

1923

KENYA

2 11

36667
RE
23 JUL '23

FROM

GOV'S DEPUTY
NORTHCOTE

CONF
384

DATE

2ND JULY 1923

FOR CIRCULATION:-

Mr.
Mr.
Mr.
Asst. U.S. of S.

SUBJECT

ELECTRIC POWER FOR KILLINDINI PIER

Three copies of memo. by Railway G.H. Requests Consulting Engineers' recommendation after consultation with Major Rhodes. Will forward comments of Director of Rly & Electricity, 2nd bar later.

Form U.S. of S.

Part U.S. of S.

Secretary of State.

Previous Paper

6 (1)

MINUTES

Para: 4 - The terms were being out 15% of the purchase price for 15 years [when the 5% would have accumulated to the capital sum]. If we borrow money at 6%, the annual charge over 15 years would be 10.3%, so that the C.E. proposal is bad business for us.

First send copy of report ^{duplicate} to Council. C.A. & ask them to communicate with the

CE as required, and Major Rhodes is expected to be in on leave at a

Copy C.A. - 30 June '23
Plan in reply to C.A. - 20 July '23
Amend copy of report by 14.59/23

Subsequent Paper

6 (2)

3984

MINUTES.

MINUTES NOT TO BE WRITTEN
ON THIS SIDE.

very early date -

revised

(C)

247 23

alone

I had intended to
bring the matter to the

committee, but

was not able to

do so at that time

because of the

absence of the

members of the

committee.

Very respectfully

Yours truly,

Walter

118-3

alone

KENYA

No. 384.

Confidential

36867

GOVERNMENT HOUSE,
NAIROBI,
KENYA.

23 JUL '33

2nd July, 1923.

My Lord Duke,

With reference to Your Grace's Confidential despatch of February 15th, I have the honour to forward for Your Grace's information and for transmission to the Crown Agents, copies of a Memorandum by the General Manager, Uganda Railway, on the subject of the supply of electric power for Kilindini Wharf.

2. I shall be glad to receive the recommendations of the Consulting Engineers on paragraph 6 of the Memorandum and I would suggest that, in this connection, they should consult Major G.D. Rhodes, O.B.E., D.S.O., Chief Engineer, Uganda Railway, who is proceeding on leave to England this week.

3. As suggested by Mr. Felling I have addressed the Government of Zanzibar with a view to obtaining the advice of the Director of Railways and Electricity, Zanzibar, and a copy of his comments will be transmitted in due course.

I have the honour to be,

My Lord Duke,

Your Grace's most devoted
and most obedient servant,*J. A. S. Matthews*

GOVERNOR'S DEPUTY.

HIS GRACE

THE DUKE OF DEVONSHIRE, K.G., P.C., G.C.M.G., G.C.V.O.,
SECRETARY OF STATE FOR THE COLONIES,
DOWNING STREET, LONDON, S.W.No. 671/II
dated 12-6-23.Part Agreement.
"B", "C", "D"
and Plan.*E.A.
7/10/33*

E.672/II.

12th June,

3.

To.

The Honourable the Acting Colonial Secretary
to the Government,
Colony and Protectorate of Kenya,
NAIROBI.

Supply of electric power for Kilindini wharf.

Your S/E.1407/23/15 of 14.1.1923.

Following on your above quoted letter, interviews have been held between the East African Power and Lighting Company and myself, Mr. Mitchell of the Consulting Engineers, Major Rhodes, Chief Engineer, and Mr. Eferde, Resident Engineer, Kilindini Harbour Works, and the whole question has been fully discussed.

2. The position is now as follows:-

- (a) The Company have submitted a draft agreement covering cost and other terms and period of contract for the supply of current to the new pier at Kilindini, both for power and lighting, a copy of which is attached marked "A".
- (b) Specifications and estimate have been received for supplying and laying the power cables from the sub-station throughout the works. This estimate includes the cost of the sub-station and the transformers. Copy attached marked "B".

2.

(c) Specifications and estimate have been received for supplying and laying the cables, wires, together with fittings and accessories from the sub-station, (throughout the sheds) for lighting purposes. Copy attached marked "C" together with plan.

(d) Specification and estimate have been received for supplying and erecting of standards and fittings for lighting purposes throughout the yard and wharf. Copy attached marked "D".

3. The Company further agree as an alternative that they will, if requested to do so by the Uganda Railway, construct the sub-station and low tension switch gear together with all underground cables, overhead cables, line construction and the electric light and power installations, and such other work as may be required to the specification of the Consulting Engineers on a basis of 10% profit on the actual cost.

4. They will also if requested carry out the whole of the work contained in the above-quoted specifications at their own cost for the sum of 45,950 on the following terms:-

(1) The Uganda Railway to pay to the Company interest at the rate of 10% per annum on the above outlay plus a further 5% to be set aside to form a sinking fund.

(2) The Uganda Railway to have the option to purchase at any period after the first twelve months from the commencement of the Company's being ready to supply electrical energy and before the termination of fifteen years from the commencement of the supply.

- (3) The amount of the purchase price to be 25,950 less the accumulated amount standing to the credit of the sinking fund which shall be calculated at the rate of 4% compound interest.

