CERTIFICATE NO: 24645

REF.: 91A/0574

PROPOSAL: New Building for storing gassing & maintaining Plant

LOCATION: Bluebell Works Bluebell Industrial Estate

APPLICANT: G.P.I. Plant & Tool Hire

1	2	3	4	5	6	7
DWELLINGS/AREA LENGTH/STRUCT	RATE	AMT. OF FEE REC.	AMOUNT LODGED	BALANCE DUE	BALANCE DUE	DATE/A/C RECEIPT NO.
Dwellings	£232					
	£216					
	£50p per M² in excess of 300M² MIN.£40					
metres² 523.566	£21.75 per M² or £40	£917	£983.55	£66.55	outstanding	
x .1 hect.	£605 per .1 hect. or £250					
x .1 hect.	£605 per .1 hect or £40					
x .1 hect	£605 per .1 hect. or £100					
	£2100					
x metres²	£10 per M² or £40					
x1,000M²	£605 per 1,000M² or £40					
x .1 hect.	£63 per .1 hect. or £40					

Column 1 Certified: Signed: [signature] Grade: DHTL Date: 17/4/91

Column 1 Endorsed: Signed: _____ Grade: _____ Date: _____

Columns 2,3,4,5,6 & 7 Certified Signed: [signature] Grade: SO Date: 17/4/91

Columns 2,3,4,5,6 & 7 Endorsed: Signed: _____ Grade: _____ Date: _____

EF. NO.: 91A/0574 CERTIFICATE NO.: 14639B

ROPOSAL: New Building for storing garaging & Maintaining Plant

CCATION: Bluebell Works, Bluebell Industrial Estate

PPLICANT: G.P.T. Plant & Tool Hire

	1	2	3	4	5	6	7
CLASS	DWELLINGS/AREA LENGTH/STRUCTURE	RATE	AMT. OF FEE REQUIRED	AMT. LODGED	BALANCE DUE	RED. FEE APPL.	AMT. OF RED. FEE
A	Dwelling (Houses/Flats)	@ £55					
B	Domestic Ext. (Improvement/ Alts.)	@ £30					
C	Building for office or other comm. purpose 523.56m²	@ £3.50 per m² or £70	£1834	£1967.03	£133.03 overlayment		
D	Building or other structure for purposes of agriculture	@ £1.50 per m² in excess of 800 m² Min. £70					
E	Petrol Filling Station	@ £200					
F	Dev. of prop. not coming within any of the foregoing classes	£70 or £9 per .1 hect. whichever is the greater					

Column 1 Certified: Signed: J. Young Grade: D/TI Date: 17/4/91.

Column 1 Endorsed: Signed: _____ Grade: _____ Date: _____

Columns 2,3,4,5,6 & 7 Certified: Signed: [illegible] Grade: S.O Date: 17/4/91

Columns 2,3,4,5,6 & 7 Endorsed: Signed: _____ Grade: _____ Date: _____

LOCATION GOVERNMENT (PLANNING AND DEVELOPMENT) ACTS, 1963 TO 1982

ASSESSMENT OF FINANCIAL CONTRIBUTION

REG. REF.: 91A/574

CONT. REG.:

SERVICES INVOLVED: WATER/FOUL SEWER/SURFACE WATER

AREA OF SITE:

FLOOR AREA OF PRESENT PROPOSAL: 5636 Ft²

MEASURED BY: J.Y. 17/4/91.

CHECKED BY:

METHOD OF ASSESSMENT:

TOTAL ASSESSMENT

MANAGER'S ORDERED NO: P/ /
DATED

ENTERED IN CONTRIBUTIONS REGISTER:

DEVELOPMENT CONTROL ASSISTANT GRADE

NO Reports
on file
Standard
rate
applicable
5/6/91

EASTERN HEALTH BOARD

P.C. _____ Reg. Ref: 91A/574

Proposed: Replacement building etc.

At: Bluebell Works, Bluebell 2nd Est.

