C.S.O.

MIN/PEA/2#7

1421

2 #1

1

4

2

1

(Formerly)

SUBJECT :

16 1421

PEAT CUTTING MACHINE.

CONNECTED FILES.

NUMBER AND YEAR.	
1986.	Peat Deposits.

A.

The Hall drawing equipment that Young telegraphed about recently if the dates are convenient.

M.C. 19/vi

Tilbury's automatic 'player' is on my dossier?

Yes.
[illegible]

B.

ACS

Para 1. Pl ask A/E for any further details he can give, date of broadcast etc.

[illegible]
20/6/51.

1421

CO.

I understand from D/E that there was a BBC talk recently a a new automatic peal cutter and rodder in use in Ireland. If it is not too complicated a expensive this might be a godsend here and I would like C.O. to enquire and arrange for me to see it. Pl. telegraph accy.

2. I might also see

Ref. PHD

As in 2° pl.

[signature] ACS 20/6/51

A

3

HCS

B

The only information I can supply is.

The article was broadcast in Radio Newreel midnight GMT on Monday June 11th 1951

AGL 21/6/51.

C

ACS Pl telegraph CAA asking them, from the information above, to try and get details and to lay them before the Governor when he calls on them.

[initials] 23/6/51.

D

GOVERNMENT TELEGRAPH SERVICE

FALKLAND ISLANDS AND DEPENDENCIES

SENT

Number	Office of Origin	Words	Handed in at	Date
				25.6.51.

To

CROWN LONDON. HOA/C.

UNDERSTAND THAT IN BBC RADIO NEWSREEL MIDNIGHT 11TH JUNE AN ARTICLE WAS BROADCAST REGARDING A NEW AUTOMATIC PEAT CUTTER AND RICKLER IN USE IN IRELAND STOP GRATEFUL YOU ENDEAVOUR OBTAIN DETAILS TO LAY BEFORE GOVERNOR WHEN HE CALLS ON YOU EARLY JULY.

COLONIAL SECRETARY.

Time

[initials]

Copy to:-

4

The Colonial Secretary,
Falkland Islands.

8 AUG 1951

27 JUL 1951

EM2/Falkland Is. 5780

Sir,

3D.

We have the honour to refer to a telegram dated the 22nd June received from the Colonial Secretary, Falkland Islands which requests us to have available for you while here in July information about automatic Peat Cutting and Ricking equipment now in use in Ireland.

This project is being carried out by the "Bord Na Mona" in Eire and the equipment being used is mainly of Continental origin, although some of the machinery is now being made in Eire. We have asked the Bord Na Mona for particulars of the plant and names of suppliers but, to date, no reply has been received.

We enclose, however, copies of the script of the B.B.C news broadcast which dealt with this subject and of the Department of Scientific & Industrial Research publication "The Winning, Harvesting and Utilisation of Peat", which describe the various methods employed in the mechanical recovery of peat and, on page 7, deals with the methods being employed in Eire.

We are also pursuing other enquiries and immediately any further helpful information is available we shall communicate with you again.

A copy of this letter and enclosures is being forwarded to the Colonial Secretary.

We have the honour to be,
Sir,
Your obedient servants,

9/8/51.

(Sgd) E. F. Gaunt.

for the Crown Agents.

Sir Miles Clifford, K.B.E., C.M.G., E.D.,
c/o East India & Sports Club,
16 St. James' Square,
London, S.W.1.

J. G

8

ALL COMMUNICATIONS TO BE ADDRESSED TO THE CROWN AGENTS FOR THE COLONIES. THE FOLLOWING REFERENCE AND THE DATE OF THIS LETTER BEING QUOTED.

CROWN AGENTS FOR THE COLONIES

COLONIAL SECRETARY 14 SEP 1951 FALKLAND ISLANDS

4, MILLBANK,

LONDON, S.W.1

EM2/Falkland Is. 5780

TELEGRAMS:- INLAND: "CROWN, SOWEST, LONDON." OVERSEAS: "CROWN, LONDON."

TELEPHONE: ABBEY 7730.

27 JUL 1951

Sir,

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We are also pursuing other enquiries and immed any further helpful information is available we shall communicate with you again.

A copy of this letter and enclosures is bei forwarded to the Colonial Secretary.

We have the honour to be,
Sir,
Your obedient servants.

File & BU at leisure: I gather Ag Engineers thinks we can cut more expeditiously & economically by hand.

M.

MC.

Sir Miles Clifford, K.B.E., C.M.G., E.D.,
c/o East India & Sports Club,
16 St. James' Square,
London, S.W.1.

for the Cr

COPY OF A SCRIPT BY WALDO MAGUIRE AS BROADCAST IN THE LIGHT PROGRAMME ON THURSDAY 7TH JUNE:

MAGUIRE: My tour began in the Operations Room - the office of the engineering workshop. A large scale map on one wall showed the lay-out of the bog - 4½ miles long and more than 2 across its widest part. I could see the course of the bog railways, and the network of power lines carrying the electricity to drive the machines. Little paper flags marked the position of the various machines on the 4,000 acre workings, with the excavators - known for some reason as "Baggers" - prominently shown. I was just being told that these weighed 30 to 40 tons each when a metallic voice broke in with: "Bagger 4 calling workshop. Bagger 4 calling workshop - over ". Yes, short wave radio has come to the bogs of Ireland, linking the machines with the workshop.

From the workshop I was taken out on the bog to see one of the "Baggers" in action. Mounted on wide cater-piller tracks, to prevent sinking, it creeps along the 4-mile trenches at the rate of about a mile a week. The wet peat is scooped out by a chain of buckets and fed into a "macerator", a sort of big mincing machine, and then squeexed out in double rows from 6-inch square nozzles, like toothpaste from giant tubes. These rows are pushed out along a "spreading arm", some 70 yards in length, and tipped on to the drying ground. Work goes on night and day, and each "Bagger" produces up to 1,200 tons a week. Each is manned by three shifts of five men - and there's keen competition to record the greatest output - a rivalry that's sharpened by the production bonuses that are paid.

Given reasonable weather, the turf hardens enough in 2 or 3 weeks time to allow the blocks to be built into small criss-cross piles called "ffotings" so that the wind and sun can dry them further. This part of the work has still to be done by hand, but the Board's Experimental Station is trying to design a machine to do the job. And after a few more weeks or months, according to the weather, the blocks are collected by machines into "rickles" - piles about 4 feet wide, and the same height, and maybe miles long. By this time they've dried nearly as hard as wood, and they stay in rickles until they're needed. Then they're loaded mechanically into wagons and turf-burning engine hauls them off to the new power station that has been built on the edge of the bog.

At present practically all the machine-won turf goes to keep the power stations and hospitals and other essential services running. But as output rises, the general public will be supplied. Two years ago production was about 100,000 tons; this year it's hoped to get 400,000 tons. By 1956 it's intended to have 24 bogs in production, turning out a million tons a year.

Many of the permament workers on the bogs are now accommodated in hostels, but it's planned to build 2,000 new houses for them, in model villages near the bogs. Three of these villages, with a hundred houses in each, are already under construction. This scheme certainly looks like bringing a transformation to some of the desolate parts of Ireland.

11

A

l - u/c P.K.J.

8-10 - f.y. cs pl

[illegible] A.C.S.

25/9/51

B

HCJ I have worked it out and I find we

cut Goo Peat cheaper

[illegible]

27/9/51

H.C.S.

Submitted as at

page 8 pl. [illegible] A.C.S.

27/9/51

J.S.

From f. 8, with S/w: [illegible]

above.

[illegible] 28/9/51.

Noted - we need not file all this

in duplicate.

M.C. 29/IX

Office

Please note

[illegible]

1/10/51

A.C.S.

Noted. E.y. [illegible] 1/10/51.

We will have to leave

[illegible] this line as the

reverse of the duplicate

has been used, pl

[illegible] /IX.

[illegible]

1/X/51

ALL COMMUNICATIONS
TO BE ADDRESSED TO THE
CROWN AGENTS FOR THE COLONIES.
THE FOLLOWING REFERENCE AND THE
DATE OF THIS LETTER BEING QUOTED.

12

4, MILLBANK,
LONDON, S.W.1.

29 OCT 1951

EM2/Falkland Islands 5780

TELEGRAMS { INLAND: "CROWN SOWEST LONDON."
OVERSEAS: "CROWN LONDON."
TELEPHONE: ABBEY 7730.

2nd October.
~~28th September~~, 1951.

Sir,

8 3-28 We have the honour to make further reference to our letter ~~dated 27th July~~, in connection with your request for information about Automatic Peat Cutting and Ricking Equipment and now enclose additional details of the various processes.

17-28 The Chief Peat Engineer, Peat Division, Department for Agriculture for Scotland, has kindly provided a treatise on the various methods recommended and two copies of this are enclosed. You will note that the large scale processes are not, on the evidence available, considered suitable for use in the Falkland Islands but the smaller German automatic and Danish semi-automatic machines are recommended.

13. A leaflet describing the machine offered by Mr. K.H.Richard of the German firm H.G.Schnittger is enclosed herewith, and the firm advise that this, their smallest machine, can be supplied complete with stripper assembly for £2,100 F.O.B. Bremen delivery, probably ex-stock, otherwise 10-12 weeks. The firm can also supply larger types of peat excavators and various other stripping machines, sod-collectors, elevators, peat-waggons etc., To enable a comprehensive quotation to be submitted , details of bog conditions (as mentioned on firm's pamphlet) are required.

4-16. Leaflets and descriptive literature for the De Smithske semi-automatic plant are also enclosed herewith. The type T.3. machine can be supplied complete with 14 yards long conveyor, 5 yards long elevator and two laying forks (but without engine) for £490 12s. 0d. packed for export, delivery - immediately, whilst stocks last - thereafter 5 months. Similar machines can be obtained from Scotland for £500. each complete as mentioned in The Chief Peat Engineer's letter. Full particulars will be obtained if you wish to consider these offers further.

We trust this letter will enable you to select suitable equipment and await your further instructions. A copy of this letter is being sent to the Colonial Secretary.

We have the honour to be,
Sir,
Your obedient servants,

K L Goodchild

for the Crown Agents.

Sir G.Miles Clifford, K.B.E., C.M.G., E.D.,
Governor of the Falkland Islands,
FALKLAND ISLANDS.

WW/JO

4, MILLBANK,
LONDON, S.W.1

TELEGRAMS { OVERSEAS: „CROMI LONDON".
INLAND: „CROMI SOWEST LONDON".
TELEPHONE: ABBEY 7220.

12A

13 29OCT 10

Torfbagger »Liliput«

SCHNITTGER B 45

Der Torfbagger „Liliput" ist eine kleine, vollautomatische Torfgewinnungsmaschine, die sich durch gedrängte Bauweise und geschickte Anordnung und Auswahl der verwendeten Bauelemente auszeichnet. Dadurch ist es möglich, Gewicht, Unterhaltungskosten und Anschaffungspreis sehr gering zu halten.
Erwiesenermaßen ist die erzeugte Torfqualität dieser Maschine besonders gut, weil großer Wert auf gründliche Durcharbeit der Moormasse sowie sorgfältige Sodenablage gelegt wird. Der spezifische Leistungsbedarf der Maschine ist wegen der geringen Leerlaufleistung bzw. wegen des hohen mechanischen Wirkungsgrades gering.

Der „Liliput" kann wegen seiner Anpassungsfähigkeit und Vielseitigkeit sowohl in Kleinbetrieben als auch in großen Werken erfolgreich eingesetzt werden. Er ist in der Lage, das Moor von oben und von unten abzubauen und kann nötigenfalls mit einer schrägen statt einer senkrechten Böschung baggern.

Verschiedene Zusatzgeräte können geliefert werden, die Abbunkern, Planieren, Drainieren sowie verschiedene andere Moorarbeiten möglich machen.

Alle Teile sind übersichtlich angeordnet und leicht zu warten und die Typenzahl der Getriebeteile und Ketten ist auf ein Minimum beschränkt.

Description:

The peat-excavator „Liliput" is a small fully automatic peat winning machine of compact design and with many clever arrangements to cut down weight, maintenance costs and price. The quality of the produced sod-peat has been proved to be excellent due to thorough maceration and careful spread. The power-requirement of the machine is low due to high mechanical efficiency. Because of its adaptility and universality this machine can be used as well on small bogs as on big ones. It is able to cut from the high bog as well as from the cut-away and, if necessary, a sloped face bank is obtainable instead of a vertical cut.

Several attachments are obtainable for stripping, levelling, drainage work and other bog labour.

All parts are easy to maintain and the number of gears, chains etc. is reduced to a minimum.

Daten:

Gewicht / Weight	7,5 t	
Flächenpressung / Bearing pressure	1000 kg/m²	= 1,42 Lbs/Sq. In.
Schnittbreite normal / Width of cut normal	1 m	= 3 ft. 4 Ins.
Baggertiefe max. / Depth of cut max.	3,35 m	= 11 Ft.
Ablage breite normal / Spread-length normal	20 m	= 66 Ft
Baggerleistung / Output	40—60 m³/h	= 1400—2100 Cu. Ft/H
Leistungsbedarf / Power requirement	35—50 PS	= 35—50 HP
Arbeitsgeschwindigkeit / Working speed	20—30 m/h	= 65—100 Ft/H
Schnell- und Rückwärtsgeschwindigkeit / Idle- & Reversespeed	1200 m/h	= ¾ M. P. H.

Für die Ausarbeitung eines Angebotes sind folgende Angaben erwünscht: Moorgröße, -tiefe bzw. Querschnitte, Feuchtigkeitsgehalt, Zersetzungsgrad, Holz- u. Faserreichtum, Säuregehalt, Sonderwünsche.

To give a quotation the following details are desirable: Size, depth and cross-sections of bog. Moisture content, degree of humification, timber- and fibre-content, acidity etc;

Torfmaschinenbau H. G. Schnittger
Oldenburg (Oldb) · Marienstraße 7 · Telefon: Oldenburg 5132

Peat Production in Denmark with De Smithskes Peat-machine type T-3, using a 2-sod mouth piece. (9.aug.1947)

The machine type T-3 can be used in many different ways according to the special local conditions, but one of the most succesfull ways is the following:

The machine is furnished with a 6-11 m long conveyor and a 4,5 m long elevator, which can be adjusted at three different angles with the vertical, namely 40°, 50° and 60° according to the depth of the bog.

The machine is placed about 1 m from the edge of the trench on light rails weighing about 7 kg per metre. The rails to be 2,5 m long and connected by two light wooden sleepers 4" x 4". Three sets of rails are used. The machine rests with one wheel-set on each of the two sets of the rails, and the third set is placed in front of the machine after each shifting, so that the machine at each shift is pushed 2,5 m forward.

Two men with special forks are taking the macerated, pressed and formed sods from the conveyor and place them on the drying ground to a distance of about 20 m from the edge of the trench. Between each moving of the machine, 2,5 x 20 = 50 m^2 of drying grounds is thus covered with sods to be dryed. The machine to be moved 2,5 m every 35 minutes. In average for the total season about 3200 sods are produced every hour.

In the trench two men are digging the raw material, one man taking the upper half and one man the lower half. They should place only one lumb on each blade of the elevator after turn, so that the machine is fed alternately with a lumb from the bottom layers and with one from the top layers.

By using two men in the trench and two men at the conveyor (or laying band) the piece rate is generally fixed at danish crowns 4,04 for each 1000 sods on the drying ground. This 4,04 to be divided by the four men in the gang. Since a workman in Denmark is dissattisfied unless he earnes at least cr. 3,00 an hour, it will be seem, that the gang must produce at least 3000 pieces of sods on hour.

There is no ekstra pay for the moving of the machine or even for repaires taking less than half an hour. The pay for digging, spreading, moving of machine, all repairs taking less than half an hour, lubrication and attending the machine and engine is cr. 4,04 per each 1000 sods placed on the drying grounds.

As the upmost 30 to 50 cm of the bog is unsuitable for

peat production, then this layer must be stripped off before the digging starts. This is done by an other man, who mostly receives cr. 0,25 per m^2 by a stripping depth of 40 cm. A man should be able to strip about 12 m^2 an hour.

As soon as the layed out sods have dried so much, that they can be handled without difficulties, mostly after 5 to 6 days of drying, then they are treated as follows:

One row of sods are turned upside down and one row from each side is placed on top of first row. This work is done by girls or men and payed with cr. 1,02 for each 1000 sods.

Here the sods remain untill they are ready for beeing stacked, generally 8 to 10 days. Then by a moisture content of about 45% of water they are collected in 4 to 5 m long stacks about 1 m wide at the ground and 1,5 m high. The stacks should preferable be placed in the direction north-south so that the sun may shine on both sides and at the same time giving the prevailing western wind opportunity to blow through the stacks. This stacking is payed with cr. 1,65 a 1000 sods.

When the sods are dried down to a water content of about 30 %, it takes about 2200 pieces to make a ton (1000 kg).

If the combined content of water and ashes is below 35%, then the peat are classed as 1st class peat and the official selling price from the bog in Denmark is cr. 41,15 a ton.

The owner of the bog usually receives cr. 3.00 for each ton of dried peat produced, plus cr. 220,00 in rent a year for each acre of drying grounds.

One machine type T-3 consumes about 9000 m^3 of bog per season and requires 9 acres of laying ground. The output in peat containing about 30 % of water is around 11-1200 tons a season. The season in Denmark has around 800 working hours.

16

PEAT-MACHINE

TYPE T-3

T-3 with 5 yards long elevator and 11 yards long conveyor and powered by 15 h. p. Diesel engine.

The T-3 is a combined kneading-, pressing- and forming-machine specially designed for peat bogs where dependability, uniformity of production and easy tending is decisive.

The machine proper is built throughout of iron and steel, and the more important bearings are heavy ball bearings. The wooden subframe or chassis is equipped with four double flanged rail wheels, so that the unit is readily moved on light rails.

The machine requires a 12—15 h. p. motor or engine, to be mounted direct on the subframe and connected to the machine through a flat belt 5" wide. The machine pulley is $19^{5}/_{8}$" in diameter and should make 550 r. p. m.

How the T-3 works:

Through the large hopper the raw peat-mud falls down into the kneading-trough, where the vigorous and thorough kneading, which is essential for obtaining a uniform and crumblefree peat of high specific gravity, is achieved not only by the kneading action in the first part of the trough, where strong knives and vanes cut and desintegrate the coarser parts of the raw peat, but mainly through our patented „double-kneading", which takes place in the second, fully enclosed part of the mainhousing. From here the well macerated peat mud enters the pressing chamber, which it leaves in two homogenous strings of peat. Through years of experience and close cooperation with the users it has been possible to shape the different parts such that a clogging up of the machine is practically impossible, even when the upper part of the peat bog is utilized.

(Turn over please.)

Aktieselskabet

DE SMITHSKE

JERNSTØBERIER OG MASKINVÆRKSTEDER

FOUNDED 1834 . TELEFON 6696

Aalborg - Denmark

Aktieselskabet

DE SMITHSKE

Jernstøberier og Maskinværksteder

AALBORG

Just in front of the mouth-piece the peat strings are cut into separate sods of the proper length by the action of automatic knives and then pushed out upon a (usualy 6½ yards long) conveyor, from which they can be taken by means of a special fork (furnished with the machine) and placed on the ground for drying.