5. The remarks on the previous specification submitted to the Consulting Engineers for criticism have been communicated to the Company who state they are prepared to embody the suggested alterations without affecting the above estimates.

6. The points, therefore, that now require deciding are:-

- (1) Whether the price quoted by the Company for the supply of electrical energy embodied in the draft agreement is fair and reasonable.
- (2) Whether the estimates submitted by the Company for the various works from the sub-station to the sheds and wharf are reasonable and the specifications satisfactory.
- (3) Which of the proposals regarding the financial arrangements is to be adopted.

7. As regards 1 and 2, I would ask that these be submitted to the Consulting Engineers and that they be asked whether they consider the prices quoted both for supply of energy and laying the installation are reasonable. In view of the recent visit of Mr. Mitchell they may desire to make further suggestions and a definite recommendation should be obtained from them as to whether they advise accepting the offer of the Company in preference to our installing and operating our own power plant.

8. At the same time, in view of the importance of the whole question I recommend that in addition to that of the Consulting Engineers, the advice of a local expert should be obtained.

I understand there is no electrical engineer on the staff of any Government Department in this Colony but that the Director of Railways and Electricity in Nairobi possesses the necessary qualifications. I recommend, therefore, that the Government of Nairobi be approached to allow this officer to examine the East African Power and Lighting Company's estimates and specifications on the spot and make recommendations. I consider this of the utmost importance as we have so far had to rely on the supplying company for our advice on technical matters and the independent advice of an expert acquainted with local conditions and prices would be of the utmost value.

9. As regards 3, provided that the prices submitted by the Company are considered to be fair I am inclined to recommend that we should pay for the cables, standards and fittings, etc., from the sub-station and throughout the sheds and yard, finding the money from the £3,000,000 loan. If, however, the Consulting Engineers or the expert suggested in paragraph 8 above have other recommendations to make, I shall give their views every consideration.

(Signed) C.L.N. FELLING.

General Manager.

Uganda Railway.

Enclosures:-

Draft agreement marked "A".

Specifications and estimate marked "B".

Specifications and estimate marked "C" with plan.

Specification and estimate marked "D".

HNH/PAS.

~~DEED OF CONVEYANCE~~ 1921.

G. L. H. FILLING

with

THE EAST AFRICAN POWER AND LIGHTING
COMPANY LIMITED.

DRAFT

AGREEMENT.

Allen and Hamilton,

Solicitors,

Nairobi.

~~SECRET~~

MEMORANDUM OF AN AGREEMENT made the _____ day of
1923 BETWEEN C. L. N.

FRANKLIN of Nairobi in the Colony of Kenya the General Manager of the Uganda Railway (hereinafter called the General Manager which expression shall include his successors in office as such General Manager as aforesaid) of the one part and THE EAST AFRICAN POWER AND LIGHTING COMPANY LIMITED a Limited Liability Company having its registered office at Nairobi aforesaid (hereinafter called the Company which expression shall include its successors and assigns where the context so admits) of the other part WHEREAS under and by virtue of "The Electric Power Ordinance, 1919" and a distributing license issued thereunder the Company is authorized to supply electrical energy for all public and private purposes within the Township of Mombasa NOW IT IS HEREBY MUTUALLY AGREED by and between the parties hereto as follows:-

1. Subject to the provisions hereinafter contained the Company shall for a period of ten years from the date of the commencement of the supply give continuously a supply of all the electrical current which (a) the Uganda Railway may from time to time require for power and lighting purposes at Kilindini Pier and (b) Employees of the Uganda Railway may from time to time require for lighting bungalows on the Island of Mombasa occupied by them and the Uganda Railway and the said Employees shall during the said term take the same and pay therefor the prices hereinafter mentioned Provided that if neither the General Manager nor the Company shall have given to the other of them twelve calendar months' previous notice in writing before the expiration of the said term of ten years of his or its intention not to continue this agreement beyond the said term this agreement shall continue in force until the

expiration of twelve calendar months after either party shall have given notice in writing to the other of their expiring at the end of any current year of his or its intention to put an end to this agreement and at the expiration of such notice this agreement shall cease but without prejudice to the rights and remedies (if any) of either party which may have accrued or arisen hereunder in the meantime.

2. The Uganda Railway shall proceed to construct and provide at its own expense on a site to be mutually agreed upon between the General Manager and the Company a transformer sub-station and the low tension distribution gear required for utilizing the said supply of electrical current for power and lighting purposes at Kilindini Pier and the Company shall proceed thereafter to provide the necessary high tension gear and transformers in the said sub-station required to enable the Uganda Railway to utilize the said supply of electrical current at Kilindini Pier and the Company shall also provide and erect at its own cost an overhead branch high tension transmission line from its nearest main high tension transmission line to the said sub-station but in the event of it being necessary for any part of the said branch high tension transmission line connecting the said main high tension transmission line with the said sub-station to be laid underground upon any portion of the property of the Uganda Railway the Uganda Railway shall pay to the Company the additional cost incurred by the Company in laying such part of the said branch high tension transmission line underground and the amount of such additional cost shall be paid by the Uganda Railway to the Company forthwith upon the completion of the laying of the said branch high tension transmission line.