For: G.P.T. Plant & Tool Hire Ltd.

Plans lodged: 12/4/91.

Architect: _____

Observations and recommendations of Env. Health Officers and/or Supervising Env. Health Officer.

See previous report dated 8/5/91.

Jackie Kelly EHO
6/11/91

PLANNING D...
DEVELOPMENT CONTROL SECT
Date 8.11.91
Time 12.25

for John O'Reilly SEHO
6/11/91

D M.G.

PLANNING DEPARTMENT — BOOK FOLIO

(R)

(1) Date Lodged
12-4-'91

LOCATION: Bluebell Works, Bluebell Ind. Est. REG. REF. 91A/574

APPLICANT: G.P.T. Plant & Tool Hire Ltd.

PROPOSAL: Replacement building etc.

(2) Date Referred:

UL SEWER — See previous report dated 4/6/1991 (copy attached)

DUBLIN CO. COUNCIL
15 OCT 1991
(3) Rec'd. from Ser.
DUBLIN CO. COUNCIL
SANITARY SERVICES
29 OCT 1991
Returned.
(4) Detached from
(5) Date to Planning

PLANNING DEPT.
DEVELOPMENT CONTROL SECT
Date 30.10.91
Time 1.00

RFACE WATER — See previous report dated 4/6/1991 (Copy attached)

(6) Date to Planner

(7) D.P.C. report to be submitted before

(8) D.P.C. report submitted at S.A. C.:

NOTE: Comment on this file is only possible by reference to an original copy of Drg. No. 08. The laser copy attached to this file does nothing to facilitate the assessing of the information supplied.

J. Rice
23/10/1991

, Decision due:

ENDORSED _____ DATE _____

SS only.

Register Reference : 91A/0574 Date : 24th April 1991

Development : Replacement building to the existing portion of their premises used for storing, garaging and maintaining their plant

LOCATION : Bluebell Works, Bluebell Industrial Estate

Applicant : G.P.T. Plant & Tool Hire Ltd

App. Type : PERMISSION/BUILDING BYE-LAW APPROVAL

Planning Officer : M.GALVIN

Date Recd. : 12th April 1991

PLANNING DEPT.
DEVELOPMENT CONTROL SE.
Date 30.10.91
Time 1.00

Attached is a copy of the application for the above development .Your report would be appreciated within the next 28 days.

Yours faithfully,

DUBLIN Co. COUNCIL
23 MAY 1991
SAN SERVICES

DUBLIN CO. COUNCIL
SANITARY SERVICES
PRINCIPAL OFFICER
17 JUN 1991
Returned

Date received in Sanitary Services .....

FOUL SEWER

No foul sewer requirements indicated.

SURFACE WATER

Available.

Surface water run-off is subject to the provisions of the Water Pollution Act.

SENIOR ENGINEER,
SANITARY SERVICES DEPARTMENT,
46/49 UPPER O'CONNELL STREET,
DUBLIN 1

E. Rollins 4/6/91

J.R. 7/6/91

Circulated to CHO.

PLANNING DEPARTMENT BOOK FOLIO

1) Date Lodged 12-4-91

LOCATION: Bluebell Works Bluebell Ind. Est. REG.REF. 91A/574

APPLICANT: G.P.T. Plant + Tool Hire Ltd.

PROPOSAL: Replacement building etc.

WATER SUPPLY

See previous report & REFER TO CFO
L. J. Spain
18/10/91

V.O. Sullivan
18/10/91

PLANNING DEPT.
DEVELOPMENT CONTROL SECT
Date 30.10.91
Time 1.00

ENDORSED: [signature] DATE 24/10/91

W SS + EHO

D. & E. WALDRON & ASSOCIATES

ENGINEERING & ARCHITECTURAL CONSULTANTS

Knock, County Mayo. Telephone: (094) 88204 (2 Lines). Fax: (094) 88610
also
Currach, Castlebar, County Mayo. Telephone: (094) 22929. Fax: (094) 24967

DATE: 10th September, 1991 REF: EW/CC/1130

91A/0574

1.1.0

Comp

Dublin County Council,
Planning & Development Section,
Block 2,
Irish Life Centre,
Lower Abbey Street,
DUBLIN 1.