By continuous running the machine produces 4200 peat sods per hour. On account of the necessary stops for moving etc., it is however not wise to count with more than 26000 pieces for a day of 8 working hours.

The ready-dried sods are of such a size, that it takes about 2200 pieces to make a ton, and in wet, fresh formed condition they take up so much space, that there is room for about 28 pieces on one square yard of the drying ground. Consequently the machine will take up about 120 sq. yards of drying grounds every hour. The machine will consume about 425 cub. feet of the bog every hour.

Plan of Working.

Naturally the **T-3** may be employed at many different plans of working, depending upon the local conditions at and around the bog, but generally we recommend one of the following plans:

1) A good level drying ground is choosen, preferable with grass on sandy ground, and in the one end of this the T-3 is placed so that in can be moved along a path parallel to and about 16 yards from the boundary. The raw peat is taken from the bog and by means of small trolleys on rails or on broad wheels driven to the machine and fed into the hopper of the machine. The finish formed sods are then taken from the conveyor and placed on the ground for drying. Gradually the machine is pushed along so that there allways is empty drying grounds at hand. The crew for each machine is 2 man.

   By peatproduction in a large scale, where more machines are employed, the digging job can by this methode be concentrated at one place, and the T-3's can be spread out over such drying grounds, which permits trucks and lorrys to drive right in and load on the finish dried peat. (For enterprises, where the digging should be done by machine power we can deliver a self propelling digging machine with a capacity of 1300 cub. feet an hour. The depth of digging may during the running be varied from zero to 3 yards.)

2) If the surface of the bog itself is useable as drying ground, as is often the case with high-bogs, then the T-3 may be furnished with a raw peat elevator and placed direct on the edge of the ditch. With two men digging and loading the elevator, and one or two men taking the finish formed sods from the conveyor and placing them on the drying ground, the machine will work at full capacity.

We also furnish:

Complete machineries for the hydro-peat process.

Semi-briquette presses and flue gas driers.

Pumps for drainage.

AKSEL SCHØLIN - AALBORG

Correspondents are asked to address
letters, postage on which must be prepaid,
The Secretary,
and to quote
Your Ref. EM2/FALK.IS.5780

Telegrams "Boas, Edinburgh"
Telephone "Edinburgh [illegible] CRA 4040
Ext. 289

Peat Division,
DEPARTMENT OF AGRICULTURE
FOR SCOTLAND,
Government Offices,
~~St. Andrew's House,~~
Saughton,
EDINBURGH, 11.

17

25th July, 1951.

26 JUL 1951

For the attention of Mr. W. Walter, "E.M.2" Department

Dear Sirs,

Peat Production
Falkland Islands

I have received your letter of 23rd instant about automatic peat machines for the Falkland Islands. The Peco Limited Company, Chairman, Colonel Oswald H. C. Balfour, with which Company I worked before the war, made a preliminary survey of the larger peat deposits on the Falkland Islands in the year 1912. I keep all the survey records for Peco, including the Falkland Islands records and have, therefore, a general idea of the conditions of the peat deposits there. All the same, it would be difficult to recommend any particular peat winnin method to suit the conditions of the Islands before I had a detailed survey of the deposit where the machines would be working.

1. Peco Milled Peat Winning, Drying and Briquetting Plant:

This plant is fully automatic and is based upon an annual production of 50,000 tons briquettes per annum with 10 per cent. moisture content. By special designed Peco machines, the peat is milled, air-dried to approximately 50 per cent. m.c. and collected into stock piles during the summer time. 20 harvesting operations are required to collect the necessary material. The milled peat, the total quantity of which is about 110,000 tons, is transported to the drying and briquetting plant during 12 months of the year. In the drying plant, the m.c. is reduced from 55 per cent. to about 10 per cent. and then briquetted. An area of about 900 acres of prepared bog is required. The last Peco plant, built in France, cost about £1 million after the war; this Peco plant works on the same principles as the Bord Na Mona Peco plant at Lullymore, Co. Kildare.

In order to get the necessary licence for such a plant, you have to approach Colonel Balfour, whom you have already contacted. It is a great question, however if such a plant will suit the general, as well as the particular, conditions on the Falkland Islands.

2. Small Scale Milled Peat Method:

If the surface conditions are suitable, you could produce milled peat on a small scale, as practised in Denmark. The machines are small and can be used on comparatively small areas. With a small Flue Gas Drier and briquette presses of a capacity of one ton briquettes per hour, you can come down to a more reasonable annual production. The actual production cost of the milled peat will be higher than with the Peco plant, but the capital expenditure much lower.

Such small plants are manufactured by:

Messrs. De Smithske,
Aalborg,
Denmark.

/3.

The Crown Agents for the Colonies,
4 [illegible],
[illegible], S.W.1.

3. Automatic Machines for Excavation, Laceration and Loading Raw Peat in the Form of Sods:

The Bord na Mona automatic machines have a production capacity of about 10 tons of air-dried peat, 30 per cent. m.c. per hour. I am sure this type is too big for the deposits on the Falkland Islands. From the reports it appears that the average depth is only about 1.5 metre to 2.0 metre. For the local conditions there, a small automatic machine would be more suitable.

I saw a very attractive automatic machine this summer in operation near Oldenburg in Germany. Its production capacity is about 4 tons air-dried peat per hour.

The manufacturer is:- K. H. Richard,
Marienstrasse 7,
Oldenburg.

4. Semi Automatic Machines for Sod Peat:

As will be seen from the accompanying notes on peat production methods, these machines do not dig and spread the peat automatically; these two operations are performed by hand labour. The machines are very simple in operation. The capital expenditure is comparatively low.

This Department tried out three such plants from Messrs. De Smithaie, Aalborg, in 1948 here in Scotland and no mechanical breakdown occurred. I worked them with unskilled German prisoners. The capacity is about one ton air-dried peat per hour. I can send you a full description of the plant. Two of these plants have only been in operation for one season and can be sold cheaply for the Falkland Islands (£500 each). The two plants could be despatched immediately.

If I can be of further help to you, please let me know.

Yours faithfully,

Anson Tomter

(A. TOMTER)
Chief Peat Engineer.

Literature

(1) A. Halbading: Handbuch der Torfgewinnung.

(2) D.S.I.R. Fuel Research Station: The Winning, Harvesting and Utilisation of Peat.

(3) J. Martin: Winning and Utilisation of Milled Peat (Institution of Civil Engineers of Ireland).

(4) A/B Svenak Torvforädling: Sveriges Brântorvindustri.

Enclosed: (1) Production Methods.
(2) Peat Briquetting - At Lulepmore.

PEAT DIVISION
D.O.A.I.

19

P.U.15.

PRODUCTION METHODS OF PEAT

FOR

FUEL AND POWER

AIRDRIED PEAT IN BLOCKS

The object of the drying is to reduce the moisture content in the raw peat from about 90% to about 30% or less in the finished product.

METHODS

1. Handcutting

(1) One man cuts the blocks, one or two other men distribute the blocks on the drying field. The cutting takes place on a face or in a ditch. The bog surface may be used as a drying field, provided it is well drained and preferably overgrown with heather or grasses. The best drying field is a grass-field composed of sandy soil.

The size of the blocks vary from district to district. From 4" x 4" x 12" in a fairly dry district to $2\frac{1}{2}$" x 6" x 14" in a district with fairly heavy rainfall.

In order to make sure about a dry product it is common practice to have all peat cut before midsummer.

The tools and methods employed for hand-cutting vary from district to district.

A better sod is obtained from horizontal cutting, parallel to the peat layers, than from vertical cutting. In the first case the man who is cutting is standing in the bottom of the trench where he is cutting; in the second case he is standing on the bog surface and cutting downwards.

(2) DRYING

When the sods have dried sufficiently to be handled, they are raised or footed or set up in stools. Usually 7 peats in a stool.

(3) STACKING

After the sods have developed a firm surface crust, stacking takes place, or better still, the peat is stored in a shed, with a roof and with the sides partly open. The moisture content of the sods when stacked may be as high as 50% or even more. Provided the roof of the stack does not allow the rain or snow to percolate into the stack the peat will dry in the stacks during the autumn and winter. If the sods are too soft when taken into the stacks very little drying will take place. The blocks are too soft to stand the weight of the peat above them. The air cannot get in among the blocks. The stack resembles a so big soft cheese. Airdried peat when burned should not contain more than 30% moisture.

(4) ADVANTAGES

(a) Capital expenditure very small.

(b) Very small peat deposits may be utilized.

(5) Drawbacks

(a) Wastage very high, both as regards the raw peat and by the drying and the transport of the dry peat.

(b) The product is usually not very uniform. The sods cut from the upper layer are as a rule light, even so light that they are thrown away. The peat from the bottom layers are usually of a much better quality, but may be very brittle owing to lack of fibre and a high content of ash.

(c) Very bulky, and transport expensive.

(d) Owing to its loose texture it burns away rapidly with only small heat production from a given quantity.

2. MOULDED PEAT

The production involves the following operations:-

(1) Digging the raw peat (by hand)

(2) Mixing or kneading.

(3) Spreading.

(4) Moulding or cutting into blocks.

The excavated peat from all layers is mixed and kneaded into a pulp. Water is added. This peat pulp is spread direct on the drying field in a layer of uniform thickness and after a couple of days cut into sods of the usual size or the peat pulp is cast in open wooden frames. The methods for mixing and kneading are among others:-

(a) The peat pulp is formed into balls by hand

(b) Peat mixed in a box or a pit by a man tramping with bare feet or stamping with oxen or horses.

(c) Peat mixed and kneaded in a churn-like container. The horizontal churn has a revolving shaft with knives attached and one or two screws which move the pulp forward. Little cutting is taking place but the pulp is getting well mixed - some forms of churns are vertical. A horse or a small engine, 3 - 5 H.P. is used for the turning of the shaft.

(2) ADVANTAGES

(a) A uniform product is obtained, which is firmer than hand-cut peat.

(b) Less wastage than by hand-cut peat.

(3) DRAWBACKS

(a) The drying field has to be on firm ground with an even surface, preferably on sandy ground with a cover of short grass. If the surface is not even, the thickness of the spread peat layer will vary too much.

(4) Number of men required: From down to three men depending upon the capacity of the pulping machine and the transport of the peat pulp from the pulper to the drying field.

3. HYDROPEAT

(1) By this method the peat in the bog is disintegrated into a thin pulp containing 95% water by the agency of water jets directed against the sides of the excavation under a pressure of 9 - 12 lbs per sqr. inch.

The peat pulp thus obtained is pumped from the bog to the drying field where it is spread in a layer approximately 6" thick. After some days of drying this layer is cut into blocks of the usual size. The product obtained has the same consistency as the moulded peat.

(2) Advantages

(a) Capital expenditure relatively low.

(b) Number of hands required low compared with other methods.

(c) The method is applicable on small bogs and the plant's capacity can be made to suit the local conditions.

(d) Used with great advantage in bogs with a large number of wooden stumps and trunks.

(3) DRAWBACKS

(a) Large quantities of water required often very difficult to obtain.

(b) The form of the sods is not very suitable for household purposes but all right for industrial purposes.

(c) The dried sods are not so heavy as the sods obtained by the method mentioned below.

(d) A grass-covered drying field on firm ground essential.

(e) More waste than by the following method.

(4) POWER REQUIRED

For a plant with a capacity of 5 tons airdried peat per hour 20 - 24 H.P.

Water required per hour, 11000 gallons.

(5) NUMBER OF MEN REQUIRED

(a) The jet	2 men	
(b) In the pit	1 man	
(c) Pumping arrangement	3 men	
(d) Cutting peat layer	1 man	= 7 men.

4. PLANTS FOR MAKING AIRDRIED MACHINE PEAT

(1) The four main parts required are as follows:-

(a) The macerator or pulping machine

(b) The elevator

(c) The engine

(d) The wagon carrying (a), (b) and (c)

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(2) Method of working

(a) The raw peat is shovelled by hand into the elevator.

(b) The elevator tips the peat into the macerator or pulping machine where the peat is thoroughly mixed and macerated.

(c) The mill has a mouthpiece in which the macerated peat pulp is formed into a continuous sausage of a section varying from 4" x 4". From the mouthpiece the peat sausage runs on boards (about 6" x 4 ft.) on to a rolling table. A mechanical cutter or a boy with a knife cuts the continuous peat sausage into sods of the required length. From the rolling table the boards with the peat sods are loaded in to bogies running on a track to the drying field. After unloading the bogies with the empty boards are pushed back to the macerator.

(3) MACERATOR OR PULPING MACHINE

The macerator resembles and works on the same principle as a mincing machine. The older ones had only a screw. This screw took the peat from the hopper at one end and forced it through a forming mouthpiece at the other end, operating like a modern Sausage Mill. Later two screws have been introduced - the modern Swedish-Norwegian pulper has one rotating shaft on which are fixed a series of knives and a screw to propel the peat from the hopper end to the mouthpiece end. These rotating knives work against a series of fixed knives in the bottom of the macerator. In this type the peat is mixed as well as thoroughly macerated. It is able to deal with timber in the bog as long as the pieces are not too big. The shaft turns at a speed of 250 r.p.m. So thoroughly is the maceration and mixing done in this mill that the original volume of the raw peat in the bog is reduced to up to 1/3 when the macerated pulp leaves the mouthpiece.

The Scandinavian mills are usually built in four different sizes of the following approximate capacities:-

Number	Dry Peat Tons/Hr.	Area required acres	Power required H.P.	Total No. of operators
1	3	50	60	24
2	2	25	40	17
3	1	13	30	14
4	.7	7	15	10

It should be emphasised that the peat in the macerator is not subject to pressure of any form. The peat is mixed, macerated and formed into sods.

(4) ELEVATOR

The elevator may be placed (a) at an angle to the direction of the trench from which the peat is excavated, (b) parallel to the direction of the trench. The last one is the most common one, also called a drag elevator. The length of the elevator varies according to the depth of the bog, from 25 feet to 35 feet. No. 1 requires 8 men to feed it, No. 4, 3 men. The elevator frames are built in steel or wood.

(5) POWER

(a) Steam engine, which has the advantage of burning peat or wood found on the site.

(b) Diesal or petrol engine.

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(c) Electric power; if the bog is conveniently situated in relation to a grid system, electric power is to be preferred.

(6) The wagon carrying the pulper and the engine is built in wood or steel. It is running on heavy sets of rails. It is moved forward by a winch. The stationary end of the rope is fixed to an anchor, driven into the bog.

(7) TRANSPORT OF THE PULPED PEAT TO THE DRYING FIELD

(a) If the moss is used as a drying field the common practice is to run the sausage-like string of macerated peat on to wooden boards on a rolling table. From the rolling table the loaded boards are placed on bogies. These bogies run on rails to the drying field where they are unloaded and returned to the mill. Another system in use is rope way for carrying the boards to the drying field.

(b) If a farm or mill is used as drying field or the moss surface is very smooth and even.

The pulped peat from the mill runs direct into tip waggons.

The tip waggons unload direct on the drying field or into [illegible] arrangement for cutting the pulp into blocks.

(8) BOG PREPARATION

(a) Drainage. If possible the bog should be drained to the bottom.

Usually the trenches where the digging is taking place are used as outfall trenches. At right angles to these trenches, and leading into them, shallow drainage ditches is laid out. The distance between the drains varies with the moisture content of the bog but is usually about 20 yards. The surface is labelled off and all trees and bushes removed.

All preparation work should be completed if possible one year before operations commence.

(9) DRYING OPERATIONS

Same as for hand-cut peat.

(10) ADVANTAGES OF MACHINE-PEAT COMPARED WITH HAND-CUT PEAT

(a) A uniform product is obtained as the bottom and top layers are thoroughly mixed.

(b) Machine peat is much denser than hand-cut peat. Breakage and wastage much less. Owing to higher density the calorific value is much higher than for the same volume of hand-cut peat.

(c) Production of machine peat can go on for a longer period than for hand-cut peat. The machine peat leaves the macerator with a very smooth surface, which is able to stand the rain much better than the surface of the hand-cut peat. As long as rain is not falling when the machine peat is laid out on the drying field, it soon develops a hard skin and later a crust which prevents the rain from penetrating deeper into the sod. As long as there is no stagnant water on the drying field, machine peat, as a rule, does not get much wetter during a period of rain than it was when it left the macerator.

(d) Skilled labour not essential. Two or three keymen required.

5. PLANTS WITH AUTOMATIC EXCAVATION AND SHAPING

The type which is most common is the Wielandt peat machine. Other types work more or less on the same principles, except the floating excavators. The Wielandt automatic peat winning machine consists of the following main parts.

(1) Mechanical excavator, (2) macerator with forming mouthpiece, (3) under-carriage for carrying the excavator, mill and power engine. (4) sod transporter.

(1) MECHANICAL EXCAVATOR

It consists of a rotating chain of buckets which dredge the peat from a sloping face at 60°. The buckets can be adjusted to vary the depth, width and slope of excavation. The width ordinarily excavated is 6 feet and the depth up to 12 feet. The chain carries 30 buckets with teeth attached to the outer side. The excavated peat drops into a hopper over the macerator.

(2) MACERATOR

A larger type of macerator is used than those mentioned under the hand-operated plant.

(3) Under carriage is built in steel or wood. It travels on caterpillar tracks or on rails. It is self-propelled.

(4) SOD TRANSPORTER

The pulped peat issues from the mouthpiece of the macerator in a sausage-like string and is received on a chain of conveyor plates moving with a velocity to correspond with that of the peat string. A cutting machine divides the string into sods or suitable length. The conveyor plates travel over a bridge work frame, about 40 yards long carried on eight caterpillar supports. The conveyor moves forward at the same rate as the under-carriage. When the chain of plates is loaded for the entire length of the supporting frame, the plates tip and deposit the peat blocks on the bog surface.

(5) The plant is operated by a 50 - 60 H.P. Oil Engine, or is electrically-driven. Capacity - about 5 tons airdried peat per hour. Number of men required - 5.

(6) An excavator of this type is not suitable on bogs containing timber.

(7) A number of these machines are in operation in Ireland. On the Clonsast bog the Turf Development Board also runs 7 machines capable of producing 10 tons of airdried peat per hour.

(8) ADVANTAGES OF AUTOMATIC EXCAVATOR AND SOD TRANSPORTER TYPE COMPARED WITH THE HAND-OPERATED TYPE

(a) Saving of manual labour, actually 5 men are producing the same quantity as approximately 28 are doing on the non-automatic type.

6. VERTICAL CUT

Common for all the methods mentioned is that the peat is excavated in a vertical cut. When a number of machines are in operation on the same bog, a number of parallel working lines are laid out. The bog surface between these working lines is used as drying fields. For every year these drying fields are getting narrower and narrower and in the end the non-excavated bog surface is getting too small for drying fields and the excavated portion

will have to be used as such with consequent slower drying. The waste of raw peat is always very high and it takes a fair amount of work to convert the excavated portions into farm land.

7. MILLED PEAT METHOD

This method applies a horizontal cut and the thickness of the cut is only about 1/2". The peat is not cut into sods but into litter of a finely divided form (like coarse saw dust).

(1) MOSS PREPARATION

Before the winning of milled peat can take place the bog has to be drained and the surface prepared. The whole moss area say 1,000 acres is divided up in fields by a system of ditches, 50' to 60' apart and 4 feet deep. The bushes, heather and grass is removed or burned and the surface made smooth with the help of rotary tillers or millers. After the overburden has been removed, the brown peat surface exposed and the fields have set sufficiently, the winning of milled peat can commence.