3. The said electrical current shall be supplied in accordance with the Electric Power Ordinance 1919.

The Company shall be entitled to enter upon the property of the Uganda Railway and to do all such things as may be necessary in connection with the construction and maintenance of the Company's lines in the same manner as if the Company possessed the powers vested in the said Railway.

4. The Company shall at all times during the continuance of this agreement duly maintain and keep in good working order the whole of the said branch high tension transmission line together with the high tension gear and transformers aforesaid and the Uganda Railway shall maintain in the like order the said transformer sub-station and low tension distribution gear and shall indemnify the Company for any damage that may be done to any portion of the said branch high tension transmission line which may be laid underground as aforesaid should such damage be caused by any accident or default on the part of the Uganda Railway.

5. The price to be paid by the Uganda Railway to the Company for electrical current to be supplied to the Uganda Railway under this agreement in each year ending the thirty first day of December shall consist of the following sums that is to say:-

(a) FOR POWER AND LIGHT

For every Kilovolt Ampere of the maximum demand of the Uganda Railway in that year the sum of shillings 160.

(b) For every unit of electrical current supplied by the Company to the Uganda Railway for power the sum of Cents 12.5 provided that in the event of the price of oil fuel varying above or below the standard price of Shillings 75 per ten ex tank Kilindini the said sum of Cents 12.5 per unit shall be increased or decreased

by .25 of a cent for every five shillings of such variation and the price of such oil fuel shall be calculated every three calendar months during the continuance of this agreement and

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- (c) For every unit of electrical current supplied by the Company to the Uganda Railway for Wharf and Shed Lighting at Kilindini Pier the sum of Cents 60.

The price to be paid by Employees of the Uganda Railway for electrical current to be supplied to them under this agreement for lighting of such bungalows as aforesaid shall be Shilling 1 for every unit of electrical current supplied provided always that if the Uganda Railway shall at any time during the continuance of this agreement undertake responsibility for the payment to the Company of all moneys payable for current supplied to such Employees the Company shall allow the Uganda Railway a rebate of 10% on the moneys payable for current supplied to the said Employees.

6. The figures of maximum demand supplied shall be ascertained from accurate and duly recorded readings of proper Maximum Demand Indicators. For the purpose of verifying the said readings the Company may at all reasonable times by any duly authorized officer or agent of the Company inspect the said Maximum Demand Indicators.

7. For the purpose of obtaining the number of units of electrical current supplied to the Uganda Railway by the Company in each year and the number of kilovolt amperes of the maximum demand of the Uganda Railway for power and light in each year under this agreement two appropriate meters and two appropriate Maximum Demand Indicators shall be placed in the said sub-station and a separate meter shall be placed on the Lighting circuit the reading of which shall be deducted

from the mean of the readings of the Meters in the said sub-station. Each of the said Indicators shall be so constructed that starting from zero it shall take a period of not less than twenty minutes to register any particular demand which has been maintained for that period. One of the said two Meters in the said sub-station and one of the said two Maximum Demand Indicators shall belong to and be supplied by and kept in repair at the expense of the Uganda Railway and the other Meter in the said sub-station and the Meter on the Lighting circuit and the other Maximum Demand Indicator shall belong to and be supplied by and kept in repair at the expense of the Company.

The mean of the readings of the said two Meters in the said sub-station for any period shall be deemed to show the number of units supplied in that period for power and light and the mean of the highest readings of the said two Maximum Demand Indicators shall be deemed to show the number of kilovolt amperes of the maximum demand of the Uganda Railway for power and light for that period.

8. In this agreement the expression "Maximum Demand" means the maximum power demanded by the Uganda Railway for power and light and provided by the Company during any year reckoned from the 1st day of January to the 31st day of December.

9. The minimum demand of the Uganda Railway shall not be less than 50 Kilovolt Amperes.

If the Uganda Railway shall desire to increase the maximum demand beyond 250 Kilovolt Amperes it shall give to the Company such reasonable notice as may be necessary to enable the Company to instal the extra machinery (if any) required by the Company to comply with such demand.

10. So far as may be reasonably required for the purpose of this agreement the Electrical Engineer for the time being or other duly authorized representative of the Company shall have access at all reasonable times to the said sub-station and the Electrical Engineer for the time being or other duly authorized representative of the Uganda Railway and the Company respectively shall have access at all reasonable times to any building that may be utilized for the purpose of measuring and controlling the supply of electrical current hereunder.

11. The Company shall as soon as may be after the expiration of each calendar month deliver to the Uganda Railway statements showing the quantity of electrical current supplied by the Company to the Uganda Railway (a) for power and (b) for lighting during such calendar month and the Uganda Railway shall within 14 days after the delivery of each such statement pay to the Company the sums payable in respect of the electrical current supplied during the calendar month to which such statements relate.

The Company shall also as soon as may be after the 31st day of March, the 30th day of June the 30th day of September and the 31st day of December in each year deliver to the Uganda Railway a statement showing the maximum demand registered from the 1st day of January till the expiration of the quarter to which such statement relates and the Uganda Railway shall within 21 days after delivery of each such quarterly statement pay to the Company the sum payable in respect of such maximum demand during the then preceding quarter together with any sums necessary for the purpose of adjusting any payments already made to the Company by the Uganda Railway in respect of previous quarters in that year.