ENVIRONMENTAL HEALTH OFFICERS

RE: Replacement Building, G.P.T. Plant & Tool Hire Ltd.
Reg.No: 91A/574. Decision Order No: P/2463/91.

Dear Sirs,

Please find enclosed revised boundary Drawings herein in accordance with the Road Authority requirements, for your approval.

We would be obliged if you would please deal with this matter as soon as possible.

Yours faithfully,

Eugene Waldron

PATRICK EUGENE WALDRON,
D. & E. WALDRON & ASS.

DUBLIN Co. COUNCIL
15 OCT 1991
SAN SERVICES

PLANNING DEPT.
DEVELOPMENT CONTROL SECT
13-11-91
4.30

Proprietors: Patrick E. Waldron, Tech. (I.E.I.), N.C.E.A. Tech. Eng.
Denis Waldron, B.E., Eur. Ing., C. Eng., M.I.E.I., M.I.W.E.M.
V.A.T. No. 3423071J

EASTERN HEALTH BOARD

P.C. _____ Reg. Ref: 91A/574

Proposed: Replacement building etc.

At: Bluebell Works, Bluebell 2nd Est.

For: G.P.T. Plant & Tool Hire Ltd.

Plans lodged: 12/4/91.

Architect: _____

Observations and recommendations of Env. Health Officers and/or Supervising Env. Health Officer.

See previous report dated 8/5/91.

Jackie Kelly EHO
6/11/91

pp Ita Devine
for John O'Reilly SEHO
6/11/91

O M.G.

SS only.

(12)

Register Reference : 91A/0574 Date : 24th April 1991

Development : Replacement building to the existing portion of their premises used for storing, garaging and maintaining their plant

LOCATION : Bluebell Works, Bluebell Industrial Estate

Applicant : G.P.T. Plant & Tool Hire Ltd

App. Type : PERMISSION/BUILDING BYE-LAW APPROVAL

Planning Officer : M.GALVIN

Date Recd. : 12th April 1991

Attached is a copy of the application for the above development .Your report would be appreciated within the next 28 days.

Yours faithfully,

Date received in Sanitary Services .....

DUBLIN Co. COUNCIL
23 MAY 1991
SAN SERVICES

DUBLIN CO. COUNCIL
SANITARY SERVICES
PRINCIPAL OFFICER
17 JUN1991
Returned GL

FOUL SEWER

No foul sewer requirements indicated.

PLANNING DEPT.
DEVELOPMENT CONTROL SECT
Date 18:06:91
Time 12-55

SURFACE WATER

Available.

Surface water run-off is subject to the provisions of the Water Pollution Act.

SENIOR ENGINEER,
SANITARY SERVICES DEPARTMENT,
46/49 UPPER O'CONNELL STREET,
DUBLIN 1

5/6/91

J.R. 7/6/91

Circulated to CMO.

Register Reference : 91A/0574 Date : 24th April 1991

.....

ENDORSED _____ DATE _____

WATER SUPPLY ... Applicant should state there is no additional water requirement - note the fire water available for fire fighting in this area is very poor.

Refer to E.H.O.

29/4/91

.....

ENDORSED _____ DATE 11/6/91

PLANNING DEPT.
DEVELOPMENT CONTROL SECT
Date 13.06.91
Time 12.55

Dublin County Council Comhairle Chontae Atha Cliath

Parks Department

Bosca 174
P. O. Box 174
5 Rae Gardiner,
5 Gardiner Row,
Baile Atha Cliath 1.
Dublin 1.
Telephone. (01)727777
Fax. (01)727530

M. G.

Mr. D. Drumgoole,
S.A.O.,
Planning Dept.