(2) 1st Operation: Milling, in the dry season

This is performed by a rotary drum (12 - 24" diam. x 10 feet long) carried and driven by a tractor. The miller cuts and disintegrates the surface of the bog to a depth of about 1/2" and this granulated peat is being left spread out for drying. The miller operates like a big lawn mower.

2nd Operation: Harrowing

After some time, hours or a day, depending upon the drying factor, fast tractor-driven harrows ruffle the peat once or more in order to hasten the drying.

3rd Operation: Ridging

When the moisture content of the milled peat has been reduced to 55% or less the dry peat is scraped into the middle of each field by a tractor pushed machine called a Ridger, which works like the half of a snow plough. The dried milled peat is now left in a ridge in the middle of the field.

4th Operation: Harvesting

Next the harvesting machine, the Harvester, runs along the ridge No. 1, picks up the milled peat in the ridge and by the help of a conveyor, delivers it on to ridge No. 2. Having finished No. 1 ridge the harvester runs along No. 2 ridge, picks up and deposits the contents of No. 1 and No. 2 ridge on the No. 3 ridge and so on until 5 or more ridges have been transported and deposited in a big ridge along a railway. In this ridge or heap the milled peat is stored until it is taken to the drying plant.

5th Operation: Loading

The milled peat is loaded into wagons by a mechanically operated loading machine.

6th Operation: Transport to drying and briquetting plant.

The milled peat is taken in trains of wagons hauled by locomotives to the drying plant.

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7th Operation: Artificial Dehydration

In the drying plant which has been specially [illegible] for the drying of peat the moisture content is reduced [illegible] 10%. The tailings, i.e. the fibres and course materi[illegible] sifted off are used as boiler fuel. The boiler plant is entirely [illegible] peat tailings. No coal or any other fuel or power from [illegible] sources is being used.

8th Operation: Briquetting

From the drying plant the milled and screened peat with a moisture content of 10% goes to the briquette presses which press and form the peat into hard briquettes, ready to be burned at once.

(3) The winning of the milled peat on the moss takes place from April to October during dry spells. One scraping is called a harvest and it takes about 2 days or less.

The number of harvests obtainable during one season depend upon the weather. The average number of harvests during 10 years in Ireland have been 20.

The briquetting plant is run the whole year. The briquetting plant is usually designed for an output of not less than 50,000 tons briquettes per annum.

All operations on the moss as well as in the briquetting plant are mechanised.

The method described is the Peco method.

It is the first commercial peat winning method in which all moss operations have been mechanised.

(4) DRAINAGE

A mechanical ditcher, driven by a 70 H.P. Diesel Engine has eliminated hand-digging of ditches. The ditcher is capable of digging a 3' deep and 3' wide ditch at a rate of 80 yards per hour on a virgin moss containing 92% water. For cleaning ditches the rate of digging is higher.

By drainage it is possible to reduce the moisture content in peat to 86% - 87%. Further dehydration can only be effected by drying.

8. OTHER MILLED PEAT METHOD

At one plant a scoop pushed by a tractor is used instead of the ridger and harvester. This method is only possible with short working lines of about 150 yards whereas the length of the working lines in the Peco method is unlimited.

Another method employed a vacuum machine for harvesting the dry milled peat. This method however, is not suitable for large scale production and the method of transport has not been solved quite satisfactorily.

9. ADVANTAGES OF MILLED METHOD

(1) Much quicker drying compared with peat in sods. The surface exposed by a peat sod 12" long and a cross section of 5" x 5" is 2 square feet. The drying of this sod from 90% moisture content to

30% will take nearly all the summer. If this sod was cut into ½" cubes the total area of peat surface exposed to the air would be almost 100 sqr. ft. The drying of milled peat therefore is of the order of 50 times as favourable as that of sod peat. Under favourable weather conditions the milled peat would dry down to a moisture content of 30% in 2 days.

(2) The whole process is mechanised. So far no machine has been invented capable of footing or setting peat sods.

A fully mechanised sod collector is still to be designed.

(3) The transport problem has been solved, from the time the milled peat is ready for harvesting till it is damped into the bunker at the drying plant.

(4) The waste of raw peat is negligible compared with the vertical methods.

When the peat deposit has been exhausted or almost exhausted, the bog area is left as a drained plain ready for the former to start cultivation. Sufficient peat will always be left to be mixed with the mineral subsoil. No pools or stagnant water are left behind as with the vertical methods.

10. DEHYDRATION

Any artificial dehydration process with the object of reducing the moisture content in peat from 90% has so far failed economically. For every 100 tons of raw peat 90 tons of water have to be excavated and transported to the drying plant. Dehydration by pressing has so

far not been a success from an economic point of view and the pressing has always been done in a plant away from the moss. The transport of the water still exists even if the method of pressing was sound.

The milled peat method takes the best advantage of airdrying at the peat deposit before any transport takes place. Say the moisture content at the time of milling is 87%, 100 tons of raw peat contain 13 tons solids and 87 tons water. After 2 days drying the moisture has been reduced to 50%. Of the original 100 tons of raw peat is left - 13 tons solids and 13 tons water. Total 26 tons. We have now only to transport 26 tons from the drying field and not 100 tons. The evaporation of the one ton water per ton solids is quite feasible in every way.

NOTES:

An undrained bog contains up to 93% water and 7% solids. Out of 100 lbs of this raw peat only the 7 lbs solids are of any use to us. Not a few people forget about this high moisture content.

The peat bogs form the largest deposit of organic matter we have. Sooner or later the peat bogs will have to be more utilised not only for fuel and power production but also in the chemical industry and in agriculture and horticulture.

Anders Tønder.

DEWATERING BY PRESSURE

This method has met with some success after many years of experiments in Germany. Bothadal peat gives up little or no water under pressure. If, however, the raw peat is formed into nutsize balls* and rolled in peat dust, the moisture of the wet bog peat can be reduced to a moisture content of ~ 5%. Further dewatering has to be done by thermal drying. One commercial plant has been in operation in Germany from 1949. The raw peat is excavated and transported to the drying and briquetting plant during during the whole 12 months of the year. There is no seasonal labour.

* Nutsize balls 10 mm.

July, 1951.

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S/W.

To consider 12-28 and report at your convenience, pl.

[illegible]
3/11/51

Reply at 12A

Copy of Minute from S/W. which is filed at Page 12/A.

H.C.S.,

I am not at all satisfied with the output of these machines. However I would like if possible to visit a

?Ireland bank in Scotland while I am on leave next year.

(Itld.) A.G.L.
11/11/51.

[illegible] From p.12. As far as most of the methods are concerned they are thinking in terms of a much larger annual output than we have here. The machine at 14-16 looks the best bet for us, and it would be as well if SAW. could inspect them on leave next year.

[illegible] 17/11/51.

So arrange pl. [illegible] real answer is [illegible], [illegible] to turn over to 'electric' as quickly as possible; [illegible] final [illegible] only.
[illegible]
17/11/51

SAW.

To see above minutes, pl.

[illegible] 19/11/51.

HCS

Noted thank you AGL
13/3/52

[illegible] 19/3

Extract from minute by H.E. the Governor to Hon. Col. Sec. of 15/2/53.

(Original filed in 0284/VI/34-41 - Estimates 1953/54).

Expenditure.

.....

XV (11)(12) I think we could economise to some extent by introducing Rayburn ranges and slow-combustion grates (as in S/P's house - same type; what is it?) in all Govt. quarters and give the housewife a much-needed break at the same time. Did we get by with the supply last year? We were in difficulties when I left. What was the final decision regarding peat hauling vehicles and may I see the reports on the small automatic peat-cutting plant? Young is I believe investing in one for the Company and is toying with the idea of briquetting I believe.

.....

Copies on 1482 - Peat Haulage
0032 - Supply of Govt. Peat.
0035 - Peat Briquetting.
0825/II - P.W.D. Stoves for Govt. Quarters.

S/W

(30)

1) What is the position about the peat hauling vehicles?

2) Pse submit early your report on the peat cutting machines.

27/5

AES [illegible]
F.C. Pse. arrange
29/5.

HCS
– Please see file 0032
ASL
10/6/53

[illegible] 11/6.

CS.

I have now examined the pp & drawings at back cover; from these it would seem that

(a) the Rohr machine costs 26,200 D. Marks f.o.b. Hamburg: (what is this in real money?)

(b) We should also have the mechanical loader (see 2nd drawing below Mr Bennie's letter) on half-track vehicle, thereby eliminating further man power calls, and we should ask for quotation at the same time. I should imagine we would need the 40 h.p. engine but S/W can advise.

2. You mentioned that F.I.C. contemplated the idea of briquetting commercially: S/W thought the price of such a plant would be of the order of £250,000 and I recall having dismissed the possibility for much the same reason and because of the high freight on (FIC) and difficulty of marketing the product

in Uruguay where I made enquiries in 1946.
I see from a Dept. of Agriculture for Scotland letter – also at back cover – that a plant of this type (PECO) cost £1,000,000 erected in France after the war!

3. In allocating any peat bog to FIC for their own purposes the requirements of Government must come first and should they go in for it commercially, entailing the exploitation of a large bog, we should be very chary of what we are about in the interests of the local inhabitants; the peat is getting further and further away with the years.

4. Please take early action as may be required: we want to get the machinery here this season. Orders can be placed by telegram. Let us confirm subject at the same time.

HC. 16 VI. 53

File three pp. please; I have thrown away the salt-digging area, in which we are not interested

GOVERNMENT TELEGRAPH SERVICE

FALKLAND ISLANDS

SENT

Number	Office of Origin	Words	Handed in at	Date
				16.6.53

To

BLUME, BALLY GANNON, KILCOOLE, WICKLOW, IRELAND. HOA/C

IN RESPECT ROAR SELF DRIVING TURF CUTTING MACHINE M2 DRP AS SEEN BY LIVERMORE GRATEFUL EARLY ADVICE ON BRACKET A BRACKET COST OF MACHINE INCLUDING CYLINDRICAL HARROW BRACKET B BRACKET COST OF ONE YEARS SPARES BRACKET C BRACKET PRODUCTION OF PEAT IN CUBIC YARDS AND TONS PER HOUR BRACKET D BRACKET DELIVERY DATE.

GOVERNOR.

ACS

Time

GOVERNMENT TELEGRAPH SERVICE

FALKLAND ISLANDS

33

SENT

Number	Office of Origin	Words	Handed in at	Date
				19.6.53

To

BLUME, KILCOOLE, WICKLOW, IRELAND. HOA/C

GRATEFUL ALSO QUOTATION AND DELIVERY DATE HALF TRACK TRACTOR WITH HYDRAULIC BUCKET LOADER AND 40 H.P. DIESEL ENGINE PLUS 2 YEARS SPARES.

See 32A

GOVERNOR.

Time

CGG

34

The Falkland Islands Company, Limited.

(INCORPORATED BY ROYAL CHARTER 1851.)

REGISTERED 1902.

AGENTS FOR LLOYDS.

TELEGRAMS "FLEETWING PORTSTANLEY" via RADIO.

COLONIAL SECRETARY'S OFFICE 16 JUN 1953 FALKLAND ISLANDS

Stanley.

CONFIDENTIAL

16th June 1953.

The Honourable the Colonial Secretary,
STANLEY.

Sir,

Further to our discussion yesterday we desire to apply for permission to work for our own use and our employees an area of peat on Stanley Common measuring approximately 720 x 120 yards x 12 feet in depth. The most easterly point of this area lies between Green Patch Pond and Pebbley Pond and is approximately 4 miles from Stanley, 1½ miles from the 'mattress' road leading off the Eliza Cove road. The West Store peat-bank forms the western limit and is the only bank worked in this locality.

At present

2. The machine which we would seek to import is the Rohr Turf Machine of which you have the specifications and descriptive literature. Our information is that the machine utilises a width of 5 feet and depth of 9 inches at a speed of 400 yards per hour, which actually gives an output of 166 cubic yards per hour though the manufacturers do not claim more than 97 cubic yards. We do not understand why Mr. Livermore estimates the output at only 80 cubic yards per day. / see 36

3. The proposed area of 720 yards by 120 yards gives 22,600 cubic yards for every 9 inches of depth, therefore assuming that it is possible to remove peat to the depth of 6 feet over the whole area without risk of flooding from surface water, a cubic yardage of 180,800 is available. According to your figures, 80,000 cubic yards are the total quantity consumed annually in Stanley of which 50,000 are for the account of Government, therefore it seems that more than 2 years supply are at hand from this one untapped area alone.

4. We do not think it would be possible to cut more than two nine inch layers off the same bank in any one year allowing for the fact that the first layer has to be dry enough for transportation before the second can be cut. In a bad season one layer only would be possible.

5. The first nine inch depth of any bank is necessarily the worst in quality, composed of top sod and fibrous matter, but it is also the easiest to win as the tractor is running on turf. Similarly, the trailers or other vehicles used for transport will travel over a comparatively firm peat surface, whereas at deeper levels the peat is often of the consistency of butter. We fear that no vehicle yet invented will be able to move over virgin peat carrying a load until at least a month of drying winds has formed a crust on the surface. This supports our contention in the previous paragraph.

I agree.

6. Another bank, about 200 yards distant, was surveyed, measuring approximately 130 x 130 yards, depth 12 feet minimum. There was insufficient time to visit other vast areas which looked likely from a distance, but we have no doubt that if a proper survey of Stanley Common peat banks were to be carried out, it would be found that the available supply is well-nigh

?

/inexhaustible

Reply at 39.

inexhaustible at the present rate of consumption. Distance from the metalled roads or peat tracks is the main obstacle, and the reason for a large proportion of the 'landed' cost. Doubtless many householders with banks nearer Stanley and/or main roads will continue to cut by hand regardless of any machinery that may be imported now or in the future.

7. For His Excellency's information we enclose a copy of a letter from Mr. Young (which please return) giving the service details of Mr. C. Ohrstrom, Peat Expert, whom we propose to engage subject to your approval. You will notice that Mr. Young refers to briquetting of peat, and here again we are at a loss to know why Mr. Livermore has the impression that the lowest cost of such a plant is £250,000. Briquetting might well reduce our own fuel costs in the matter of East Jetty and "Fennia" boilers, not to mention Government commitments at Fox Bay and Cape Pembroke Lighthouse.

8. Finally, we ask you to recommend to His Excellency that we are given unqualified permission to proceed with this project on the following grounds:-

(a) If it proves satisfactory we would import a second machine for use on our farms.

(b) It will alleviate the shortage of labour and relieve our Staff, Employees and Pensioners of an ever-present anxiety.

(c) If Government decides to import a Cutting Machine also, it would be reasonable to suppose that at least one of the two machines was in working order and a reciprocal agreement could be arrived at.

(d) Centralisation, even if only partial, of the peat areas worked, reduces the number of peat tracks and bridges considerably.

9. We are sending a copy of this letter to our Head Office, and as the writer expects to leave for Ajax Bay on the 19th we shall be very much obliged if you can favour us with your reply, in duplicate, by noon on the 18th.

I am, Sir,
Your obedient servant,

A.G. Davis

MANAGER.

DECODE.

TELEGRAM.

From Mr Blume , Kilcoole , Ireland.

To Governor, Port Stanley.

Despatched : 18.th June, *19* 53 *Time* 1812

Received : 19th June, *19* 53 *Time :* 0845

F.o.b. price Roehr machine complete with two years spares £2,550 ; four weeks delivery ; average hourly output equals two tons dry peat.

BLUME KILCOOLE.

B.u. f.

(Intld.)
C.C.

P/L
CGG

DECODE.

TELEGRAM.

37

From Blume, Kilcoole.

To H.E.the Governor.

Despatched : 20th June, *19*53 *Time* 1208

Received : 22nd June, *19*53 *Time :* 0845

FOB price ROEHR 40 H.P. diesel halftrack with bucket loader two years spares complete electric equipment 1700 sterling six weeks delivery.

BLUME KILCOOLE.

P/L.
SS

(38)

Jth. 30I (31)

Quotations for machinery are at (36) & (37). This total (plus spares) FOB price is £4,225. This is a lot of money and on Sfw's figures that 2 tons dry equals 80 to 90 ft cu. 75 wet say we only save the wages of one cutter & one stickler which is about £200 a season. (It saves the work of a second cutter but this is offset by the driver of the machine).

2) However with man power so short & the fact that with two shifts we can work the machine 16 hours a day and thereby shorten the season I think it is worth experimenting.

So do I — there is the further point that we should be able to get the peat more quickly.

3) I suggest I put to CFC on Friday & then order by telegram.

Yes

—

4) Ref (34).

I feel that we should encourage the importation of the machine & I will get Sfw to go over the bogs again with Mr Barton.

5) Mr B. has also mentioned a figure of £8,000 for briquetting machinery. It is not like Mr Young to slip up on figures though he seems to have done so over the Loder output. I suspect however that this was Mr Y. (junior.)

This I cannot credit.

Not a bit

6) Draft sfc at cover.

21/6

Para 5 of draft reply: is it not 2 tons per hour?

Please. 25/6

MC. 25 vi

39.

1421

A

26th June, 53.

CONFIDENTIAL

Sir,

34 I am directed to refer to your letter of the 16th of June, 1953, and to state that Government is anxious to encourage your proposed experiment of importing and operating a Rohr Turf Machine.

2. Every effort will be made to find you suitable stretches of bog to work, but it is not possible to approve the actual areas mentioned by you until a more detailed survey of the common has been made. This will take place in the near future.

3. It is also emphasised that any bog concession will at this stage be on the understanding that the peat won will be solely for the use of your Company and its employees.

4. As regards your paragraph 7 Government has no objection to your engaging Mr. Ohrstrom, but no concessions for the briquetting of peat can be guaranteed until Government is satisfied that future peat supplies for the rest of Stanley will not be jeopardised thereby. This question can no doubt be resolved as a result of Mr. Ohrstrom's investigations and it is hoped that Government will be furnished with a copy of his survey report.

5. For your information it has been confirmed by the Rohr Agents that the average output of the machine is two tons per hour.

6. Mr. Young's letter is returned herewith.

I am,
Sir,
Your obedient servant,

(Sgd) C. Campbell

COLONIAL SECRETARY.

See 46

B

Ack telegram at cover to issue. S/O to prepare [illegible]. File back to me for telegram to S/S. [illegible] 2/6

The Manager,
Falkland Islands Company, Limited,
STANLEY.

VP

40

GOVERNMENT TELEGRAPH SERVICE

FALKLAND ISLANDS AND DEPENDENCIES.

SENT.

Number	Office of Origin	Words	Handed in at	Date
				29.6.53

To

C. A. Registration Number F. Islands 6268 should be quoted on correspondence relating to the Indent

CROWN LONDON HOA/C

PLEASE ORDER FROM HERBERT BLUME LTD BALLYGANNON KILCOOLE COUNTY WICKLOW IRELAND ONE SELF DRIVING ROHR TURF MACHINE M2 DRP PLUS TWO YEARS SPARES AND ONE ROHR FORTY HP DIESEL HALF TRACK WITH BUCKET LOADER PLUS TWO YEARS SPARES AND COMPLETE ELECTRIC EQUIPMENT STOP TOTAL FOB COST £4250 STOP DELIVERY EARLIEST POSSIBLE STOP CONFIRMATORY INDENT FOLLOWS STOP GROUP NUMBER 4.