A statement of account shall be supplied by the Company to each Employee of the Uganda Railway occupying any of the said bungalows lighted by the Company after the expiration of each calendar month showing the quantity of electric current supplied to each such Employee during the preceding calendar month. Provided always that in the event of the Uganda Railway undertaking responsibility for the payment of electric current supplied for lighting the said bungalows all such statements of account shall thereafter be delivered to the Uganda Railway and the Uganda Railway shall within fourteen days after the delivery thereof pay the same less such rebate as aforesaid.

12. Every notice required by this agreement to be given to the Uganda Railway or the Company respectively shall be served by leaving the same or sending it through the post in a prepaid letter addressed to the General Manager at Nairobi aforesaid or addressed to the Company at its electricity works at Mombasa aforesaid as the case may be.

IN WITNESS, etc.

25

THE EAST AFRICAN POWER AND LIGHTING COMPANY LIMITED
LAYING AND SUBSTITUTION OF SUB-STATION BUILDING
AND/OR REPAIRS TO THE SAME.

Sub-Station to be erected on Site agreed upon.

This Sub-Station will contain 2 - 250 K. W. Transformers.

All Cables to be underground.

The Cables for the Cranes will be run to two 6 way.

Distribution pillars to be erected upon Sites

agreed on. Lighting Cables to be run to a Distributing
Pillar, No.2 Sued.

The Pillars would be fed by two 3 core. 25 sq. in.

paper insulated lead covered and armoured cables.

Each Cable would feed a separate pillar, but the

pillars will be interconnected, so that either or

both pillars can be fed from either cable. Thus in

the event of a break down on either of the two cables,

one cable would continue to serve the two pillars without
interruption of the supply. Each of the two cables will

be of sufficient section to carry the total energy demanded
for all ordinary working conditions.

Each crane will be fed by a separate cable connected into a

set of fuse ways in one of the pillars. One pillar would

feed the four cranes in front of No.2 Sued, and the other

would feed those in front of No.1 Sued.

Of the remaining two fuse ways in each pillar one would be

utilized for the interior cranes of each sued and the other

would be available for other power circuits that may be
needed later.

The crane cables would be .022 sq. in. 3 core vulcanised

rubber insulated, lead sheathed and armoured. It is

presumed that the crane makers will supply the necessary

flexible cable for each crane and also the switch plug

disconnecting boxes into which the underground crane cables
will be connected.

~~REGISTRATION FOR~~
~~TABLE AND SUPPLY OF~~ SUB-STATION BUILDING
~~AND POWER SUPPLY~~

(Continued).

It is understood that the cross cables will be laid in a trench provided on the top of the wharf wall.

Where trenches are not specially provided, all underground cables shall be laid direct in the ground at a depth of two and a half feet in soft earth and under roads and two feet in coral. Where it is considered necessary, the bottom of the trench shall be covered with a layer of clean sand to a depth of 4 inches, before the cables are laid. After laying the cables shall be covered to a depth of 9 inches with soft earth (or sand if necessary) and then cover boards not less than 1 inch thick and wide enough to overlap the cable lay, shall be laid the full length of the cable route and the trench shall then be filled in completely.

Where the cables pass under buildings or foundations or where they are not easily accessible by ordinary surface excavation, they shall be drawn through suitable ducts to allow of withdrawal should the necessity arise.

The sub-station building to be of brick or other suitable material and fitted with necessary lifting appliances.

The estimated cost of the above scheme is £4,000.0.0.

Transformers and the necessary High Tension Switch Gear for controlling same will be supplied by the Company at their cost.

THE EAST AFRICAN POWER AND LIGHTING COMPANY LIMITEDSPECIFICATION FORELECTRIC LIGHT WIRING OF NOS. 1 and 2 SHEDS.CLAUSE 1 (c)

THIS specification covers the whole of the internal and external electric light wiring installations for the Nos. 1 and 2 Sheds.

The whole of the work shall conform with the Regulations governing the Supply of Electric Energy (under the provision of the E. A. ELECTRIC POWER ORDINANCE 1920.

All wires, cables, fittings and accessories used on the work shall conform with the specifications laid down by the British Engineering Standards Association.

The Contract shall include the supply, delivery, erection, testing and finishing in every respect complete and ready for use, of all necessary wires, cables, fittings and accessories for the complete Electric Lighting installations for the buildings mentioned in the subsequent schedules and drawings attached hereto. The Uganda Railway shall arrange to do any cutting away and making good required by the Contractors.

The whole of the wires and cables used shall be lead sheathed twin and three core vulcanised india rubber insulated and not less than 600 megohm grade.

The wires shall be run in position where they are not easily accessible except by special means, and where they are easily accessible and likely to suffer damage from external causes they shall be protected by suitable steel tubing or channelling.

The wires shall be fixed to the walls by suitable clips or saddles spaced at intervals of 12 inches apart in exposed position and up to 24 inches apart where not exposed.