24 MAY 91

Our Ref.
Your Ref.
Date 20.5.91

Re: Application for replacement building at Bluebell Works,
Bluebell Industrial Estate.
Reg. Ref. 91A/0574

In the event of it being decided to grant planning permission, the applicant should be requested to submit and agree a detailed landscape plan, specification and programme of works for the development to the Parks Department prior to the commencement of development.

SENIOR PARKS SUPERINTENDENT

PLANNING DEPT.
DEVELOPMENT CONTROL SECT
Date 24.05.91
Time 10.15

M.G

DUBLIN COUNTY COUNCIL

REG. REF: 91A/574.

LOCATION: Bluebell Works, Bluebell Ind. Estate.

APPLICANT: G.P.T. Plant & Tool Hire Ltd.

PROPOSAL: Replacement building.

DATE LODGED: 12.4.91.

No Roads objection in principle. However, the site acces is very blind and is dangerous.

If permission is granted it should be subject to:-

1. Applicant to sumbmit a plan showing setback of front boundary wall to improve safety of access. Details to be agreed with Roads Department.

2. A site car parking plan to Dublin County Council Standards to be submitted.

PLANNING DEPT.
DEVELOPMENT CONTROL SECT
Date 23.05.91
Time 3.50

TR/BMcC
14.5.91.

SIGNED: T. Rogers **ENDORSED:** [illegible]

DATE: 12/4/91 **DATE:** 14/5/91

MG

DUBLIN COUNTY COUNCIL

PLANNING AND BUILDING CONTROL DEPARTMAENT

Senior Environmental Health Officer,
33 Gardiner Place.

Register Reference : 91A/0574 Date : 15th April 1991

Development : Replacement building to the existing portion of their premises used for storing, garaging and maintaining their plant

LOCATION : Bluebell Works, Bluebell Industrial Estate

Applicant : G.P.T. Plant & Tool Hire Ltd

App. Type : PERMISSION/BUILDING BYE-LAW APPROVAL

Planning Officer :

Date Recd. : 12th April 1991

DUBLIN COUNTY COUNCIL
30 APR 1991
ENVIRONMENTAL HEALTH OFFICERS

Attached is a copy of the application for the above development .Please ensure that your report is received within 5 weeks from 12th April 1991.

Yours faithfully,

.....

PRINCIPAL OFFICER

The proposal is acceptable subject to

(1) Compliance with Health, Safety and Welfare at Work Act 1989.

(2) Compliance with Safety in Industries Act 1955/80

PLANNING DEPT.
DEVELOPMENT CONTROL SECT
Date 14.4.91
Time

pp a Devine
for John O'Reilly SEHO
8/5/91

P/2463/91

COMHAIRLE CHONTAE ÁTHA CLIATH

Record of Executive Business and Manager's Orders

Register Reference : 91A/0574 Date Received : 12th April 1991

Correspondence Name and Address : D.&.E. Waldron & Associates, Knock, Co. Mayo.

Development : Replacement building to the existing portion of their premises used for storing, garaging and maintaining their plant

Location : Bluebell Works, Bluebell Industrial Estate

Applicant : G.P.T. Plant & Tool Hire Ltd

App. Type : Permission

Zoning : E

CONTRIBUTION
Standard Nil
Roads No payment Building
S Sers
Open Space
Other
SECURITY:
Bond / C.I.F.:
Cash:

(MG/BB)

Report of Dublin Planning Officer dated 28th May, 1991.

This is an application for permission for a replacement building at Bluebell Works, Bluebell Industrial Estate for G.P.T. Plant and Tool Hire Ltd.

The proposed site which has an area of 4140 sq. metres (i.e. c. 1.02 acres) is located to the east of the Bluebell Industrial Estate in an area zoned E "to provide for industrial and related uses" in the Dublin County Development Plan, 1983. The site is accessed via a narrow roadway off the old Naas Road, to the north of the Naas Dual Carriageway.