COLONIAL SECRETARY

S/W - asked to prepare Indent 30/6/53
[illegible] 30/6

ACS
To S/W as at 39?
[initials] 29/6

Y.E. S/C have approved the machinery
2) Draft to S/S at cover ofc. [initials]

Time

SS

[initials] 39B - File to you any.
[initials] 30/6.

Issue
[initials] 1/VII

ACS
[initials] 2/7

DECODE.

TELEGRAM SENT.

From GOVERNOR *to* SECRETARY OF STATE

Despatched: 2.7.53 *Time:* 1140 *Received:* ...... *Time:* ....

A

No. 121. Superintendent Works recently inspected peat cutting machinery in Ireland and based on his favourable report I have ordered one Rohr Machine and auxiliary equipment at approximate landed cost £5,000.

(2) Growing demand and acute shortage of labour have made it increasingly difficult to win and store sufficient peat in the short season available and quicker output by machinery appears to be only solution to problem.

(3) Grateful your covering approval, which I have anticipated to enable machinery arrive in time for next season. Falkland Islands Company are making similar experiment.

Reply at 43

B

GOVERNOR.

(a) Papers at G.C. and now be placed in
(b) an envelope & file kept for reply (41) & renew
(c) P.S.D. about confirmatory ...

G.T.C.
~~CGG~~

2/7.

ACS

41b. (a) done.

[illegible]
3/7

42

A.W.

As at 40 pl. (Confirmatory Indent).

W.H. for C.S.
3/7/53

HCl

Confirmatory Indent will be forwarded later

Indent No. 190/53.

[illegible]
11/7/53

1421

DECODE.

TELEGRAM SENT.

From SECRETARY OF STATE *to* GOVERNOR

Despatched: 9.7.53 *Time:* 1955 *Received:* 10.7.53 *Time:* 0845

No 92. Your telegram No 121. Peat Cutting Machinery.

Covering approval granted.

SECRETARY OF STATE.

File.
(Intld) J.B.
10/7

P/L.
SS

44/

AP/T.

41/4 43.

S.W. ..?

14/7/53

H.T.

A.S.E. has been received

21/7/53.

ACS/

43 seen checkgen.

T.S.

28/7/53

Ft.

Peat Bogs

I think there was a reference in Dr Young's recent letter to cancelling his peat expert because Govt would not cooperate over bogs.

Is that so? I was not aware of it

2) The latest position is at (39) which I think is an encouragement rather than a deterrent. In conversation with Dr Barton we generally agreed that the whole matter would be satisfactorily concluded when their peat expert arrived, but in the meantime he & Sho [?] were to prospect suitable bog areas when the weather improved.

This is exactly what I understood.

3) My impression is that P.C.C. realize that they got the output figures of the Röhe [?] machine wrong and are now trying to slide out of the experiment — at the same time putting the blame on Govt.

This was being expressed before [?]

4) I feel we should return to the attack with C.M. (who can cable Head Office) & for drafting may I ~~see~~ have relevant extract from Dr Young's letter?

(a) 4 — I fear that I have delayed it but the clear intimation was that as Government had not given them a firm guarantee over the bog that it was not worth their while to get the expert out.

Action as in para 4 please.

MC 17/viii

F.I. Ref: 1421.

46

18th August, 1953.

CONFIDENTIAL.

Dear Barton,

His Excellency received a letter from Mr. Young in the last mail advising that the Company would not now be bringing out the Danish Peat Surveyor as Government had not given adequate guarantees about bog concessions.

39

I feel that my letter No. 1421 of the 26th of June, 1953, gave every encouragement and my impression from our discussions was that we agreed to await any final decisions until the expert had conducted his survey, though you and the Superintendent of Works would make further investigations of suitable areas in the meantime when the weather had improved.

I think that it would be a great pity if the opportunity of expert advice were lost and I would be glad to know what precise assurances Mr. Young is seeking.

Yours sincerely,

(Sgd) Colin Campbell

The Hon. Mr. A.G. Barton, J.P.,
STANLEY.

25/8

VP

Reply at 47

47

The Falkland Islands Company, Limited.

(INCORPORATED BY ROYAL CHARTER 1851.)

REGISTERED 1902.

CONFIDENTIAL

AGENTS FOR LLOYDS.

TELEGRAMS "FLEETWING PORTSTANLEY" via RADIO.

Stanley.

20th August 1953.

Dear Campbell,

46

Thank you for your letter of 18th inst. My letters to and from Mr. Young on the peat problem have invariably crossed, and the situation at the moment is as follows:-

34 1. 16. 6. 53 My letter to you re Eliza Cove peat deposits asked for a reply by the 18th in order to get it away by "FITZROY" on the 20th. You were too busy to reply until the 26th. 2 days only!

And in any event CM cannot reasonably expect to hold a pistol at Govt's head like this [initials] 25/8

34 2. 16. 6. 53 I wrote to Mr. Young enclosing a copy of my letter to you.

3. 19. 6. 53 I wrote to Mr. Young again quoting you as saying we would be allowed certain areas to exploit for the use of the Company and it's employees but not necessarily the bogs specified by us.

39 4. 26. 6. 53 Your No. 1421 to me, on the strength of which I cabled Head Office recommending they proceed with the engagement of the Peat Expert.

5. 29. 6. 53 Telegram as above.

39 6. 17. 7. 53 I sent Mr. Young a copy of your 1421 of 26th June.

7. 17. 7. 53 Mr. Young writes, in answer to mine of 19th June:

"We did not intend to ask Government to share
"the expenses of a Peat Expert, but unless we
"can be assured of being allocated suitable banks
"there is nothing to be gained by employing him.
"A survey of the banks adjacent to Stanley would
"surely be most valuable to Government, the Public
"and ourselves. *Agreed*
" However in view of their attitude we do not
"propose to proceed further in this matter until
"we have something definite from them.
" We consider that some form of mechanical cutt-
"ing must be adopted sooner or later. Briquetting
"is another matter but a small plant has distinct
"possibilities.
" With regard to the Rohr Machine, Mr.Young Jnr
"is at present in Ireland and will report on the
"results it has achieved when he returns".

The last paragraph refers to the conflicting reports which you and I had received on the machine's output.

8. As far back as January 1952 Mr. Young was contemplating the purchase of peat-cutting machinery and asked for information on peat deposits and annual consumption from Stanley and Camp Managers. Samples of peat dust from Stanley and Darwin were sent home this year for analysis. Early in May 1953 you or possibly the Superintendent of Works told me that Government proposed to

he contemplated it in June 1951

/cut

Reply at 51

BUK.

48

cut peat mechanically with two machines and I informed Mr. Young to that effect. Am I right in thinking that the machine(s) were not actually ordered until July, that is to say after the Company had applied to work a certain area mechanically?

So what? Quotations were asked for earlier

9. As no survey of the Stanley peat-bogs has yet been undertaken by the Superintendent of the Public Works Department how can he be certain that there are suitable areas, except on the strength of my report of 16th June? He was not present on the occasion of my preliminary survey of one particular area, nor were his subordinates who did accompany me aware until then of the extent of it. All things considered it is not surprising that the Company senses a somewhat dog-in-the-manger attitude on the part of Government.

no detailed survey.

Rubbish - the Peat Officer & S[PW] himself were well aware -

39

10. Your 1421 of 26th June contains reservations detrimental in part to the Company's programme in three out of five paragraphs, but nevertheless I advised Mr. Young to proceed. There is no suggestion that peat might be briquetted for export therefore it is hard to see how briquetting could jeopardise Stanley's peat supplies, one would think rather the opposite.

11. If you can now see your way clear to granting us the area specified which, as my letter points out is further removed from Stanley than any area now being worked, I will again endeavour to interest Mr. Young in his original proposal.

Yours sincerely,

C. G. Darlin[?]

MANAGER.

Y.E. (45) - (47)

Carping criticism again. I feel inclined to repudiate the allegations and suggest that the cause of withdrawal is the nonsense Young (Bus?) made over the machines out put.

2) In any event I consider S/W should make an early survey of the bogs.

C/es

22/8

The Hon. C. Campbell Esq.,
Colonial Secretary,
Secretariat,
STANLEY.

It is a pity that the Colonial Manager (I have no doubt that his representations - or rather misrepresentations - are responsible for Young's attitude: I have generally found the latter reasonable) spends so much time trailing his coat: his allegations may be refuted firmly but it is not worth the time & paper to do so in detail. Agree say. we have had mechanical cutting under consideration since 1951, and indeed earlier. Please let me see reply before issue. [initials] 22/viii

49

HCS

A

Peat Cutting

I spoke this morning about CM's letter and this conversation supercedes the minute which I have addressed to you on this subject. The letter is offensive in tone and he is altogether too ready to impute shady motives to others when he would be better employed in removing the beam from his own eye.

2 The Eliza Cove bog has, so I have understood, always been regarded as the exploitable reserve and for Mr Barton to suggest, as he has done, that its existance was unknown to P.W.D. before he drew attention to it is patently childish. He has told e.g. Gilruth that it is the only bog suitable for automatic cutting and why, in that event, he should suppose that Government could contemplate handing it over to the Company is altogether beyond me. I have had under consideration the question of automatic cutting for a very long time and it was one of the many things included in EH's (Bunting's) brief: for I had it in mind that the time is not far distant when we shall have to provide in some measure for the public, quite apart from our own servants, and these considerations cannot be subordinated to the needs of the Company. When there has been a proper survey (we might turn Blaiklock on to this when he returns from the South) of available bogs Government will, naturally, be only too willing to assist the Company but is not prepared to give them a blank cheque in advance.

3. I will write to Young on the next mail [signature]

B

23.8.53

Ys. Draft opp. at cover.

[initials] 28/8

C

CS.

Thank you. Please check with S/W before issue and return file to me i.d.c. for letter to Young; the tone of Mr. Barton's correspondence is, as I have before remarked, infelicitous. Done [initials]

D

[signature] 25 VIII

Mr [illegible] Draft at cover to issue then file back to me. [initials] 25/8

1421

26th August, 53.

CONFIDENTIAL

Sir,

I am directed to refer to your letter of the 20th of August, 1953, and to express regret that you appear to consider that your Company has been unfairly treated over the question of mechanical peat winning.

2. In reply to your paragraph 8 I am to point out that the question of utilising peat cutting machinery has been under serious consideration by Government since 1951 and its examination was included in the brief given to Mr. Bunting when he went on leave. Though the Rohr machine was not finally ordered until July 1953 the fact that enquiries regarding price and delivery date were made before your letter of the 16th of June, 1953, was received may serve to refute the implication that Government is trying to compete with or victimise your Company and it is thought that the tone of my letter No. 1421 of the 26th of June, 1953, should have dispelled any doubts you may have had on that score.

3. Again, the suggestion contained in your paragraph 9 that a new and extensive peat area had been discovered as a result of your survey cannot be entertained as it is reasonable to suppose that the general layout of the bogs on the Common has been known to peat officers in the past and, in addition, the Eliza Cove area on account of its accessibility has always been earmarked by Government as the most suitable place for machinery experiment.

4. I am to suggest that a possible explanation of your Directors' reluctance to invest in machinery and to engage a Peat Surveyor was the knowledge that the estimate of output given in paragraph 2 of your letter of the 16th of June, 1953, proved to be inaccurate; an explanation which would be wholly reasonable and there should be no need to impute improper motives to Government. The figures of output supplied by the makers indicate that the experiment is distinctly "marginal" and in these circumstances it is right that the initial risk of loss or failure should be borne by the Administration.

Reply of 53

The Manager,
Falkland Islands Company, Limited,
STANLEY.

5. In conclusion I am to point out that while Government is still anxious to encourage any mechanical peat winning experiment your Company may wish to undertake and to assist this in any legitimate way, it cannot concede, on demand, rights over the particular bog you ask for since until a survey is made it is the only area of sufficient size and sufficiently accessible to facilitate experiment. The Government would be willing to share this bog with the Company for this purpose and it was hoped that the matter could be resolved with mutual satisfaction after your Peat expert - the cost of whose hire the Government would also have been most willing to share - had undertaken his survey.

X

I am,
Sir,
Your obedient servant,

(Sgd) C. Campbell

COLONIAL SECRETARY.

HES.

(1) D on 49 - file returned accy,

S
26/8.

J.E. wished this file returned to write to Mr Young. S/so agreed with the draft & contributed the information that it was Aldridge who showed Mr B the bog in question! I thought however that we could keep this shot in our locker.

S
26/8

Col. S.

I have written to Young.

MC. 2/IX

51a

Ghai

The illustrative brochure of the ROHR peel cutting machine is missing from this envelope.

MC 29/VIII

52

The Falkland Islands Company, Limited.

(INCORPORATED BY ROYAL CHARTER 1851.)

REGISTERED 1902.

AGENTS FOR LLOYDS.

TELEGRAMS "FLEETWING PORTSTANLEY" VIA RADIO.

Stanley,

27th August 1953.

Recd. 27/8/53

The Honourable the Colonial Secretary,
STANLEY.

Sir,

We have for acknowledgment your letter No. 1421 of 26th August and will discuss the question of mechanical peat-cutting further on Mr. Young's arrival, by which time your machine will have given a practical demonstration of its performance.

We hope!

It is too late now to consider the engagement of the Peat Expert for this coming season.

I am, Sir,

Your obedient servant,

A. G. Barton

MANAGER.

To see. No come back!

28/8

MC 28/VIII

He is probably thinking up something!!

53

A

A.C.S.

H.K.'s note at 51a. Brochure cannot be traced pl. ~~A.O.~~ not with S.W.

4/9/53

B

The brochure is the one H.C. produced at Ex. Co. I think – but I regret I cannot recall what happened to it subsequently.

4.9.

C

ACS Sfo. has it?

4/9

D

He says not

4.9.

B.W. I wonder if it has not turned up 5/9

BU 15/9/53

E

EXTRACT FROM MINUTES OF S.F.C. MEETING HELD ON 29.6.53.

(Original filed in 1040/A - S.F.C. Minutes of Meetings).

....

Purchase of a Peat Cutting Machine

The Committee approved the purchase of a Peat Cutting Machine and auxiliary equipment at an approximate landed cost of £5,000.

....

F

ACS.

No trace of Brochure, pl. 15/9/53

Y.E. asked about pp. regarding possible importation of a driver for the peat machinery and I am afraid that the relevant papers are the subject of another mysterious disappearance – like the Röhr machine brochure ((51) A 1921 refers).

NO

1) I strongly suspect S/W but I wondered if they were anywhere in Y.E.'s office? S.W. is still searching.

2) I, A.C.S. & S.W. recollect a recent letter to S.W. from Herbert Blume (Irish Peat Contractors) & I think it was in that letter Blume mentioned a peat machine driver & Y.E. minuted thereon.

That is so.

3) On the other hand I seem to remember a minute from H.E. to S.W. enclosing a pamphlet on peat draining (ex C.M. F.E.?) which S.W. recalls discussing with Y.E. one Saturday & which he cannot now trace. The matter of the peat driver may have been in that one.

No – it was on letter from Blume.

4) The question of the driver first came up on (97) B 0032 and my recollection is that S.W. satisfied us that anyone could work the machine with 24 hours practice. This leads me to believe that the point was not raised again until the missing letter from Blume to S.W. arrived and after Y.E. queried

55

the necessity matter of the driver, I would have passed on the minute for S/W's comment in view of his previous categorical assurance.

[initials] 17/9

Undoubtedly, & we must conclude that S/W is the culprit. I hope he is not being over-optimistic.

[initials] 18.IX

56

S.O.

Pse see attached.

You will note that I have put all the blame on you & it is up to you to prove me wrong!

Can you pse make a most thorough search.

@
1/9

HCC

Above noted with regret. regarding (1)
The only brochure I have ever seen is the one I myself brought back from Ireland That I gave you to put in the file in a celluloid container. (Complete with working drawings).
(2) The letter referred to was sent to me and I fear this has been mislaid
(3) As regards peat drainage I did have this pamphlet. I discussed with you and returned same.
(4) I am confident we can drive this machine
Does the S/W always have to "carry the Baby"

ACL Office to keep an eye out for these @

PP. 22/9 21/9/53.

57

ACS

56. Kept in secret pl.

WH 22/9/53

57

in this way will dry much more quickly.

Until the Peat-winning machine has got into its stride — i.e. after the top-soil has been removed — the 'hopper' cannot be expected to function efficiently but should thereafter. Incidentally it will also be useful for mixing road-metal when we start on construction.

MC 24/XII

1421

Bot.

58

CS

I had a look at the Peat-winning machine in action yesterday and have no doubt at all that once the top cover is removed it will do exactly as claimed and be of great help to us. What it will not look at is diddle-dee cover which is too fibrous so that really what is needed is a bull-dozer with skimming edge to take off the top soil which done the peat-machine can go on for year after year and you will get maximum economical exploitation of the bog. Nor is there any doubt that peat macerated

1421

File copy

60

23rd December 53.

To: The Superintendent of Works,
Stanley.

From: The Colonial Secretary,

Peat Cutting machinery.

I am directed to enquire what action you are taking to comply with Section 10 of the Peat Bank Rules.

(Sgd.) C. Campbell

Colonial Secretary.

NFAN.

DM

1421

File

CS
S/W

Buf

Peat.

Mr. Hang has a Danish briquetting machine which costs about £8,000 and produces briquettes a little larger than the Essex fuel 'nuts'. The bog requires no prior treatment, apparently, and the machine discharges the finished briquettes into a lorry.

He is going to bring out his expert this year and I think we should contemplate sharing his expenses as it is for the general good. There should be no

difficulty in finding a suitable
bag for the machine which is said
to scrape the surface only so that a
good bag should last for a very
long time indeed.

I would have liked to
have seen the machine in operation.

MC 29 XII

1421.

68

30th December, 53.

To: The Hon. Agricultural Officer,
The Superintendent of Works,
STANLEY.

From: The Colonial Secretary.

58 I am directed to enclose a copy of a Minute from His Excellency the Governor to the Colonial Secretary and to request that you will discuss this problem and advise me of your recommendations in due course.

Lee 67

(Sgd) C. Campbell
COLONIAL SECRETARY.

BU 31/1/54
K I.V. 60 and 61

CCC

CS

64

Peat.

Chairman confirmed his intention to bring out peat export and is quite willing that we should go in with them over this – sees every advantage in a combined effort. I explained about the bog and CH's misrepresentations in re.

MC 20/1

P/A @ 21/1

As at 63 [illegible]
Bll 31/1.

HCS.

63 awaits a reply – send a reminder?

CS 1/2

Yes. [illegible] 2/2

65

1421.

2nd February, 54.

To: The Superintendent of Works,

From: The Colonial Secretary. STANLEY.

I am directed to state that the peat cutting machine has been in operation for some weeks now and to request that you will furnish a brief report on its performance together with details of output.

Rep/pat 65

(Sgd) C. Campbell

COLONIAL SECRETARY.

BU 22/2/54

CGG

No. ____

It is requested that, in any reference to this memorandum the above number and date should be quoted.

MEMORANDUM.

66

18th. February, 1954.

From/ Supt. of Works.

Public Works Dept.,

STANLEY.

