm connection	33kV	Ploughed	Nov-15
WPD / BBUSL	Salem	Grid connection	11kV	Ploughed	Nov-15
Folly Farm	West Wales	Turbine connection	11 & 33kV	Ploughed	Nov-15
WPD / BBUSL	Llangadog	New Grid Connection	11kV	Ploughed	Sep-15
EDF / GPC	Jersey	Beach landing from Normandy	120kV	Ploughed	Sep-15
EDF / GPC	Normandy	Export cable to Jersey	120kV	Ploughed	Sep-15
WPD / New Generation Bio	Pengallt	New Grid Connection	11kV	Ploughed	Sep-15
SSE Enterprise	Stirling	Kingsburn connection	33kV	Ploughed	Aug-15
SSE Enterprise	Ness of Quoys	Grid connection	33kV	Ploughed	May - Sept 2015
WPD / Greencat Energy	Gilfach	Wind Farm connection	11kV	Ploughed	May-15
WPD / BBUSL	Narberth	Grid connection	11kV	Ploughed	Apr-15
WPD / BBUSL	Whitland	Overlay plus hedge crossings	33kV	Ploughed	Apr-15
WPD / BBUSL	St Florence	Grid Connection including hedge and road crossings	11kV	Ploughed	Apr-15
RH Howells	Pentre Mawr	Private section of turbine connection	11kV	Ploughed	Apr-15
SSE Enterprise	Petersfield	AONB	11kV	Ploughed	May-15

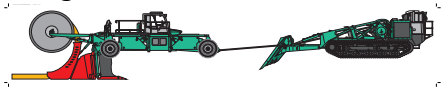


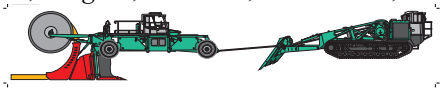
WPD / BBUSL	Haverford West	Grid Connection	33kV	Ploughed	Mar-15
Interserve / NPG	Spurn Point	Tidal area installation	11kV & Water Main	Ploughed	Mar-15
WPD	Ty Groes West Wales	Grid Connection at Ammanford	11kV	Ploughed	Mar-15
Balfour Beatty Civils	PYC Windfarm	Turbine connection	33kV	Ploughed	Jan-15
WPD / BBUSL	Oakwood Park	Grid Connection	11kV	Ploughed	Nov-14
WPD / BBUSL	Sarnau Trelec	Connection	11kV	Ploughed	Nov-14
WPD / BBUSL	Pentre Mawr	Grid Connection	11kV	Ploughed	Oct-14
WPD / BBUSL	Blaun Waun	Overlay plus hedge crossings	11kV	Ploughed	Sep-14
Western power	Canarth	New turbine connection	11kV	Ploughed	Aug-14
WPD / BBUSL	Llandstuhl	Llandysul Diversion	11kV	Ploughed	Jun-14
BBUSL / ABB	Pen Y Cymoedd	Connection to windfarm including steep gradient dual circuit 132 kV	132kV	Open Trench	2014 / 2015
Western power / BBUSL	Carmarthen - Wind turbine x 36	Overlay plus hedge crossings	33kV	Ploughed	Jul-14
Western power / BBUSL	Porlock Saltmarsh scheme	SSSI inclusive of stream and multiple hedge crossings.	11kV	Ploughed	Jul-14
WPD / Kier	Yatton	AONB strawberry line cycle path	11kV	Ploughed	Jan-14
WPD / BBUSL	Pendine Phase 2	Pendine MOD CAMP	Fibre	Ploughed	Dec-13
WPD / BBUSL	Pendine	Pendine MOD CAMP	Fibre	Ploughed	Oct-13
Powersystems	Mynydd y Bwlfa	Windfarm phase 2	33kV	Ploughed	Summer 2013
Powersystems	Mynydd y Bwlfa	Windfarm phase 1	33kV	Ploughed	Autumn 2013



SPEN	North Wales	4.9km 11kV cable laying project - Snowdonia National Park	11kV	Ploughed	Jun-07

JASON LLOYD THOMAS
DIRECTOR
A THOMAS PLANT HIRE LIMITED
23rd January 2023






FSP 22
ATP
KEEP CLEAR


CAUTION
ELECTRIC CABLE

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Jason Lloyd Thomas
Dated the 23rd day of January 2024.