The proposed site is bounded by wire fencing on three sides. (There is existing conifer planting beyond on adjoining sites to the north and west). The boundary to the public road comprises a ~~high~~ wall/fence and entrance gates.

Existing buildings on site comprise single storey offices/stores/workshop to the front of the site adjoining the entrance. The existing workshop to the rear comprises a galvanised building of floor area c. 607 sq. metres. Lodged plans indicate that this is used for vehicle storage and maintenance. An additional building denoted on drawings as being a store is located in the north (front) of the site.

The Planning Register was checked - there is no apparant Planning History to this site.

From site inspected it was noted that a substantial proportion of the site (to the rear) is used for the open storage of machinery and parts. Various

COMHAIRLE CHONTAE ÁTHA CLIATH

Record of Executive Business and Manager's Orders

Reg.Ref: 91A/0574

Page No: 0002

Location: Bluebell Works, Bluebell Industrial Estate

building materials and lengths of piping are stored on the front portion of the site (site effectively divided in two by a low railing bar). The front portion is also used for car parking and it was noted that it is congested and some cars are double parked.

The current application provides for the replacement of the existing workshop to the rear with a new 523.6 sq. metre building. According to the applicants this is to be used for storing, ~~[illegible]~~ and ~~manufacturing~~ maintaining the plant hire operation. The proposed building will be smaller than the existing building (i.e. 523.6 sq. metres as opposed to c. 607 metres). It will also be slightly ~~longer~~ but narrower.

Lodged plans provide for a building with a knap plaster finish c. 8 - 8.5 metres in height. Elevational drawings are included only for the north western and south western facades. 2 no. rodler shutter doors are proposed in the north
western elevation i.e. opening onto the yard area. An additional roller shutter door is proposed in the northern elevation (no drawing submitted) connecting it with the adjoining existing workshop.

Roads Department report states no objection, however, it also noted that the site access is very blind and dangerous and that any grant of planning permission should be subject to:-

(1) The applicants submitting a plan showing a setback at the front boundary wall to improve safety at the access.
(2) A site car parking plan to Dublin County Council standards to be submitted.

It is considered that these matters can be conditioned. A total of c30 no. car spaces are required here to meet current Council standards. The site is sufficantly large to cater for this.

The proposed development which is for a replacement building in an established industrial ~~individual~~ area is considered acceptable.

I recommend that a decision to GRANT PERMISSION be made under the Local Government (Planning and Development) Acts, 1963-1990 subject to the following (10) conditions:-

C O N D I T I O N S / R E A S O N S

01 The development to be carried out in its entirety in accordance with the

COMHAIRLE CHONTAE ÁTHA CLIATH

Record of Executive Business and Manager's Orders

Reg.Ref: 91A/0574

Page No: 0003

Location: Bluebell Works, Bluebell Industrial Estate

plans, particulars and specifications lodged with the application, save as may be required by the other conditions attached hereto.
REASON: To ensure that the development shall be in accordance with the permission and that effective control be maintained.

02 That before development commences, approval under the Building Bye-Laws be obtained and all conditions of that approval be observed in the development.
REASON: In order to comply with the Sanitary Services Act, 1878-1964.

03 That the requirements of the Chief Fire Officer be ascertained and strictly adhered to in the development.
REASON: In the interest of safety and the avoidance of fire hazard.

04 That the requirements of the Supervising Environmental Health Officer be ascertained and strictly adhered to in the development.
REASON: In the interest of health.

05 That the water supply and drainage arrangements, including the disposal of surface water, be in accordance with the requirements of the County Council.
REASON: In order to comply with the Sanitary Services Acts, 1978 - 1964.

06 That off street car parking facilities and parking for trucks be provided in accordance with Development Plan Standards. In this regard before any development takes place, the appliant is to submit a car parking layout for the ~~proposed~~ site to the Planning Authority for agreement. This is to be marked out on site prior to the occupation of the proposed unit.