To/ The Honourable the

Colonial Secretary.

Stanley, Falkland Islands.

SUBJECT :-

65

I have the honour to report the peat machine arrived in Decenber last. This machine has been used and proved a complete success. I consider the output of this machine tobe approximately 120 yds. per day.

This machine will prove a big asset to Government next year when it is hoped to have a permanent driver and a machine to take off the " Top Sod ".

[signature]

Supt. of Works.

ACS

BUF [illegible]
draft urgent [illegible]
to Hon S.O. [illegible]
report on [illegible] is [illegible]
the top sod.
[illegible]
[illegible]

1421.

67

25th February, 54.

URGENT REMINDER

To: The Superintendent of Works,
Stanley.
The Hon. Agricultural Officer,

From: The Colonial Secretary.

Peat Cutting Machine.

63

With reference to my memorandum No. 1421 of 30th December, 1953, regarding the removal of top soil to facilitate the operation of the peat machine , I am directed to ask you to furnish a reply without further delay.

(Sgd.) C. Campbell

Colonial Secretary.

BU 28/2/54 M.

dm

No. [redacted]

It is requested that, in any reference to this memorandum the above number and date should be quoted.

MEMORANDUM.

68

26th. February, 19 54.

To/ The Honourable the Colonial Secretary, Stanley, Falkland Islands.

From/ Supt. of Works, Public Works Department, Stanley.

SUBJECT :- Re Memo No. 1421. 67

I have the honour to state that I visited the Peat Bogs with the Hon. the Agric. Officer for the purpose of removal of Top Sod.

We agreed that a Bulldozer was the right instrument for the job and recommend that one should be purchased.

Superintendent of Works.

69

HCS

67

Referring to the Peat Machine, I am answering your letter of 25/II/54 on same.

I went with Messrs Livermore, Pollini & Aldridge to look at same early in January. However they forgot to take the key to the windowless shed in which machine was housed, & I thus saw only where machine had been working.

I solicited from Mr Pollini that machine was now working satisfactorily as evinced by its last "diggings". But it was still not leaving its "revenant" standing up right.

Late I saw you & confirm the verbal report I then made:-

That while there was much peat bank with considerable vegetative cover which the machine appeared not to be robust enough to deal with dry; there was much peat bank with light, mainly moss cover near at hand to it, towards Horse Point & the drained pond, where it could work without any bank preparation.

Also that there were acres of already bare peat banks in the Peninsula just beyond Surf Bay.

P.T.O.

That I saw no reason why the machine should not be worked extensively on these considerable areas this season, to produce stoke hold peat.

Also that if considerable turf sod removal were envisaged preparatory to this machine's working in other places; a bulldoze would be the most practicable means of turf removal in the quantity necessary. As opposed to any type of grader; the working of which to this end I would consider impractical; & would at work of necessity have it be hauled by the peat machine. Thus restricting the operative time of the latter at the job for which it was designed.

I also suggested to Mr Livermore that he first have a strip of the dense turf sod cut & set on one side by hand to elucidate that the machine would then work before venturing on any capital expenditure in this direction.

John P Cline
26/II/34.
A.O

Yr.

Peat Machine

The attached reports from W.O. & F.O. differ in certain respects. While feeling that beyond Kin/ Bay is an unnecessarily long haul at present, I do think that much can be done on the Elgin Cove bog, which was eventually selected, without the use of a bulldozer.

2) A bull dozer will, I agree, eventually be necessary but I do not think that we should hold up operations pending the purchase of one – even so I would prefer to see it come out, possibly early, as part of the road equipment which the Engineers provide as necessary.

Either it should do

3) I do not think we have experimented enough with the machine – partly because of lack of a driver – and I think F.W. should make a determined effort at the beginning of next peat season.

To move the machine about to deal with small patches is uneconomical – its most efficient use is on a large bog. A bull-dozer with blade attachment is certainly the answer – it will be required in any event for the road programme and should, I think, be here in time for the next peat season. Meanwhile there should be further experimentation (including stripping a small section by hand, perhaps) and a driver should be trained.

BVF

MC 7/

71

[illegible]

B.O. to me 1 week.

[illegible] 5/3

BM 12/3

G.C.S.

[illegible] C.S.

Draft at once to issue.

[illegible] 13/3

0421.

72

16th March, 54.

To: The Superintendent of Works,

From: The Colonial Secretary, Stanley.

68

Peat Machine.

I am directed to refer to your memorandum of 26th February on the subject of the removal of the top sod so as to facilitate the working of the peat machine and to confirm that the most practical method would appear to be by bulldozer with blade attachment.

2. It is more than probable that a bulldozer will be required for the road programme and when the scale of machinery for the major works has been decided upon early shipment will be arranged.

3. In the meantime, however, there are suitable peat banks near Eliza Cove where the peat machine can apparently deal with the light top sod itself and you should concentrate on these areas at the beginning of the next season. You should also take early steps to train a driver for fulltime work on the machine.

4. If satisfactory results are still not obtained you should endeavour, if the labour can be found to experiment further by stripping a small section of the top sod by hand.

(Sgd.) J. E. Briscoe

Acting Colonial Secretary.

Copy to Hon. Agricultural Officer.

No. [redacted]

It is requested that, in any reference to this memorandum the above number and the date may be quoted.

MEMORANDUM.

73

22nd. May, 19 54.

To/ The Honourable the Colonail Secretary, Stanley, Falkland Islands.

From/ Sutp. of Works, Public Works Dept., Stanley.

SUBJECT :-

I have the honour to request the following:-

1). An order is placed with the Crown Agents for a Front Blade attachment to fit an International T.D.6 Tractor (4 cylinder).

2). Enquiries to be made with Messrs Blune Ltd of Ireland regarding machinery made for the removal of Top Sod on Peat Bogs.

A G Shuttleworth

Supt. of Works.

See 74

GOVERNMENT TELEGRAPH SERVICE

FALKLAND ISLANDS

74

SENT

Number	Office of Origin	Words	Handed in at	Date
				25.5.54

To

CROWN LONDON HOA/C

See 86

Indent

MY INDENT 190/53 AND YOUR REQUISITION 6268 PEAT CUTTING MACHINE STOP IT HAS BEEN FOUND THAT THIS MACHINE CANNOT PENETRATE CERTAIN AREAS OF BOG COVERED WITH THICK TOP SOD OF QUOTE DIDDLE DEE UNQUOTE BRACKET EMPETRUM BRACKET ABOUT THREE TO SIX INCHES IN DEPTH STOP NEWPARA 2 POSSIBLE METHOD OF OVERCOMING THIS IS PRIOR STRIPPING WITH OUR INTERNATIONAL TD 6 TRACTOR BRACKET 4 CYLINDER BRACKET FITTED WITH FRONT BLADE ATTACHMENT STOP NEWPARA 3 GRATEFUL YOU CONSULT HERBERT BLUM LIMITED AND IF NO BETTER METHOD SUGGESTS ITSELF GRATEFUL YOU ORDER SUITABLE FRONT BLADE ATTACHMENT.

SECRETARY

Reply at 76

Time

.8m

75

A

Then B.U. 2 weeks.
(Intld) C.C.
26/5.

B

BU
9/6/54

C

EXTRACT FROM MINUTES OF STANDING FINANCE COMMITTEE MEETING
OF 28. 5. 54.
(Original filed in 1040/A - S.F.C. Minutes of Meetings).

.....

Additional Peat Cutting Machinery.

7. The Committee agreed in principle to Government obtaining a suitable blade attachment for the removal of the top layer of fibrous turf, prior to operating the Peat Cutter.

A/A

15B

76

DECODE.

TELEGRAM.

From The Crown Agents for Oversea Govts.& Admins.

To The Colonial Secretary

Despatched: 8th June, 19 54 *Time*: 1442

Received: 8th June, 19 54 *Time*: 1430

74 ing?

Your telegram 25th May. Herbert Blume agree top strippers can be done by TD6 Tractor. International Harvester can supply dozer attachment at approx. cost £600 but require following information

(a) confirm tractor serial number is TDBK9275
(b) has tractor front power take off coupling
(c) dimension between centre lines of tracks
(d) width of track shoes.

Kindly forward details and confirm we order dozer attachment.

CROWN.

Reply at 78, 83

To Dept concerned pl.
(Intld) W.H.
8/6

SW Will you supply inf. requested above pl.?
[illegible]
for CS. 9/6/54

See 92

P/L.
SM

77

No.

MEMORANDUM.

It is requested that, in any reference to this memorandum the above number and the date may be quoted.

14th June, 19 54

From

Supt Works - PWD.

Stanley, Falkland Islands.

To

The Hon. Col Secretary,

Secretariat.

SUBJECT :- Information re. Tractor.

In reply to 76, I have the honour to submit the following:-

1. Serial No, TDBK9275.
2. Tractor has no front power take off coupling.
3. Dimensions between centre lines of track, 52 inches.
4. Width of shoes, 16 inches.

Supt Works.

78

GOVERNMENT TELEGRAPH SERVICE

FALKLAND ISLANDS

SENT

Number	Office of Origin	Words	Handed in at	Date
				14.6.54

To

CROWN LONDON HOA/C

76 YOUR TELEGRAM 8TH JUNE STOP PLEASE ORDER DOZER ATTACHMENT STOP FOLLOWING IS INFORMATION YOU REQUIRE. STOP BRACKET A BRACKET TRACTOR NUMBER IS TDBK9275 BRACKET B BRACKET NO FRONT POWER TAKE OFF COUPLING BRACKET C BRACKET DIMENSION BETWEEN CENTRE LINES OF TRACKS 52 INCHES BRACKET D BRACKET WIDTH OF TRACK SHOES 16 INCHES.

SECRETARY

See 92

Time

79

A

ACS (78) should not have been sent off w/o my approval of cost involved. As it is no harm has been done.

C
17/6

B

H.C.S.

I am sorry about this. I have not troubled you with all drafts which, I presume, you wd. like to see in future.

WH 16/6

C.

ACS I don't want to see all drafts but this a policy financial matter & the cost might well have been say £6,000 & therefore uneconomical.

D.

Spoke H.C.S. & explained that I misunderstood which I took to be authy for ordering WH 17/6

C 17/6

BM 20/6
15/7

80

DECODE.

TELEGRAM.

From The Crown Agents.

To The Colonial Secretary

Despatched: 6th July, 19 54 *Time* 1805

Received: 7th July, 19 54 *Time* :0845

78 YOur cable 14th June advises dimension between centre lines of tracks as 52 inches. International Harvester state this dimension for TD6 tractor should be either 40 inches for narrow tread or 50 inches for wide tread tractor. Assume your tractor is 50 inches but please cable confirmation.

CROWN.

Reply at 82

To S/W early
(Intld)C.C.

S.W.
above. Will you confirm or otherwise pl
for C.S. 8/7/54

P/L.
SM

81

HCl This T.D6. was measured by Pallins who stated 52". He has again measured and found 50" Correct. (Discrepancy owing to wear on sprocket wheels)

AGL
8/7/54

GOVERNMENT TELEGRAPH SERVICE

FALKLAND ISLANDS

82

[redacted]

SENT

Number	Office of Origin	Words	Handed in at	Date
				8.7.54

To

CROWN LONDON HOA/C

80 YOUR TELEGRAM 6th JULY STOP TD6 TRACTOR STOP FIFTY INCHES CONFIRMED STOP ERROR REGRETTED.

SECRETARY

Bu ~~8/7~~ 15/8

Time

Communications to be addressed to
THE CROWN AGENTS
FOR OVERSEA GOVERNMENTS AND ADMINISTRATIONS
the following reference and the date
of this letter being quoted.

EM3/Falkland Is. 6268

TELEGRAMS { INLAND: "CROWN, SOWEST, LONDON."
{ OVERSEAS: "CROWN, LONDON."
TELEPHONE: ABBEY 7730.

4, MILLBANK,
LONDON, S.W.1.

26th June, 1954.

1421.

Sir,

I am directed to refer to this Office cable of the 8th June, 1954, and would acknowledge receipt of your cable dated 15th June instructing that an order be placed for a Dozer Attachment.

2. This has been done and in connection with this matter a copy of Messrs. Herbert Blume's letter dated 31st May, 1954 is enclosed.

I am, Sir,
Your obedient servant

The Colonial Secretary,
FALKLAND ISLANDS.

BUF

See 82

DAS/DG

DIRECTORS:
M. J. McCABE
G. [redacted]CCABE
HERBERT BLUME

SECRETARY & REGD. OFFICE
R. I. GEORGE, F.C.A.
13 D'OLIER STREET
DUBLIN

Herbert Blume Limited

IMPORTERS & AGENTS

BALLYGANNON, KILCOOLE,
Co. WICKLOW, IRELAND

31st May, 1954.

HB/DF.

The Crown Agents
for Oversea Governments and
Administrations,
4, Millbank,
London S.W.1.

Dear Sirs,

Ref.: EM3/Falkland Isl. 6268/1
Your letter dated 28th May, 1954.

In answer to your above letter regarding the stripping of overburden from bog prior to using a Röhr Peat Cutter, we would like to make the following comment and suggestions.

In all cases of virgin bog, the overburden has to be removed before any type of peat cutting machine can be employed, or even before sods can be cut by hand.

1. Where large areas of bog are to be prepared, a Stripping Machine is normally employed. These machines both strip the top sod, and in the same process level the bog surface. The stripped overburden is deposited by these machines in ridges alongside the working, from where it can be conveniently removed.

Stripping machines are however quite expensive, and their use would only be justified, where considerable areas have to be stripped Care must be taken, that no rocks or root stumps are worked through the machine.

2. In many cases an ordinary agricultural Rotary Cultivator will successfully strip the overburden. The process is as follows:

Work the Rotary Cultivator once, or if necessary, twice over the surface to be prepared, until all the fibreous sods and their roots have been cut up. By fitting a simple blade to the ploughing attachment of the Röhr Peat Cutter, the machine can be used to remove this cut-up overburden and deposit it in ridges alongside the working, from where it can be collected. There are of course many other ways of removing this overburden, once it has been rotary tille

The Crown Agents for Oversea Governments and Administrations.

Ref.: EM3/Falkl. Isl. 6268/1. Your letter dated 28.5.1:

3. On some bogs the overburden can be ploughed off .

4. Hand-stripping may have to be done in cases where no machine are available, or where the bog surface is studded with rocks or timber, or when the bog is undrained, and will not support machines

Stripping of overburden by TD 6 Tractor fitted with Dozer Blade would be a very good way of overcoming this problem, provided the bog is very dry, and will support the TD 6. The bearing pressure of the TD tractors is rather too high for most bog conditions, and when the dozer blade is set to work, the tendency would be for the tractor to bury her nose, as the tracks would travel over the stripped bog. It might be preferable to use the TD 6 with some rear-mounted tool to rip or to cut up the top sod, as the tractor would then travel on the overburden, which gives much better support, than stripped bog.

(a)

These can only be suggestions towards the problem of bog stripping. The methods used must vary from bog to bog, as conditions are so very different.

We are also investigating at the moment the use of a so-called Hand-Scraper for this purpose. The Hand-Scraper is basically a power winch to which a scraper shovel or other tools can be attached for earth moving, loading or unloading or even trench digging.

(B)

The whole unit is portable and so light, that it would not sink even on waterlogged bog. It is operated by one man, and costs between £ 300 and £ 400. We shall write to you again regarding this Hand Scraper as soon as the current tests are completed.

Regarding the use of the Peat Cutter, may we mention that the peat to be processed should have a moisture content of at least 85%. The dry crust of a bog is unsuitable for processing by any machine. Peat lends itself to maceration and formation into sods only when it is of a dough-like, moist consistency. If the surface of the bog has dried out so much, that even the use of the bog harro will not bring up wet peat, then the work should be left until rain thoroughly wets the surface.

Yours faithfully,
Herbert Blume Limited.

H. Blume

W/ EM 3 Falkland Islands 6268/3

All communications to be addressed to the Crown Agents for the Colonies, the above reference and the date of this letter being quoted.

CROWN AGENTS FOR THE COLONIES,
4, MILLBANK,
LONDON, S.W.1.

28 JUN 1954 19

Letter No. Col.Secs.tel of
Date 26-5-54

Indent No. 190/53
Date 28.8.53.

Department:— P.W.

29 JUL

The Colonial Secretary,
Falkland Islands.

Sir,

We append a report in connection with the indent or other communication referred to hereon.

We are, Sir,
Your obedient servants,

for the CROWN AGENTS.

ITEM No.	SUBJECT	REMARKS
	Dozer Attachment	An order for the item or items indicated has been sent to Messrs International Harvester of Gt. Britain Ltd., and ~~subject to their informing us that they can supply the goods, and to the price and delivery promise being satisfactory~~, the usual ''Advice of Order placed'' will follow.

DAS/DMP/38

W.20. | 20,000/2/53 W. & Co. Ltd.

87

Communications to be addressed to
THE CROWN AGENTS
FOR OVERSEA GOVERNMENTS AND ADMINISTRATIONS
the following reference and the date
of this letter being quoted.

4, MILLBANK,
LONDON, S.W.1.

TELEGRAMS { INLAND: "CROWN, SOWEST, LONDON."
OVERSEAS: "CROWN LONDON."
TELEPHONE: ABBEY 7730.

EM3/Falkland Is. 6268/2

3rd July, 1954.

Sir,

International Harvester Bullgrader.

83.
76

I am directed to write further to this Office letter of 26th June, 1954, concerning your cable of 8th June instructing that an order be placed for a Dozer attachment.

88

Enclosed is a copy of a leaflet dealing with the Bullgrader which the firm propose supplying. In your cable you stated that the attachment is required for a Tractor with a 52" tread, but this is apparently not a standard size. Two tread sizes are produced namely, 40" for the narrow tread and 50" for the wide tread. It is assumed that yours is the 50" machine.

The firm are proceeding with the Bullgrader attachment, together with the front power take off coupling, and it is hoped that this will very shortly be despatched.