SPECIFICATION FORELECTRIC LIGHT WIRING OF HOE, 1 and 2 STORES (Continued).

The whole of the wiring shall be arranged on the Multiple circuit Distribution System, conductors to radiate from distribution centres, and in large installations centres to sub centres.

Multiple circuit installations shall be provided with suitable iron cased multiple way distribution boards. Single circuit installations shall be provided with a pair of suitable fuses which may be integral with the main service switch.

Each installation shall be controlled by a suitable iron cased main switch and fuse board.

The fuse boards shall be fed by suitable leads running back to the main service control switch which is supplied from a distribution pillar in the neighbourhood of the shed.

Each sub circuit shall be controlled by a suitable single pole switch, and all the switches for each section of an installation shall be grouped together in a convenient position.

The conductors of any final sub circuit shall not be less than size $\frac{1}{.029}$ and the maximum load on a sub-circuit shall not exceed 600 watts, except under special circumstances.

Jointing of wires is to be avoided by keeping the wires in and out of fittings, but where very long lengths of wire are required to accomplish this, joints may be made in special joint boxes with porcelain connectors.

The lamp fittings for the general interior lighting shall be of the distribution type, made of heavy gauge steel sheet, vitreous enamelled, black or green, excepting the reflectors which shall be white.

SPECIFICATION FORELECTRIC LIGHT WIRING OF NOS. 1 and 2 SHEDS (Continued).

They shall be provided with a suitable screw type lampholder to accommodate any high candle power lamp of the gasfilled type between the sizes 100 and 300 watts capacity.

On completion of each installation the lead sheathing of all the wires is to be bonded together at the fuse board and the whole connected to earth.

The insulation resistance of the whole installation between individual poles and between both poles and earth shall not be less than 25 megohms divided by the total number of lights installed.

When each installation has been completed and the prescribed tests passed in the presence of the representatives of the Uganda Railway and the contracting firm, it shall be formally handed over to the General Manager of the Uganda Railway, and an account presented by the contractors for the sum due in respect of that installation.

ESTIMATED cost of the above scheme is

£1,200.

FAS.

SPECIFICATION FOR
WHARF LIGHTING.

30

CLAUSE 1 (d).

Referring to the Plan it will be seen that eight Lights are proposed, each of 2,000 Candle Power. The arrangement shown gives the best general Lighting Distribution consistent with economy. It is proposed that the Lights be supplied by bare over-head lines. The over-head lines would be at a height of not less than 30 feet above ground level; this will give plenty of head room for travelling cranes. No overhead lines will be erected within 100 feet of the wharf wall. The Lamp Standards will be spaced approximately 100 yards apart, and the Lanterns would be at a height of 32 feet above ground level; each Lantern would contain a 2,000 C.P. 1,000 Watt Gasfilled Lamp. A ladder arm would be fitted to each Standard for maintenance purposes. The Lanterns would be weather proof, vitreous enamelled steel with white enamel reflectors designed to throw the light down over the largest possible area.

Intermediate poles would be erected between the Lamp Standards so that the Cable spans would not exceed 50 yards in length.

ESTIMATED cost of the above scheme is

£750.

JNS 36667/23 Ranga

C. D.
R 28 JUL
D 30

31

DRAFT.

30 July 1923

Ca ~~Amud~~
~~23984 sent~~

with ref to the letter from

MINUTE.

This Dept, No 10190/23, of
previous date
the 6th of March, regarding
the supply of power to
Kilindini Wharf by the
Electric Power & Lighting
Company, I am to transmit
to you a copy of a draft, with

- Mr. Buel July 23
- Mr. Parkinson
- Mr. White 27. 23
- Mr. Davis
- Mr. G. Grindle
- Mr. H. Road
- Mr. J. Masterton Smith
- Mr. Ormsby-Gore
- Date of Discussion

of Aug 2 July
36667

enclosed, from the Off.
of Kenya on the subject,
I request you to communicate
with the Consulting Engineer
& consult the Chief Engineer,
Nairobi Reg., on the matter,
as termed by the latter.

I Major Rhodes has
accepted to allow you leave
and his address is Lt. Bullock
at a very early date
Aroona, N. 431
(signed) H. J. READ

July 3 1923 Kenya

G. D.
11 2 O'Clock
1923

DRAFT.

C.A.

In my signature
[Signature]

MINUTE.

- Mr. [Signature]
- Mr.
- Mr.
- Mr. Dicks
- Mr. G. Grindle
- Mr. H. Read
- Mr. J. Masterton Smith
- Mr. Ormsby-Gore
- Duke of Devonshire

Plan
revised

(understand you
have asked for the
plan which accompanied
Kenya Dist. No.
386 Conf. of 1911
2nd of July 1911
electric power for
the Kilindini Wharf.
(See C.O. letter 36667/23
of 30th of July 1923).
London 1923

plan : will you, please,
make a print of
returning it, as it is the
only copy wh. we have.

Sp. Ass. Parker.

20 Aug. 25

attach
see
27/8/23
above

Crown Agents.

I understand you have asked for the plan which accompanied Kenya despatch No. 384 Confidential of the 2nd of July reference electric power for the Kilindini wharf, (see Colonial Office letter 36667/23 of 30th of July 1923).