06 REASON: In the interest of the proper planning and development of the area.

07 That the area between the building and roads must not be used for truck parking or other storage or display purpose, but must be reserved for car parking and landscaping ~~as shown on lodged plans~~.
REASON: In the interest of the proper planning and development of the area.

08 That the front boundary be set back to the requirements of the Roads Department. Details to be submitted to the Planning Authority for written agreement prior to the commencement of development on site.
REASON: In the interest of traffic safety.

09 That details of landscaping and boundary treatment be submitted to and ~~approved~~ agreed in writing by Planning Authority and work theron completed

COMHAIRLE CHONTAE ÁTHA CLIATH

Record of Executive Business and Manager's Orders

Reg.Ref: 91A/0574

Page No: 0004

Location: Bluebell Works, Bluebell Industrial Estate

prior to occupation of units. Detailed plans to be submitted to + agreed by the Planning Authority prior to commencement of development.
REASON: In the interest of amenity.

10 That no advertising sign or structure be erected except those which are exempted development, without prior approval of Planning Authority.
REASON: In the interest of the proper planning and development of the area.

11 That a ~~financial contribution~~ in the sum of £ _____ be paid by the proposer to the Dublin County Council towards the ~~cost of provision~~ of public services in the area of the ~~proposed development~~ and which facilitate this development; ~~this contribution~~ to be paid before the commencement of development on the site.
REASON: The provision of such services in the area by the Council will facilitate the ~~proposed~~ development. It is considered reasonable that the ~~developer~~ should contribute towards the cost of providing the services.

COMHAIRLE CHONTAE ÁTHA CLIATH

Record of Executive Business and Manager's Orders

Reg.Ref: 91A/0574

Page No: 0005

Location: Bluebell Works, Bluebell Industrial Estate

Endorsed:-.....
for Principal Officer

.....
for Dublin Planning Officer

Order: A decision pursuant to Section 26(1) of the Local Government (Planning and Development) Acts, 1963-1990 to GRANT PERMISSION for the above proposal subject to the (10) conditions set out above is hereby made.

Dated : 7 June 1991 K. O'Sullivan

ASSISTANT CITY AND COUNTY MANAGER

to whom the appropriate powers have been delegated by order of the Dublin City and County Manager dated 26th April, 1991.

COMHAIRLE CHONTAE ATHA CLIATH

DUBLIN COUNTY COUNCIL

Building Control Department,
Liffey House,
Tara Street,
Dublin 1.

Telephone: 773066

Planning Department,
Irish Life Centre,
Lower Abbey Street,
Dublin 1.

Telephone: 724755
Extension: 231/234

27 September 1991

LOCAL GOVERNMENT (PLANNING AND DEVELOPMENT) ACTS, 1963 TO 1982

LOCATION: Bluebell Works, Bluebell Ind. Est.

PROPOSED DEVELOPMENT: Replacement building

APPLICANT: G.P.T. Plant & Tool Hire Ltd

PLANNING REG.REF.: 91A/0574

DATE OF RECEIPT OF SUBMISSION: 12 September 1991

A Chara,

With reference to above, I acknowledge receipt of application for:

Compliance with Conditions.

Mise, le meas

A. Smith

PRINCIPAL OFFICER

D & E Waldron & Associates,

Knock,
Co. Mayo.

D. & E. WALDRON & ASSOCIATES

ENGINEERING & ARCHITECTURAL CONSULTANTS

Knock, County Mayo. Telephone: (094) 88204 (2 Lines). Fax: (094) 88610

also

Currach, Castlebar, County Mayo. Telephone: (094) 22929. Fax: (094) 24967

DATE: 10th September, 1991 REF: EW/CC/1130

91A/0574

1.1.0

Comp

Dublin County Council,
Planning & Development Section,
Block 2,
Irish Life Centre,
Lower Abbey Street,
DUBLIN 1.

RE: Replacement Building, G.P.T. Plant & Tool Hire Ltd.
Reg.No: 91A/574. Decision Order No: P/2463/91.