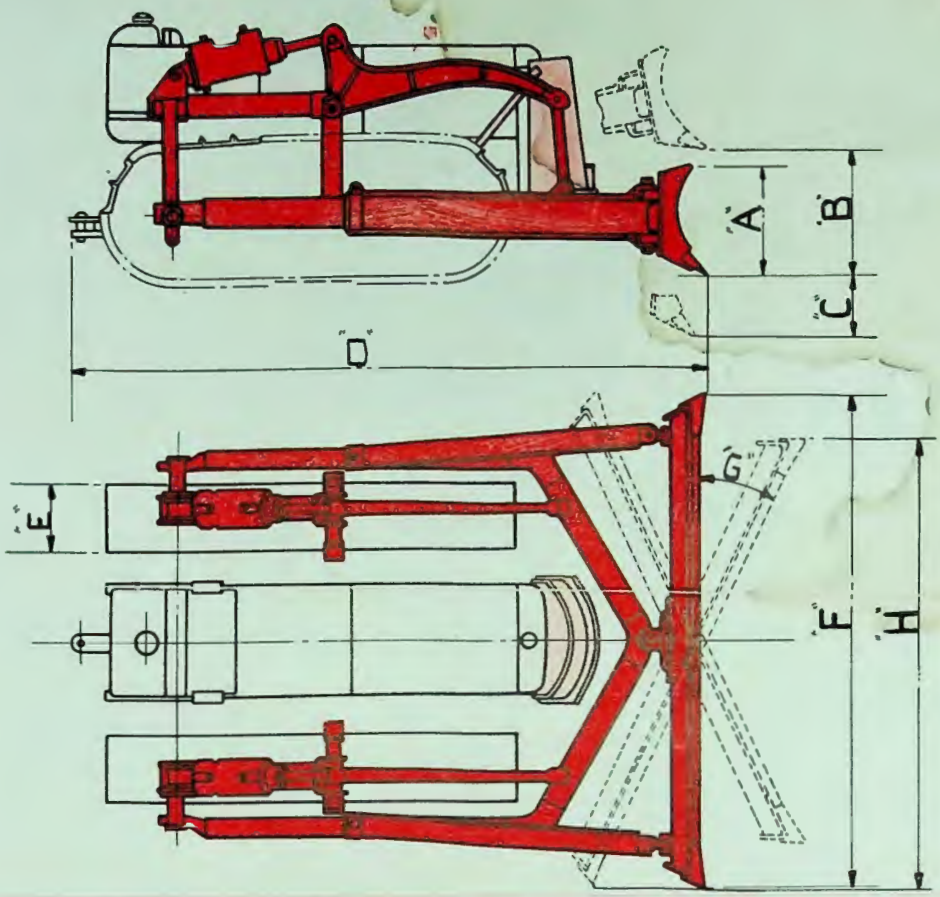
I am, Sir,
Your obedient servant,

The Colonial Secretary.
FALKLAND ISLANDS.

DAS/JN

TD-6

BULLGRADER *Specifications*



TD-6 BULLGRADER 50 Tread Crawler Tractor

Maximum tractor track shoe width		16″
Operating oil pressure (normal)		200—300 lb.
Maximum oil pressure		500 lb.
Blade length	"F"	8′ 6″
Blade height	"A"	21″
Blade lift above ground line	"B"	29″
Blade drop below ground line	"C"	13″
Blade travel speed (at rated engine speed)		29″ in 3.3 secs.
Angle of blade from bulldozing position	"G"	25°
Difference in height of blade ends when tilted		8¼″
Type of cutting edge		Reversible
Material of cutting edge		Alloy steel
Cutting edge dimensions		⅝″ x 6″
Overall length (including tractor)	"D"	11′ 4¼″
Overall width (including tractor)	"E"	8′ 0″
Width of cut with blade angled	"H"	7′ 8½″
Weight (domestic)		2,745 lb.

HYDRAULIC CONTROL: Power take-off shaft for rear pump furnished by Ruston-Bucyrus. Hydraulic cylinders with release ports at both ends of piston stroke.

RUSTON-BUCYRUS LIMITED, LINCOLN, ENGLAND

Telephone : Lincoln 640 & 11197 Telegrams : Bucyruston, Lincoln

LONDON OFFICE : 95 ALDWYCH, W.C.2

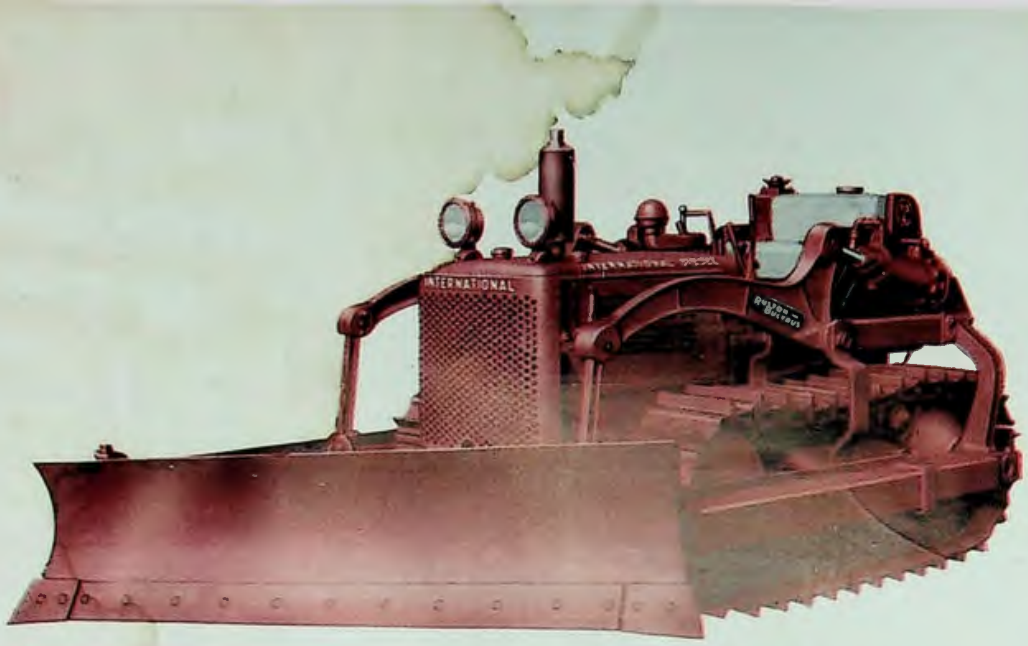
Telephone : Holborn 7197-9-9, 7190 Telegrams : Bucyruston, Estrand, London

AJJ452K Publication RB1419 (R1) Printed in England

RUSTON — BUCYRUS

TD-6

RUSTON-BUCYRUS BULLGRADER



Ruston-Bucyrus bullgraders set a new high performance standard in dirt moving. They are designed and built for International Crawler Tractors so that the tractor and bullgrader become one properly balanced unit and the greatest use is made of the power, speeds and weight of the tractor.

BALANCE.—The TD-6 bullgrader is constructed to maintain the balance of the TD-6 tractor. When the bullgrader is mounted on the tractor the same full-length bearing and drawbar pull on the tracks are available and the tractive ability of the tractor is not destroyed. The weight of the bullgrader is carried entirely on the tractor track frame which is designed for this load, and is equally distributed over the track rollers. Maintenance costs on the tractor are thus kept to a minimum.

HYDRAULIC EQUIPMENT.—Easy, efficient control is secured by twin hydraulic cylinders. The control valve is conveniently placed and four positions are provided; raise, hold, lower and float positions. The hydraulic system operating at a low and safe pressure, generally from 200 to 300 lb. in normal operation, avoids severe heating and consequent breaking down of the structure of the oil and allows the use of ordinary quality oil as opposed to high-priced, special hydraulic oil. A pressure relief valve, set for a maximum pressure of 500 lb., is incorporated in the control valve. The entire system is simple, fool-proof and exclusive.

BLADE.—The bullgrader blade is curved so that it rolls the dirt instead of pushing it along. This reduces resistance and keeps down fuel consumption.

Replaceable and reversible cutting edges are standard equipment. Replaceable corner shoes are also provided at each end of the blade.

The blade can be angled by one man within a few minutes without overstrain and without the use of a heavy sledge hammer or jacks. The blade can be tilted easily by the operator with a hammer and without the aid of any other tools. The ability to tilt the blade of a bullgrader is important only when it can be done easily and quickly as on Ruston-Bucyrus equipment.

MAIN FRAME.—The bullgrader frame transmits the load to the tractor at two points so that it does not put side stresses into the tractor track frames. No rubbing plates are necessary. The frame is of heavy, box section, welded steel construction to absorb pounding, punishing loads from either side as well as from top or bottom.

POSITIVE CONTROL.—Steel connecting rods provided with renewable bushes and pins connect the lift arms with the main frame and blade and provide a rigid action between the hydraulic cylinders and the blade, eliminating " chatter." The lifting mechanism on each side is entirely independent from the other side, hence any tendency to distortion from track oscillation, is eliminated. At the same time the blade can be held level in relation to the ground, within the limits of the piston travel in the cylinders, regardless of the oscillation of the tracks.

FULL VISIBILITY.—The whole of the blade and the work are in view at all times so that the operator can see what he is doing without having to stand up or twist himself in an uncomfortable position.

RUSTON-BUCYRUS

90

S.W.

To see from 83.

[illegible] 6/8

H.C.S.

X. at 87. is correct. Discrepancy of 2" occurs on a/c of worn tracks.
Ag. S/W.
A. M. 9/7.

Ag. S.O.

I would like your early views and those of your advisers on (84). There it states that the dozer blade will only be of use if the bog is drained or very dry or will support a T.D. 6.

2) I have my doubts about our bogs & if we must think again we must try and cancel the blade attachment before it is too late.

[illegible] 10/8

H.C.S.

Pallin's view is as (a) at 85. This is also corroborated by Mr. D. Pole-Evans (Port Howard) who has tried it out.

X. at 2 of 84. seems to be more in keeping with our needs, but does not appear to be a standard attachment, & I very much doubt if we could make it here.

The bog which we have chosen is in itself very well drained but I myself do not think it would stand the tractor after removal of top sod.

There does not appear to be any use for the scraper in any of our immediate programmes, as its operation is dependent on heavy, rather than light or soft soil.

ag. S/W. A. M. 10/8

H.E.

Rather a serious question has arisen over the peat top sod removing scraper.

In reply to our (74), the C/A at (76) advise the scraper. However we have now received (84) & Ag S.W.'s comments are above.

2) I am not happy about the scraper & I

91

suggest we should cancel or suspend before it is too late & get G.O. to discuss with C.L. Agent, & if necessary Herbert Blume in Ireland. It will mean further delays but is I think the prudent course.

11/8

This is a pity but we must do it. Action as suggested app[d] 11/8/54

G.O. Please consider & report urgently if it is practicable to put out an area to contract hand stripping & if so what area.

13/9

1.O.Z. I visited the selected bank this afternoon with Palline-Lunston, (peat officer) & called in H.E. Clifton (peat haulier) for his views.

It would seem advisable to handstrip the whole bank if we can find contractors to take the job on, as once stripped it would suit Govt's needs for another 15 yrs. This would probably be expensive & of fairly long duration as the overburden is of a very fibrous nature & about 1 ft deep.

Means of disposing of the overburden were discussed & two methods present themselves. (1) carting & tipping over the beach, & (2) putting in ricks & burning. It was agreed that burning would not affect the bank. I.E. setting it on fire.

No useful purpose would be served by trying to find an alternate bank, as the one selected is the only one within reasonable reach of a good road, & possessing the required area & depth of peat..

If contractors responded en-bloc we might get sufficient stripped this spring to give the machine sufficient operating space to prove itself, but it will be quite a long programme to strip the whole bank.

Sg. S/W.
A. L. 14/9

Copied to 96 herein.

92

GOVERNMENT TELEGRAPH SERVICE

FALKLAND ISLANDS AND DEPENDENCIES.

SENT.

Number	Office of Origin	Words	Handed in at	Date
				12.8.54

To

PRIORITY CROWN LONDON HOA/C

76 78

YOUR TELEGRAM 8TH JUNE AND MY TELEGRAM 14TH JUNE DOZER ATTACHMENT FOR PEAT STRIPPING STOP IN VIEW OPINION EXPRESSED IN PARAGRAPH FOUR OF

83 ENCLOSURE TO YOUR LETTER 26TH JUNE EM3/FALKLAND ISLANDS 6268 PLEASE SUSPEND ORDER WITH VIEW TO CANCELLATION AS MOST IMPROBABLE LOCAL BOGS WILL SUPPORT TD 6 WITH FORWARD MOUNTED SCRAPER STOP NEWPARA 2 REQUEST YOU VIEW PAPERS TO AND DISCUSS WITH LIVERMORE AND PROVIDED HE AGREES WITH FOREGOING MAKE EARLY DECISION ON BEST ALTERNATIVE METHOD TO ADOPT STOP IF NECESSARY LIVERMORE MAY VISIT BLUNT.

SECRETARY

Bll 1 week.
(Intld) C.C.

Bll 19/8/54

Time

CC/SM

Bll 2 weeks
Bll 3/9

Reply at 93.

93

GOVERNMENT TELEGRAPH SERVICE

FALKLAND ISLANDS

SENT

Number	Office of Origin	Words	Handed in at	Date
				3. 9. 54.

To
CROWN LONDON H.C. Acct.

92 MY TELEGRAM of 12th AUGUST PEAT MACHINE STOP GLAD TO KNOW OUTCOME OF YOUR DELIBERATIONS

SECRETARY.

Reply 94
See 103, 106

[illegible] 1/9

Tel in [illegible] 10/9

Time

CS/VF

DECODE.

94

TELEGRAM.

From The Crown Agents.

To The Colonial Secretary

Despatched :	9th September,	*19* 54	*Time*	1752
Received :	10th September,	*19* 54	*Time :*	0845

93

Your telegram 3rd September. Order for bullgrader attachment cancelled. Have discussed with Livermore who considers hand stripping preferable. Enquiries being made accordingly will advise results later.

CROWN.

YS (90) + (92)

Pse see (94). This does not seem to be very clever as the whole point of getting the machine is because we have insufficient labour to strip. Of course once an area has been hand stripped then there are tons of peat to be won underneath by a machine.

2) They may perhaps be thinking along the lines of a hand scraper vide B/ on (85).

P/L.
SM

3) I am a little undecided what to recommend. I feel we must get the machine working as we have now had it ~~over~~ a nearly a year. Pending any bright thoughts by C of Agents or F.S. we might try getting a small ~~ar~~ area handstripped on contract so that we can show some results. It might be possible to do this before peat cutting proper starts.

(initials) 10/9

B.

Yes, that's right. Put out handstripping on contract now. [initials] 10/9

S.W.

As at B p[1]. [initials] 13/9

See (91)

Original wrongly filed at 91 Rerein.

96

S.W.

Please consider and report urgently if it is practicable to put out an area to contract hand-stripping and if so what area?

(Intld) C.C.
13/9/54.

H.C.S.

I visited the selected bank this afternoon with Pallini - Luxton (peat officer) and called in H.E. Clifton (peat haulier) for his views.

It would seem advisable to handstrip the whole bank if we can find contractors to take the job on, as once stripped it would meet Government's needs for another 15 years. This would probably be expensive and of fairly long duration as the overburden is of a very fibrous nature and about 1ft. deep.

Means of disposing of the overburden were discussed and two methods present themselves (1) carting and tipping over the beach and (2) putting in ricks and burning. It was agreed that bruning would not affect the bank, i.e. setting it on fire.

No useful purpose would be served by trying to find an alternate bank, as the one selected is the only one within reasonable reach of a good road, and possessing the required area and depth of peat.

If contractors responded en-bloc we might get sufficient stripped this spring to give the machine sufficient operating space to prove itself, but it will be quite a long programme to strip the whole bank.

Ag. S.A.
(Intld) A.N.
14/9/54.

NB Sw. also told to put on the Govt. pump.

Bu. 3 days.
15/9

BU 18/9

Bu. 3 days.
20/9 BU 23/9

97.

Communications to be addressed to
THE CROWN AGENTS
OVERSEA GOVERNMENTS AND ADMINISTRATIONS
the following reference and the date
of this letter being quoted.

4, MILLBANK,
LONDON, S.W.1.

EM3/Falkland Islands 6268.

TELEGRAMS { INLAND: "CROWN, SOWEST, LONDON."
OVERSEAS: "CROWN, LONDON."
TELEPHONE: ABBEY 7730.

4th August, 1954.

Sir,

International Harvester
Bullgrader

I am directed to refer to the various correspondence concerning the supply of the above, and it is confirmed that the International Harvester Company are supplying a Bullgrader, the ex-works cost being £577.16s.0d.

See 83-97

Various references in correspondence have been made to the Bulldozer and the object of this letter is to advise that a Bullgrader is in actual fact being supplied.

I am, Sir,
Your obedient servant.

Cancelled see 94

The Colonial Secretary,
FALKLAND ISLANDS.

DAS/KD

98

S.W.

H.C.S.'s query on 97 pl.

WA / C.S. 23/9

H.C.S.

I received an enquiry on the day following our advert. from Messrs. M. Clark & L. Goodwin, who were supplied with a copy of attached particulars.

I heard nothing further until this morning when they requested an interview, which I granted for 1-15 this afternoon, when they stated that owing to a complete & unrepairable breakdown with their lorry they were unable to do anything about it unless Govt. could supply them with a vehicle.

I could not offer them a lorry, but suggested that it might be possible for them to have the use of our Fordson tractor to use in conjunction with a peat sleigh.

Pallini is definitely against allowing Clark to drive one of our lorries - even if we had one to spare, & although reluctant - was agreeable to him using the tractor.

I suggest therefore that we ask them for a price per sup. yd, with us supplying tractor - sleigh, & fuel. The tractor is deisel burning, not petrol.

I would like your views pl. before proceeding further.

Ag. S/W.
A. E. 23/9.

H.C.S

I did not add a closing date to our advert for the peat bog stripping, as I thought perhaps one of the contractors missing the oil tank base might have a bash. 99

I had in mind that we might get a price of around 6d per yd. & on receipt of the enclosed tender this afternoon calculated that if we had to pay that price, then to strip our required area of ½ mile sup. would cost £38,720 – at 6d £19,360, & for a ½ mile strip by 50 yds wide £2,200 & £1,100 respectively.

Even at 6d per yd, I don't think we could afford it as it would cost almost 3 times as much as we pay cu yd for peat.

I feel that we should wait & see what results are obtained from the handstripping equipment now under experiment in Ireland.

Ag. Ypw.
2.Q. 24/9.

YS Attached is the adverse response to the peat stripping advert and Sw's comments.

In view of the figures quoted I cannot recommend acceptance of this quota.

2) As regards PWS peat gang starting in S.O. does not recommend this

a) As they will make a negligible impression by themselves &

b) they will tire themselves out & 'brown themselves off' before peat cutting proper starts and we may get caught between two stools.

I think there is substance in this argument.

3) I suggest therefore that we proceed with the machine

This is infuriating. Can Mrs N. see Mr Patterson & point out that he's asking 6 times as much for shipping as we pay for post & see if he can get them to submit a reasonable figure?

ORA 27

1. 10 13

Sir, With regard to the shortening of the road from Pear Banks, I quote the sum of £1100

(440 yds x 50 yds @ 1/- p. yd

J. Peterson

Ag. Dept Works
(WD)

1 101

Ag Fo. (98)

~~Can you~~ Unless you are quite happy about giving these people the tractor you should not proceed to negotiate on these lines but ask them what they would charge for stripping & stacking.

HE's minute at (100)

Pse discuss with Petersen & see how far you could beat him down.

28/9

H.C.S. - I interviewed Clark a.m. 29/9 & asked him for a price :- (A) Stripping & stacking. (B) Stripping, removing with Govt. supplying tractor & sleigh. He returned p.m. & gave verbal price on (B) only @ 1/6d per. sup. yd. with him supplying the fuel. I pointed out the futility of coming along with such a stupid price, when he stated that they would have no further interest in the job.

I saw Pettersson on 30/9 & he agreed that his price of 1/- per yd was more or less based on peat cutting. I pointed out the unwarrantable cost of stripping at this price, & asked him to bear this in mind & give me a firm price for a 50 yd wide strip running North & South on West side of the bank.

I found the attached tender when I returned to the office on Sat. morning, & as can be seen it is still based on the 1/- per. yd.

I cannot recommend the acceptance of this, & can only suggest that if it must be handstripped, then it would be better for us to experiment as to the best means of achieving this, & call for tenders based on our findings at the end of this peat season, when contractors will have much more interest in some winter work.

Ag. S/W.
R. K. 4/9.