I enclose the plan: will you please make a point of returning it, as it is the only copy which we have.

A.C.C. Parkinson

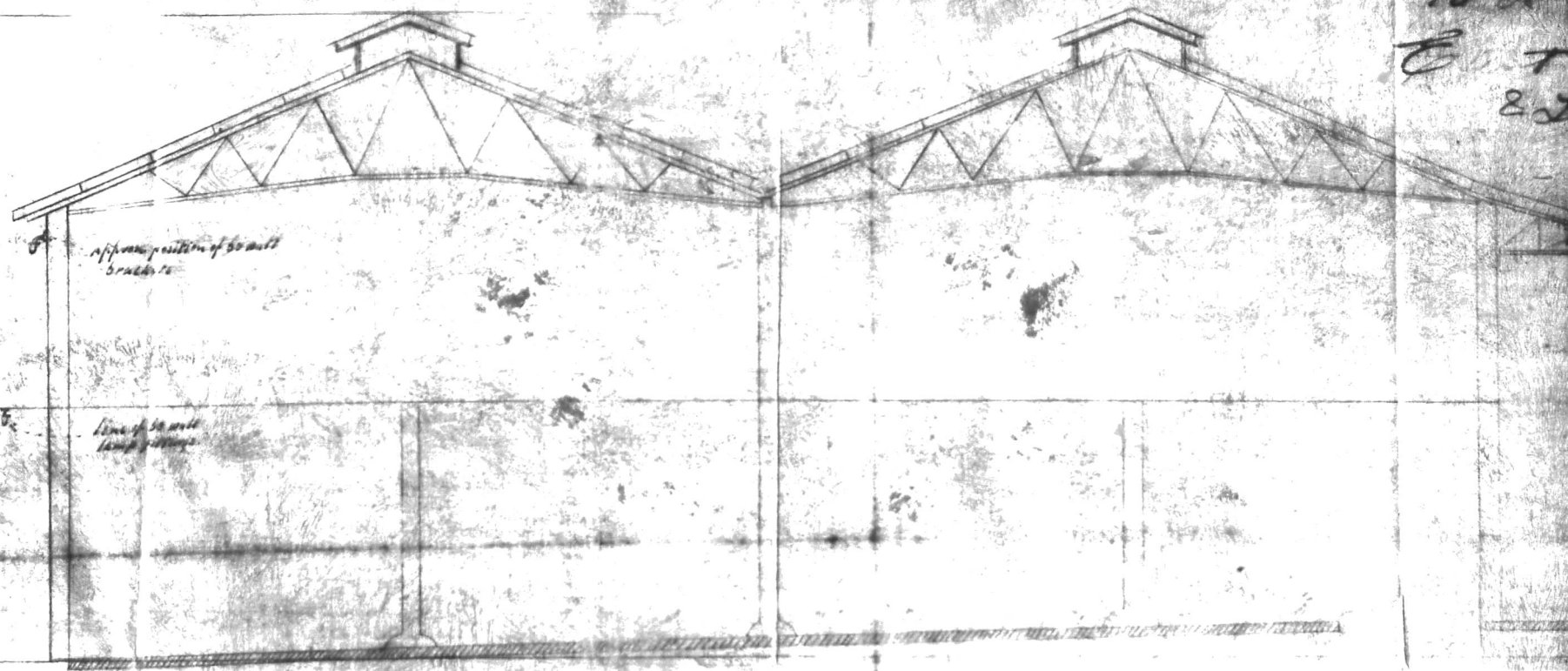
20th August, 1923.

W. Parkinson
C.O.

above plan returned herewith
with thanks. C.E. have made
copy. - Ernest Owen
28/8/23