Dear Sirs,

Please find enclosed revised boundary Drawings herein in accordance with the Road Authority requirements, for your approval.

We would be obliged if you would please deal with this matter as soon as possible.

Yours faithfully,

Eugene Waldron

PATRICK EUGENE WALDRON,
D. & E. WALDRON & ASS.

12. SEPT 91

Proprietors: Patrick E. Waldron, Tech. (I.E.I.), N.C.E.A. Tech. Eng.
Denis Waldron, B.E., Eur. Ing., C. Eng., M.I.E.I., M.I.W.E.M.
V.A.T. No. 3423071J.

1

PLANNING DEPARTMENT BOOK FOLIO

(1) Date Lodged

7 Aug 1991

LOCATION: Bluebell Works, Bluebell Ind. Est. REG.REF. 91A/0574

APPLICANT: G.P.T. Plant & Tool Hire Ltd

PROPOSAL: Replacement building to premises

APPLICATIONS TO BE CIRCULATED TO THE FOLLOWING:

ROADS

SANITARY SERVICES

CHIEF MEDICAL OFFICER

DEVELOPMENT PLAN TEAM

FIRE PREVENTION OFFICER

PARKS SUPERINTENDENT

VETERINARY OFFICER

NOTES

REFER TO:

Senior Executive Development Controller

28/8

2

PLANNING DEPARTMENT BOOK FOLIO

(1) Date Lodged

7 Aug 1991

LOCATION: Bluebell Works, Bluebell Ind. Est. REG.REF. 91A/0574

APPLICANT: G.P.T. Plant & Tool Hire Ltd

PROPOSAL: Replacement building to premises

(2) Date referred

ROADS DEPARTMENT OBSERVATIONS:

(for use by Planning Control Section)

(3) Rec'd Roads Department:

1) Application logged on Control Sheets....YES O/S

2) Type of application

a) full permission b) outline c) approval

d) added information e) compliance with conditions

(4) Dispatched by Roads Dept:

3) Details provided

a) North point, b) Adequate location map, c) Site outlined

4) Effect on proposal by road reservations

a) Site affected by road reservations. Directly/Indirectly

b) Reservation(s) shown. Correctly/Incorrectly/Approx.

c) Details of other roads proposals nearby

(5) Rec'd Planning

5) Previous planning history

a) Applications to Local Authority:

Reg.Refs.:

Date Lodged:

(6) Date to Planner

b) Applications to An Bord Pleanala

Reg.Refs.:

Decision Dates:

(7) D.P.O. report to be submitted before:

Site observations Access.....

Margin width: Front.....Side.....

(9) Decision due:

Carriage width.....Footpath.....

Relocate poles/service Pipe Ditches

Construct footpath.....Kerbs.....

(8) D.P.O. Report submitted to S.A.O.:

Endorsed; DATE:

COMMENTS:.....

.....

.....

COMHAIRLE CHONTAE ATHA CLIATH

DUBLIN COUNTY COUNCIL

Building Control Department,
Lif[redacted] House,
Tara Street,
Dublin 1.

Telephone: 773066

Planning Department,
Irish Life Centre,
Lower Abbey Street,
Dublin 1.

Telephone: 724755
Extension: 231/234

15 August 1991

LOCAL GOVERNMENT (PLANNING AND DEVELOPMENT) ACTS, 1963 TO 1982

LOCATION: Bluebell Works, Bluebell Industrial Estate

PROPOSED DEVELOPMENT: Replacement building to premises

APPLICANT: G.P.T. Plant & Tool Hire Ltd

PLANNING REG.REF.: 91A/0574

DATE OF RECEIPT OF SUBMISSION: 7 August 1991

A Chara,

With reference to above, I acknowledge receipt of application for:

Compliance with Conditions.

Mise, le meas

A. Smith

PRINCIPAL OFFICER

D & E Waldron & Associates,
Knock,
Co. Mayo.