102

G.Fo (101)

I agree. I see carry out, experiment including burning. In the mean time the machine should operate on the easier bog.

[initials] 5/10

Recalled on H.C.S's. instructions. See 103.
[initials] 29.10.54.

HCS The Peat machine will be working early in the New Year

A.G.B.
29/12/54

103

Communications to be addressed to
THE CROWN AGENTS
FOR OVERSEA GOVERNMENTS AND ADMINISTRATIONS
the following reference and the date
of this letter being quoted.

4, MILLBANK,
LONDON, S.W.1.

EM3/Falkland Islands 6268

13th October 1954

TELEGRAMS { INLAND : "CROWN, SOWEST, LONDON." OVERSEAS : "CROWN, LONDON."
TELEPHONE : ABBEY 7730.

2 OCT

Sir,

93. I am directed to refer to your telegram dated 3rd September in connection with the supply of alternative equipment for stripping the top of the peat bogs.

The matter was taken up once more with Messrs Herbert Blume who state that they have not yet received from the makers of the hand scraper the drawing of the special attachment for stripping bogs.

Tests have shown that the hand scraper can effectively cut the overburden, provided it does not contain either heavy timber or rocks.

It is not as quick a method of stripping a bog as with a stripping machine, as the overburden will have to be removed manually when it has been sliced off with the power scraper. The power scraper is very much cheaper than a stripping machine, and has a further great advantage, in that it can be used for a number of other purposes when the peat-cutting season has ended.

Details and price of the scraper will be forwarded as soon as they are received from the manufacturers.

I am, Sir,
Your obedient servant,

[signature]

BUF

BUF - recall file if necessary. 29/10

See 106

S.O. Stripping machine is referred to in (84) who [illegible]. I think the hand stripper is our best bet which is presumably towed behind a tractor. 29/10

The Colonial Secretary,

FALKLAND ISLANDS.

ACS Send telegraphic enquiry whether any further news of hand scraper. BU I will [illegible] when I [illegible] with Peat Expert 30/10

LM/EM

GOVERNMENT

FALKLAND ISLANDS

SENT

Number	Office of Origin	Words	Handed in at	Date
				31.12.54

To

CROWN LONDON HOA/C

103 YOUR LETTER13TH OCTOBER EM3/FALKLAND ISLANDS 6268 STOP GRATEFUL LEARN POSITION REGARDING HAND SCRAPER.

SECRETARY

K.I.W. BU 1 week
(Intld)J.B.
30/12

Bu 6/1/55

Reply 105

Time

JB/SM

DECODE.

TELEGRAM.

From The Crown Agents

To The Colonial Secretary

Despatched: 4th January, 19 55 *Time:* 1646

Received: 5th January, 19 55 *Time:* 0845

104
Not yet received

Your telegram 31st December. Airmail letter with details hand scraper despatched 18th December.

CROWN.

A.C.S./ Above f.1.
2. File submitted in acc. w. 103 C.

6/1.

P/L.
SM

106

Communications to be addressed to THE CROWN AGENTS FOR OVERSEA GOVERNMENTS AND ADMINISTRATIONS the following reference and the date of this letter being quoted.

4, MILLBANK.

LONDON, S.W.1.

EM3/Falkland Islands 6268

15 JAN

18th December 1954

TELEGRAMS { INLAND: "CROWN, SOWEST, LONDON." OVERSEA: "CROWN, LONDON."

TELEPHONE: ABBEY 7730.

Sir,

93 I am directed to refer to your telegram dated 3rd September 1954 in connection with the supply of alternative equipment for stripping the top of peat bogs.

103 In this Office letter dated 13th October you were advised that Messrs Blume Limited were preparing their quotation for the Hand Scraper and this is now in hand.

107 A copy of the firm's letter dated 9th December, together with pamphlet and drawing, is enclosed for your information.

110 109

I am, Sir,
Your obedient servant,

[signature]

BuF

The Colonial Secretary,
FALKLAND ISLANDS.

KIV fic [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] be adapted for the [illegible]

LM/EM

DIRECTORS
M. J. McCABE
G. E. McCABE
HERBERT BLUME

SECRETARY & HEAD OFFICE
R. I. GEORGE, F.C.A.
13 D'OLIER STREET
DUBLIN

Herbert Blume Limited

IMPORTERS & AGENTS

VC7

BALLYGANNON, KILCOOLE
Co. WICKLOW, IRELAND

9th December, 1954.

HB/DF.

The Crown Agents for
Oversea Governments and Admin.,
4, Millbank,
London S.W.1.

Dear Sirs,

Ref.: W/BM3 Falkland Islands 6268.

We very much regret the delay, which has arisen over the quotation for the Power Scraper, suitable for stripping bogs, but we are now able to enclose this quotation.

The special cutting shovel, which was developed for bog work will deal with overburden consisting of heather, sphagnum, cotton grass and similar light material, but it will not cut through str ger roots. The shovel will give a straight cut, so that the loose strips can conveniently be removed.

The depth of cut will vary with the density of the roots to be cut, the average being approximately 3 to 5 inches.

The Handscraper is easily portable, so that it can be moved b the working crew, when the action radius has been stripped. The winch is normally anchored with four bolts. On soft ground, bricks or stones can be used to hold it in position in addition to the bo

We can supply this machine on solid rubbers, for which we quote an extra price, but we doubt whether this will be of any great advantage on rough bog.

May we draw your attention to the many other uses the Hand= scraper has in loading or unloading bulk materials. Another type o shovel would be needed for these purposes, and we quote this as an extra also.

Assuring you of our best attention always.

Yours faithfully,
Herbert Blume Limited.

H. Blume

Enclosures.

The Crown Agents for Oversea Governments and Administrations,
4, Millbank, London S.W.1.

Ref.: W/EM3 Falkland Islands 6268.

Quotation.

1 (One) EUMA Power Scraper

as per enclosed leaflet with sturdy steel frame, with 4½ h.p. Fichtel & Sachs petrol engine, electro-magnetic clutch and Bosch generator. With hardened and ground gears running in oilbath. All parts dust and grit proof, shafts running on ball bearings. With cable reeling device and 100 feet of steel winch rope and 100 feet of steering rope. With 4 foundation pegs, each 28 inches long.

With special cutting shovel suitable for stripping 3 to 5 inches of light overburden from bogs.

Price of the complete unit, assembled and ready for work:

£ 345.0.0. F.O.B. German Port.

Extras. Shovel suitable for loading or unloading bulk materials:

£ 15.0.0.

Four-wheeled solid rubber tyred bogie:

£ 21.0.0.

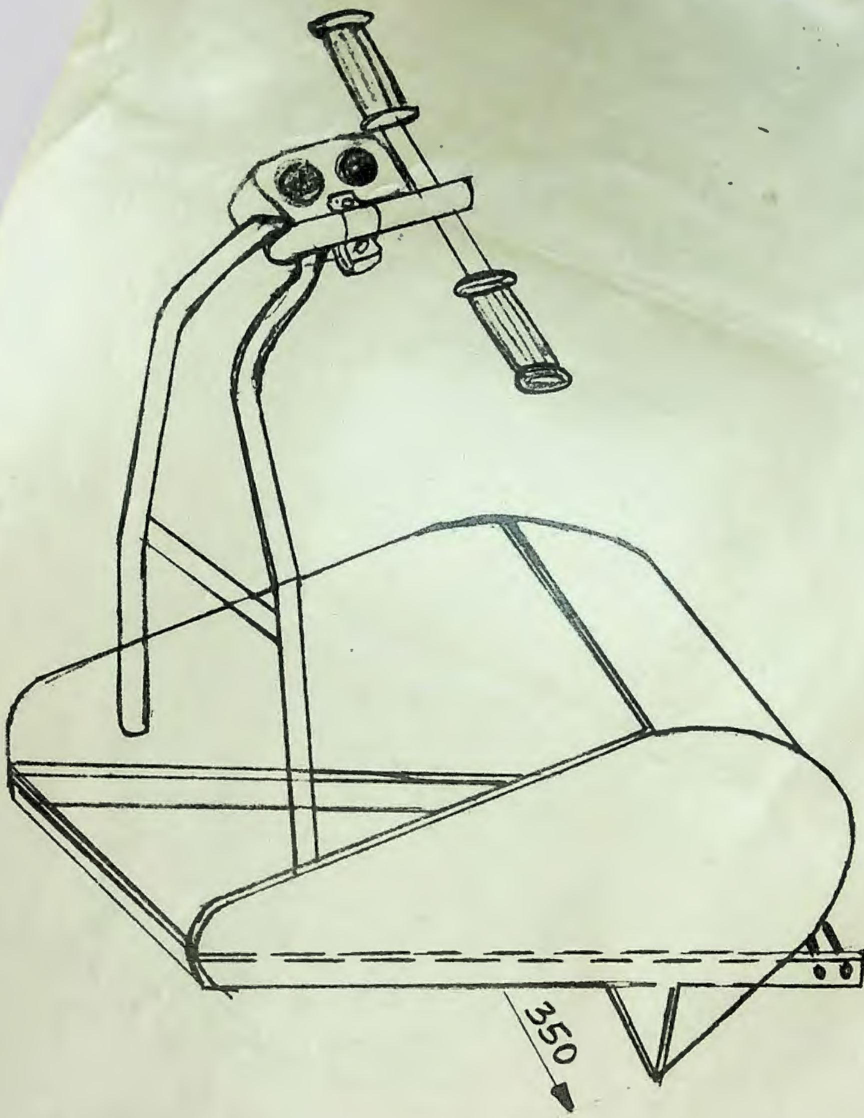
Spares for engine, winch and power unit sufficient for two years under average conditions:

£ 34.0.0.

Delivery: Within 14 days of receipt of firm order.

Herbert Blume Limited.

H. Blume.



Cutter-shovel for Bog Stripping.

EUMA - Grasbodenscha[illegible]

[illegible] Menz

Nellingen-E[illegible] a/N.

EUMA Handscraper

The new remote controlled Electric Winch (German Patent)

★ *robust* ★ *simple* ★ *high output*

7 CONVINCING ADVANTAGES

1. **Simple and robust design within portable tubular frame**
2. **Superfluous components eliminated**
3. **All parts fully enclosed, dust and grit-proof**
4. **Gear-motor, flanged, hardened and ground gears running in oil bath**
5. **Noiseless operation, all shafts running on ball bearings.**
6. **A winch for a variety of scraper duties.**
7. **Also available as mobile unit with conveyor for loading and unloading.**

The E U M A for universal application

complete with loading shovel, 100 ft. steel rope and 100 ft. steering rope.

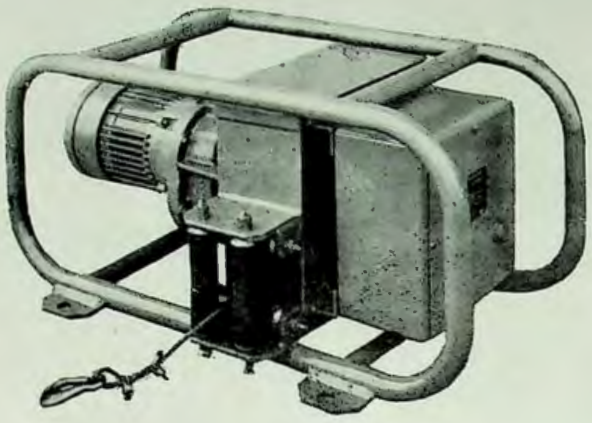
The EUMA will meet your requirements in every respect — you will save 70-80% of your present handling charges. A few weeks of operation will fully repay your initial outlay and the EUMA will continue to earn money for you!

The EUMA HAND SCRAPER-LOADER

Saves YOUR money!

Distributors for Ireland.—CROMAC LTD., PALMERSTOWN, CO. DUBLIN.

The Euma Hand Scraper



is a popular and indispensable machine with the Contractor. It has a variety of applications such as loading and unloading of wagons, lorries and feeding of concrete mixers. Are used also in sugar factories, chemical industries and others.

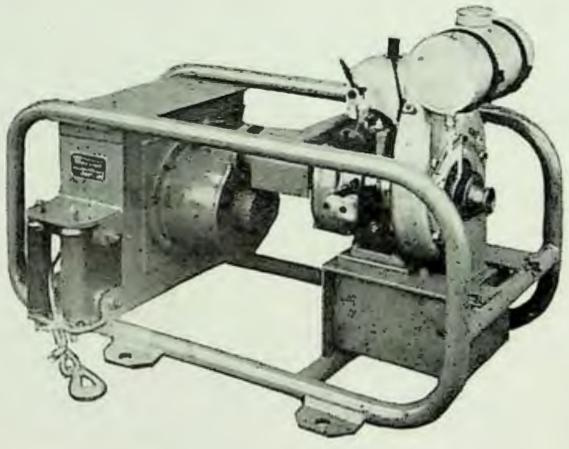
In combination with conveyors, bucket elevators, chutes or silos the use of heavy plant such as grabs or loading shovels is eliminated. It handles material in confined spaces.

Portable or Mobile units on solid rubber tyres are available.

Petrol engined model as quoted.

A winch incorporated in the Euma is driven by a Gear-motor (make Eberhard Bauer G.m.b.H., Esslingen) and is controlled by the operator through an efficient and reliable switch (make Kloeckner-Moeller), which is conveniently fitted to the handle-bar of the shovel. The electrical cable is automatically taken up by a reel, suspended from a pole, thus avoiding wear of cable.

Where no electrical power-supply is available, units fitted with a Fichtel & Sachs petrol engine are available.



To appreciate the saving in handling costs you have to see this machine working at your site. Why not phone to-day for a free demonstration to :

CROMAC LTD., PALMERSTOWN

CO. DUBLIN

Phone 79116

111

H.E.

I saw the F.I.C. Peat Surveyor to-day and he is going to carry out the following programme on our behalf:-

a) Make a rough survey of the common with a view to ascertaining the peat potential round Stanley — this will not only give us an indication of our assets but will enable a decision to be reached if the question of exporting briquettes is raised.

b) Make a detailed survey of the Eliza Cove area to enable areas for mechanical peat winning to be allocated between Govt & F.I.C. — to the mutual satisfaction of both parties.

c) Supervise ~~ploughing up~~ stripping of top sod by ploughing which is the method he considers most suitable.

d) Advise on the best method of removal of stripped top sod after ploughing.

e) See the Peat Machine & auxiliary equipment in action and comment on its performance.

f) Advise on the necessity of bog draining prior to or during mechanical peat winning.

Very good. [illegible] 30

[illegible] 21/1

[illegible] 31/1

Memo to Re Peat Surveys

112

4 copies made by Mr. Barton

Government requirements in Connexion with Peat

1) Rough survey of common to ascertain peat potential ~~over a area~~ expressed in a term of years to supply Stanley. Figure for annual consumption to be taken at 80,000 tons or 10,000 tons.

2) Detailed survey of Eliza Cove area to allocate suitable stretches for Govt and F.I.C. to carry out mechanical experiments. As far as possible both Govt and F.I.C. preferences to be met.

3) Supervise experiments in ploughing top sod by horse and (if possible) mechanical ploughs and advise on quickest and most economical method.

4) Advise on best method of removing top sod from bog after ploughing.

5) See Röhr machine working on bog with thin top sod and advise on its performance.

6) Advise what draining (if any) of bogs is required prior to mechanical cutting.

1421

URGENT.

5th February, 55.

To: The Superintendent of Works,

From: The Colonial Secretary. Stanley.

Peat.

I attach an interim report from Ohrstrom which does not tell us much at present.

2. The Falkland Islands Company will have the two blade plough ready early next week and ask if we can have a combined experiment on Wednesday with Peat Machine, Loader, tractor and other devices. Can you arrange? - I would like to be present for part of the time and suggest 9.30 a.m. start on the site.

3. The Falkland Islands Company further state that their man, Basil Reive, would be available to drive one of the machines if required and they could also provide some labour if the experiment is protracted and we are short.

(Sgd.) C. Campbell

Colonial Secretary.

cc/Sup

114

The Falkland Islands Company, Limited.

(INCORPORATED BY ROYAL CHARTER 1851.)

REGISTERED 1902.

AGENTS FOR LLOYDS.

TELEGRAMS "FLEETWING PORTSTANLEY" VIA RADIO.

Stanley,

22nd February 1955

The Honourable the Colonial Secretary,
STANLEY.

Sir,

50
115-126

With reference to your No. 1421 of 26th August 1953 and later correspondence, we now submit for your consideration Mr. C. Ohrstrom's final report on Stanley Common Peat Deposits.

We have now adapted the Government Peat Machine to tow a 2-furrow plough, and our Engineering Department in conjunction with the Public Works Department will continue to plough the top sod of the Government bank with a view to drying and eventually removing it in readiness for production of air-dried peat by the Government machine.

As our investigations will dispel, we hope, any fear in your mind that the granting to us of Area (d) on map enclosed for our own uses within the Colony might imperil the Town supply, we now request that our project may receive your favourable consideration. In view of Mr. Ohrstrom's departure from the Colony within the next two months or so we should appreciate an early reply.

I am, Sir,
Your obedient servant,

A. G. Dawkins

MANAGER.

Reply at 126

SURVEY OF STANLEY COMMON PEAT DEPOSITS.

1. The survey covers an area of 4000 yards radius with the Cathedral as centre, as shown on map. The actual areas surveyed are shown shaded in brown.
   The areas are lettered and numbered, representing quality and depth thus:-

   (a) 8.1 - 3.3

   The 8.1 represents the grade of Humus = H
   The 3.3 represents the depth in yards.

   The total quantity of Air-dried peat in areas (a) to (t) is approximately 1,170,000 tons.
   In addition to the above there are large quantities of peat at Mullet Creek, Christina Bay, and between Sparrow Cove and Hell's Kitchen, comprising approximately 750,000 tons of Air-dried peat, sufficient for 75 years at the present rate of consumption.

2. The most suitable bog for the working of the Government peat machine is in the vicinity due north of the shed where the machine is housed i.e. between Eliza Cove and Pebbly Point, shown on Map as area (a).
   The peat here is of Good to Excellent quality (see enclosure, Report No.1). The area is approximately 70 acres.

   The only unoccupied bog suitable for the production of peat dust for Falkland Islands Company Briquetting Plant is area (d) on Map. The peat in this bog is of good quality and comprises about 17 acres. Owing to this bog having a high percentage of water (92%) and because of it's depth (4.7 yards) this bog will require a good deal of draining before any production of dust can commence.

3. The removal of top sod by horse and plough is impracticable. The most economical way of removing top sod is by means of a track tractor (Government Peat Machine) and a fixed two-furrow plough.

4. The transporting of topsod from bog can best be undertaken by means of a track tractor fitted with bulldozer blade or with the Government loader.
   The top sod can be dumped into the low lying hollows adjacent to the Government Experimental bog.
   Sketch No. 1 shows plan of Government Experimental bog, ploughing and removing top sod.

5. Because of the frequent stoppages required to clear the grassy peat from the machine, it is considered advisable to remove the top sod by method (3) and (4) above, before any large scale production is attempted.

6. After top sod has been transported from bog, all surface rain water should be drained off. This will improve the working of the machine, at the same time partly drying the peat.
   Sketch No. 2 shows the ditching plan of Government experimental bog. (Note remarks on Draining)

E G Thurston

STANLEY
3rd February 1955.