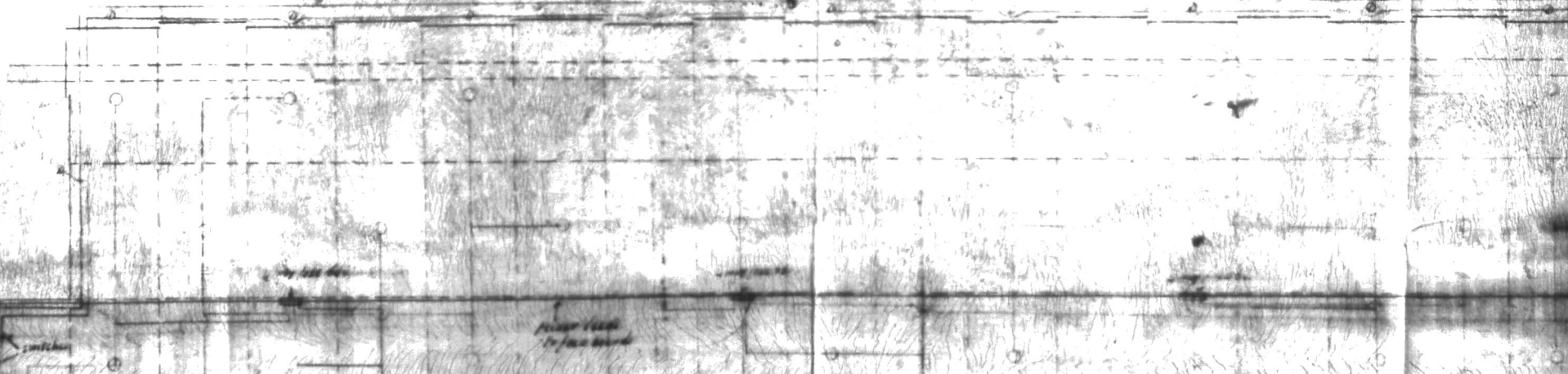
Enclosures of

0
10
E. T.
22

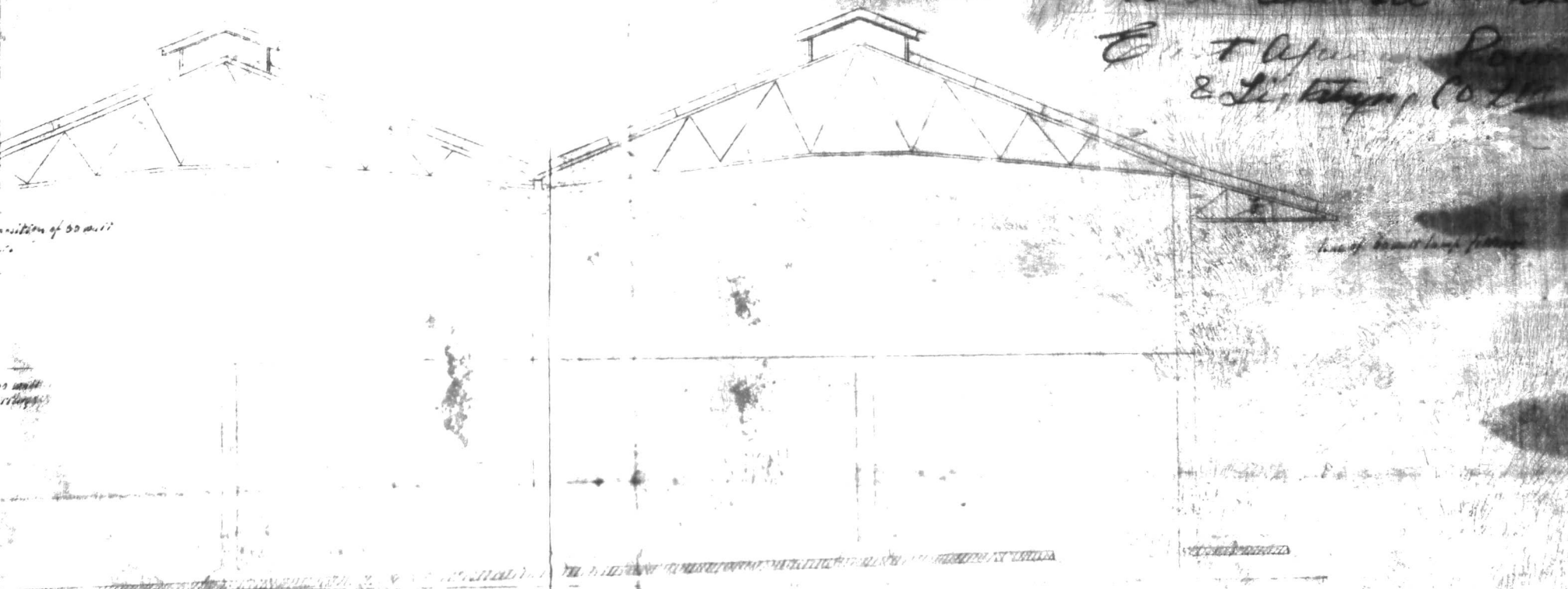


CROSS SECTION OF SHED ROOF SHEET

SCALE - 1" = 2'



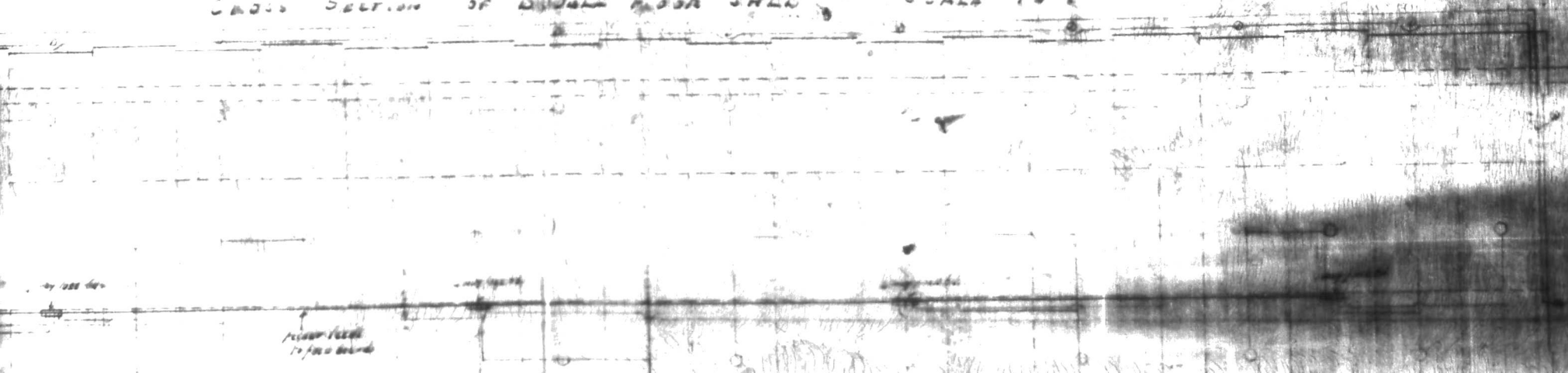
Original plan
to be returned to the
E. T. A. J. - P. J.
& J. J. J. Co.