Note: Bogs of less than one yard are not mentioned in the Report.

Survey of Stanley Common Peat Deposits.
dated 3rd February 1955

APPENDIX

The Government figure of 80,000 cub. yds or 10,000 tons of air-dried peat per annum seems to be a very high consumption considering the population.

With more efficient burning, this figure could be reduced to 5,000 tons. This reduction could be effected in the following manner:-

1. The use of slow combustion stoves should be encouraged both for kitchen and domestic use, and for general heating.

2. More machine cut peat should be produced. This would result in a better quality peat thus making a reduction in consumption.
   The cost of machine cut peat to the public should be reasonable, considering the man hours now spent by individuals in producing hand-cut peat.

3. With a view to producing machine cut peat in the future the allocation of bogs should be carefully watched so that any large, deep areas can be preserved for this purpose.

STANLEY
21st February 1955.

FALKLAND ISLANDS COMPANY PEAT SURVEY

REPORT NO. ..7....

Name or description of Peat Bog ....THE GOVERNMENT.... ELIZA COVE

Locality ..2 MILES: S-E FROM.... PORT STANLEY

Date of examination ....1 FEBRUARY 1955....

SUPPLEMENT NO. 1

Area (total) ..70..acres: Area (examined) ...5...acres

Peat characteristics

SUPPLEMENT NO. 2 & No. 3 (Imp. Institute Report) Bogsbed VERY LITTLE PLANT. (see Bore Minutes)

Peat Humus (vegetable mould - soil)

Average for Borehole No. 1 to .8.. = GOOD. = Peat H..8.1....

Note:-

Humus is graded in 10 degrees H-1 to H-10:

H-1 to H-2	Very Poor peat	
H-3 to H-4	Poor	"
H-5 to H-6	Fair	"
H-7 to H-8	Good	"
H-9 to H-10	Excellent	"

(Lowest grade for briquetting is H-7).

Average depth of Peat

Borehole No. 1 to .8.. = ..120..inches

Moisture Comtent

Average for all Boreholes = M ..4....

Note:-

Moisture is measured in 5 degrees M-1 to M-5:

M-1 = Airdry
M-2 = Light dried
M-3 = Normal content of water
M-5 = The greater part of water.
M-4 = Heavy content of water

Cohesion factor of Peat:

Borehole No. 1 to .8... = C .3....

Note:-

Cohesion is measured in 5 degrees C-1 to C-5.
Highest possible cohesion of peat after drying is C-5.

GENERAL TEST - All Boreholes:

Ash	=	..9.8..% of dry substance
Moisture content	=	..92..% in the bogs

CALORIFIC VALUE:- See analysis by Imperial Institute (Suppl. No. 3) and R. Dons, Copenhagen (Suppl. No. 4)

[signature]

BORERMINUTES FOR THE GOVERNMENT: ELIZA COVE PEATBOG.

SUPPLEMENT No. 2.

Borer hole:	Humusnumber of peat at following depths in inches							Peat deposits		Peat bottom character
								Depth	Humusaverage	
No.	20	40	60	80	100	120	140	Inch	1 to 10	Sand: Clay: Stubble: Ston
1	7	7	8	9	9	9		120	8.1	STONE
2	7	6	8	9	9	9		-	8.0	"
3	7	7	7	8	9	10		-	8.0	"
4	6	7	9	9	9	10		-	8.3	"
5	6	8	8	9	9	10		-	8.2	"
6	7	7	8	8	9	10		-	8.1	"
7	7	7	8	8	9	9		-	8.0	"
8	6	7	8	9	9	10		-	8.1	"
9										
10										
11										
12										
13										
14										
15										
16										
17										
18										
								Average: 120	8.1.	

C. E. Johnston

SUPPLEMENT NO. 3.

Imperial Institute,
South Kensington,
LONDON S.W. 1.

Three samples of peat taken from the depths between one and nine feet were accordingly sent to the Imperial Institute and are referred to in a letter from the Governor dated 23rd. May 1905.

The samples have been examined in the Scientific and Technical Department of the Imperial Institute and have furnished the following results:-

SAMPLE No. 1.

This sample weighed about 10 lb. and was described as "Brown mossy peat; the first sod obtained after removing the top sod."

The material consisted of the dried and partially decayed remains of the moss from which the peat was formed. It was very loosely compacted and could be readily disintegrated. This kind of peat is chiefly utilised as litter for stable use in place of straw. In Europe there has been an increasingly constant demand for this material, which, on account of its absorbent and antiseptic qualities, forms a cleaner litter and, when spent, is a more valuable manure than straw litter.

SAMPLE No. 2.

This sample weighed about half a hundredweight and was described as "Black peat, one to two years old, obtained at a depth from two to four feet."

The material consisted of blocks of peat which were black and dull, and contained little plant remains still showing structure. It contained a quantity of soil in which the moss had grown, as is shown by the higher percentage of ash, and would be described as 'mud peat'.

SAMPLE No. 3.

This sample weighed about 200 lb. and was described as "Black peat obtained at a depth at a depth of nine feet."

This peat contained more plant remains than No. 2 and this fact may indicate its derivation from a drier locality in which decay has not been so rapid.

RESULTS OF EXAMINATION

The following are the results of the chemical examination of the three samples of peat:-

	I per cent	II per cent	III per cent
Ash	2.71.	6.52	2.72
Moisture (at 100°C)	11.13	31.29	37.23
Volatile Matter	57.26	35.39	39.17
Fixed Carbon	28.90	26.80	20.18.
	100.00	100.00	100000.
Calorific Value	4728 Cals.	4241 Cals.	4033 Cals.

One Calorie is the amount of heat required to raise 1 gram of water from 0° to 1°C.

The ash was analysed but the percentages of potash, lime, and phosphoric acid, are too low to make the ash of any value as a fertiliser.

SUPPLEMENT No. 3 (Contd.)

CONCLUSIONS AND RECOMMENDATIONS

Compared with peat from other sources, No.3 of the present samples may be said to be the best quality. Analysis of European peat show that the amount of mineral matter (ash) present varies from 1 to 25 per cent, the average being about 5% . The Calorific Values determined by the bomb calorimeter, of the samples (Nos. 2 & 3) which are suitable for fuel were 4241 & 4033 respectively. The calorific value would be increased by briquetting since in this process a large proportion of the water would be eliminated.

The suitability of Falkland Island Peat for briquetting purposes can only be definitely determined by practical trials. From the results obtained it seems likely that the Falkland Is. peat will prove to be quite satisfactory for the purpose.

(Sgd.) Wyndham R. Dunstan

11th. April, 1906.

SUPPLEMENT NO. 4. March 20th. 1953.

R. DONS, ANALYTICAL CHEMIST, COPENHAGEN.

The results of the examination of three samples of peat: MARK = F.I.C., PORT STANLEY. received March 18th. 1953 from Kai Herold Nielsen, Ingerslevsgade 30-40,V.

	A Peat powder, heavy	B, sample 1 Peat powder	B, sampl Bricks
Ash	15.92%	4.41%	4.56%
Moisture	14.30%	17.16%	20.82%
Gross calorific value, kcal/kg	4012	4515	
Nett " " " "	3716	4180	
Dry ash-free peat:-			
Gross calorific value, kcal/kg	5750	5757	
Nett " " " "	5446	5457	

The calorific value is determined in the Berthelot-Mahler bomb calorimeter.

The nett calorific value in dry, ash-free peat is about 8-10 % higher than in Danish peat, which have a natt calorific value in dry, ash-free peat of 4950-5150 kcal/kg.

(Sgd) G. Hansen

122

SUPPLEMENT NO. 4. March 23rd. 1953.

R. DONS, ANALYTICAL CHEMIST, COPENHAGEN.

The results of the examination of three samples of peat briquettes: H-L-M received March 23rd 1953 from Kai Herold Nielsen, Ingerslevgade 30-40, V.

	HEAVY	LIGHT	MIXED 50% Heavy 50% Light
Ash	15.33%	5.54%	9.67%
Moisture	13.21%	15.32%	14.23%
Gross calorific value, kcal/kg	4116	4559	4383
Nett " " " "	3825	4231	4072

Thecalorific value is calculated from a gross calorific value in dry ash-free peat of 5760 kcal/kg and a nett calorific value in dry ash-free peat of 5460 kcal/kg.

(Sgd) G. Hansen

SUPPLEMENT NO. 4. March 23rd. 1953.

R. DONS, ANALYTICAL CHEMIST, COPENHAGEN.

The results of the examination of two samples of Danish Peat: F-B received March 23rd 1953 from Kai Herold Nielsen, Ingerslevgade 30-40, V.

	FORM FUEL	BRIQUETTES
Ash	13.84 %	20.62 %
Moisture	22.00 %	15.75 %
Gross calorific value, kcal/kg	3413	3385
Nett " " " "	3095	3105

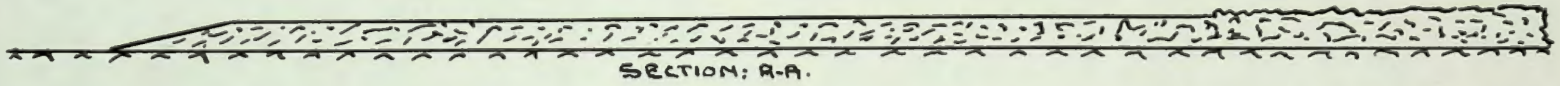
The calorific value is calculated from a gross calorific value in dry, ash-free peat of 5320 kcal/kg and a nett calorific value in dry, ash-free peat of 5025 kcal/kg.

(Sgd) G. Hansen.

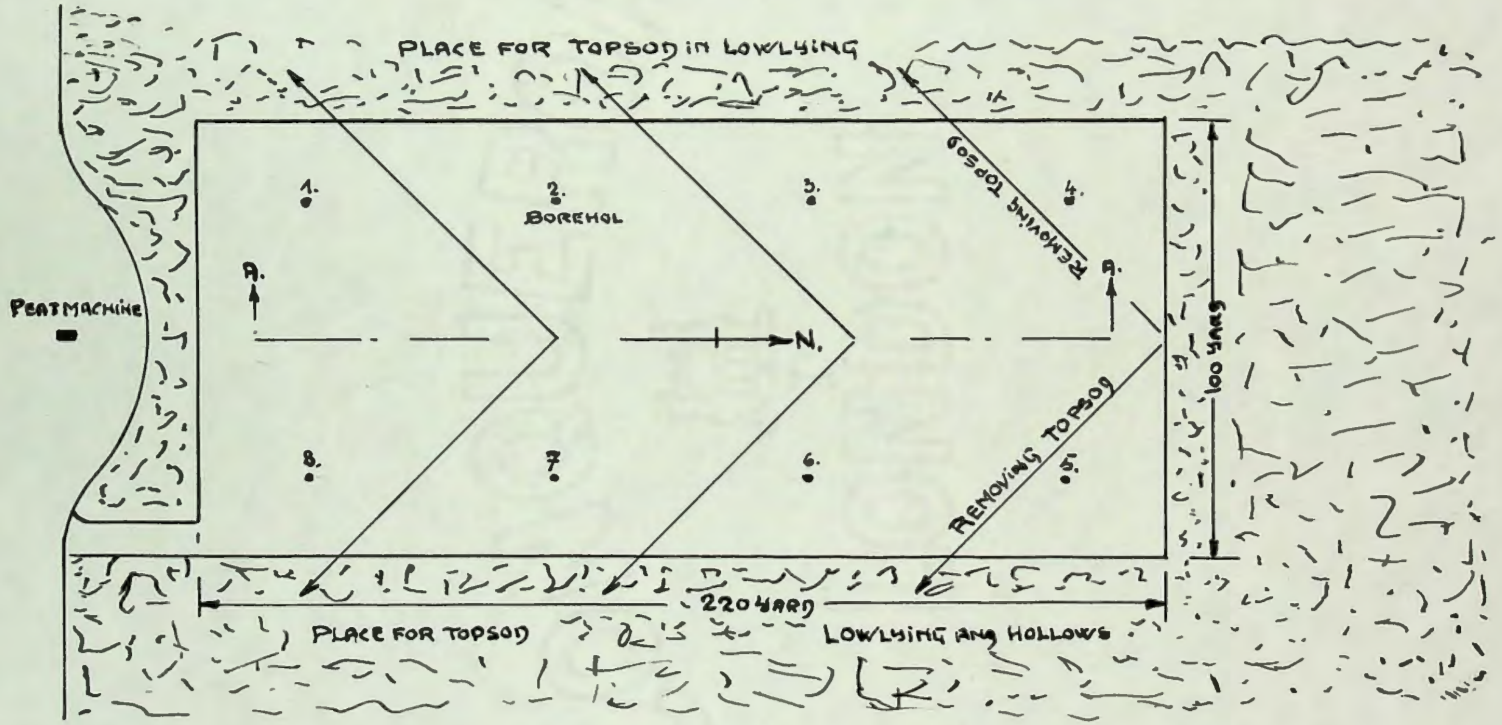
124

PLOUGHING AND REMOVING TOPSOD PLAN OF GOVERNMENT EXPERIMENTAL BOG: ELIZA COVE.

5 ACRE.



SECTION: A-A.



1. PLOUGHING OF TOPSOD.
2. DRYING " " .
3. REMOVING " " .

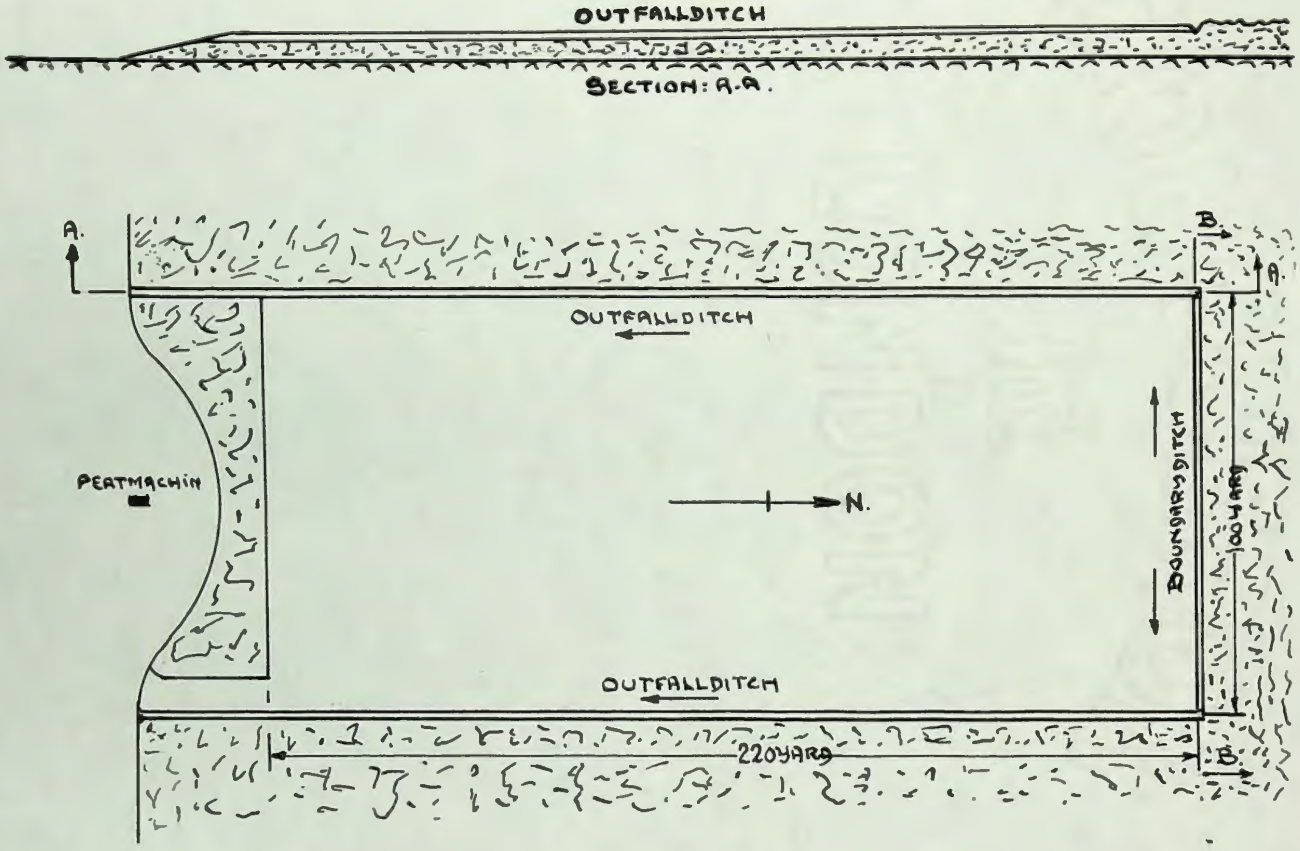
SKETCH No 1.

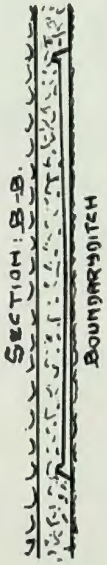
124

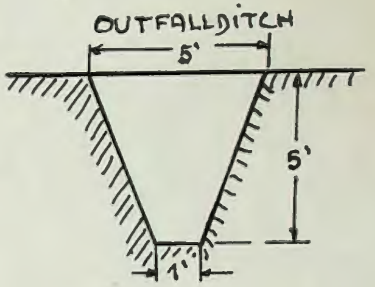
C. Glynstrøm

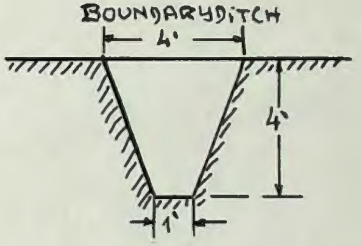
125

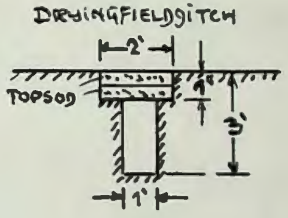
DITCHING PLAN OF GOVERNMENT EXPERIMENTAL BOG BY ELIZA COVE.











IF IT IS FOUND THAT WITH THE BOUNDARY-DITCH AND OUTFALL-DITCH THE NATURAL DRYING CONDITIONS ARE SUFFICIENT IT MAY BE UNECESSARY TO MAKE DRYING-FIELD-DITCH. IF DRYING-FIELDDITCHING IS NEGESSARY THEY SHOULD BE DUG AT 20 YARD INTERVALS PARALLEL WITH THE BOUNDARYDITCH.

SKETCH No. 2

C. Thrower.

1421.

1st March, 55.

Sir,

I am directed to refer to your letter of the 22nd of February, 1955, and to thank you for the most useful and comprehensive report prepared by Mr. C. Ghretron. The assistance rendered by your Company in finding a solution to the problem of removing the top sod is also very much appreciated.

2. I am to confirm that Area (d) marked on the map accompanying your letter under reference will be allocated to your Company for mechanical working.

I am,
Sir,
Your obedient servant,

(Sgd) C. Campbell.

Colonial Secretary.

The Manager,
Falkland Islands Company Limited,
STANLEY.

CC/LJH.

Copy to Superintendent of Works

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Record

Map referred to at foot page 126 now in envelope at b.c. of Volume II.

SM
10/3/55

CLOSED SEE VOLUME II

Enclosures.

Photos of machine.
Letters etc