position of 50 unit

line of main floor plate

CROSS SECTION OF BUILDING ROOF SHED SCALE 1" = 8'

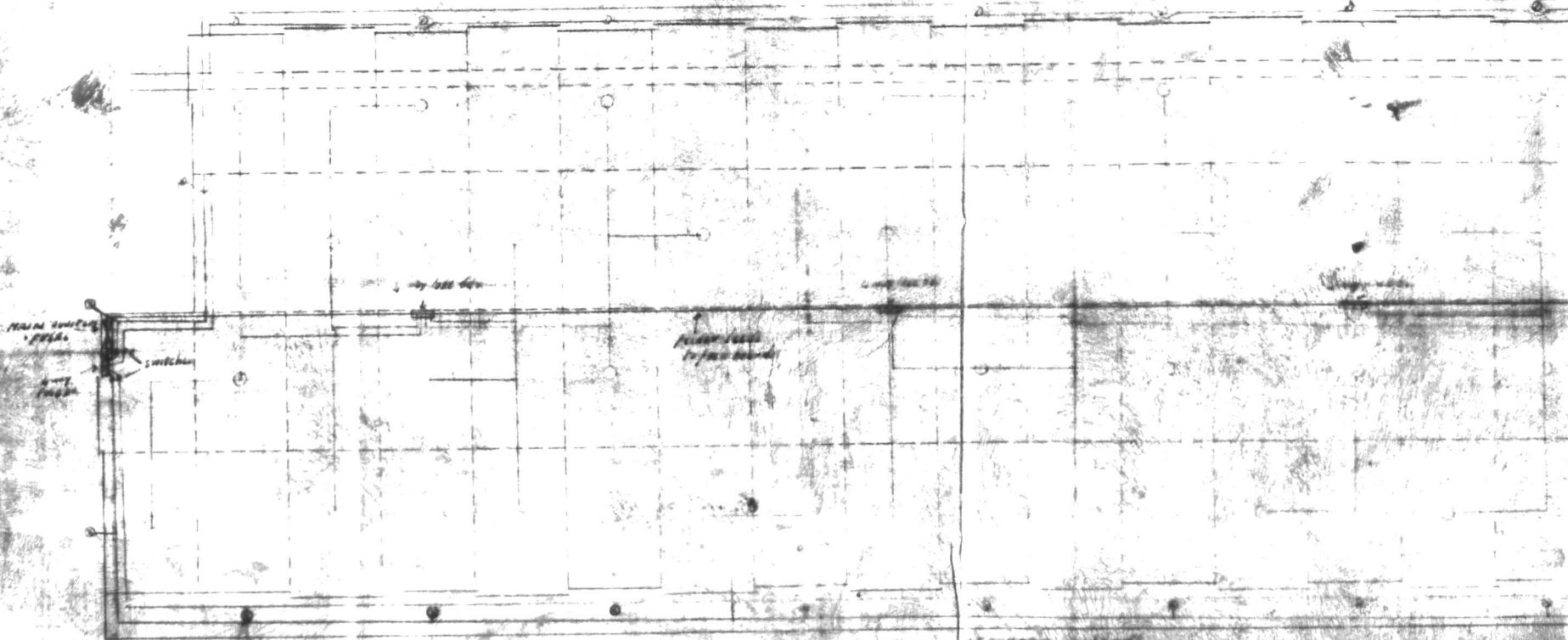


floor level
17' 0" below

1/2" DIA. 10' DIA. HOLE

CROSS SECTION OF ROOF FLOOR SHEET

SCALE 1" = 8'



MAIN SURFACE
SWITCH

FLOOR JOIST



TO LINE - 1/2" DIA. HOLE
1/2" DIA. HOLE

Position proposed
for ladder
Billow

No. of ANTI-CORROSION FITTINGS
FOR ANTI-CORROSION LIGHTING
No. of 1/2" DIA. HOLE
- FOR AIR -

PLAN OF SHEET NO. I - II SCALE 1" = 20'

41 0 - A

35 0 - B

CROSS SECTION OF DUNGEON FLOOR SHEET

SCALE 1/2"

PLAN VIEW
OF SHEET

PLAN OF SHEET NO. 12

NO. 12
NO. 13
NO. 14
NO. 15
NO. 16
NO. 17
NO. 18
NO. 19
NO. 20
NO. 21
NO. 22
NO. 23
NO. 24
NO. 25
NO. 26
NO. 27
NO. 28
NO. 29
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NO. 31
NO. 32
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NO. 34
NO. 35
NO. 36
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