D. & E. WALDRON & ASSOCIATES
ENGINEERING & ARCHITECTURAL CONSULTANTS
Knock, County Mayo. Telephone: (094) 88204 (2 Lines). Fax: (094) 88610
also
Currach, Castlebar, County Mayo. Telephone: (094) 22929. Fax: (094) 24967

DATE: 1st August, 1991

REF.: EW/CC/1130

Ms. Mary Galvin,
Dublin County Council,
Planning & Development Section
Block 2,
Irish Life Centre,
Lower Abbey Street,
DUBLIN 1.

07. AUG 91

RE: Replacement Building, G.P.T. Plant & Tool Hire Ltd.
Reg. No: 91A/574. Decision Order No: P/2463/91.

Dear Ms. Galvin,

Enclosed please find Drawing re Car Parking facilities in accordance with Development Plan Standards together with Landscaping Drawing for your information, as per our telephone conversation.

We would be grateful if you would please deal with this matter at your earliest convenience as our clients wish to proceed with this development as soon as possible.

Yours sincerely,

Eugene Waldron

PATRICK EUGENE WALDRON,

1.2.0
Compliance
91A/574.

Proprietors: Patrick E. Waldron, Tech. (I.E.I.); N.C.E.A. Tech. Eng.
Denis Waldron, B.E., Eur. Ing., C. Eng., M.I.E.I., M.I.W.E.M.
V.A.T. No. 3423071J.

Dublin County Council Comhairle Chontae Atha Cliath **Planning Department**

Bloc 2, Ionad Bheatha na hEireann,
Block 2, Irish Life Centre,
Sraid na Mainistreach Iacht,
Lower Abbey Street,
Baile Atha Cliath 1.
Dublin 1.
Telephone. (01)724755
Fax. (01)724896

NOTIFICATION OF DECISION TO GRANT PERMISSION
LOCAL GOVERNMENT (PLANNING AND DEVELOPMENT)ACTS 1963-1990.

Decision Order Number : P/ 2463 /91 Date of Decision : 7th June 1991

Register Reference : 91A/0574 Date Received : 12th April 1991

Applicant : G.P.T. Plant & Tool Hire Ltd

Development : Replacement building to the existing portion of their premises used for storing, garaging and maintaining their plant

Location : Bluebell Works, Bluebell Industrial Estate

Time Extension(s) up to and including :

Additional Information Requested/Received : //

In pursuance of its functions under the above mentioned Acts,the Dublin County Council,being the Planning Authority for the County Health District of Dublin, did by Order dated as above make a decision to GRANT PERMISSION in respect of the above proposal.

Subject to the Conditions on the attached Numbered Pages.

NUMBER OF CONDITIONS:- 10 .....ATTACHED.

Signed on behalf of the Dublin County Council.....
for Principal Officer

Date: 10.6.91.....

D.&.E. Waldron & Associates,
Knock,
Co. Mayo.

Dublin County Council Comhairle Chontae Atha Cliath **Planning Department**

Bloc 2, Ionad Bheatha na hEireann,
Block 2, Irish Life Centre,
Sraid na Mainistreach Iacht,
Lower Abbey Street,
Baile Atha Cliath 1.
Dublin 1.
Telephone. (01)724755
Fax. (01)724896

Reg.Ref. 91A/0574
Decision Order No. P/ 2463 /91

C O N D I T I O N S / R E A S O N S

01 The development to be carried out in its entirety in accordance with the plans, particulars and specifications lodged with the application, save as may be required by the other conditions attached hereto.
REASON: To ensure that the development shall be in accordance with the permission and that effective control be maintained.

02 That before development commences, approval under the Building Bye-Laws be obtained and all conditions of that approval be observed in the development.
REASON: In order to comply with the Sanitary Services Act, 1878-1964.

03 That the requirements of the Chief Fire Officer be ascertained and strictly adhered to in the development.
REASON: In the interest of safety and the avoidance of fire hazard.

04 That the requirements of the Supervising Environmental Health Officer be ascertained and strictly adhered to in the development.
REASON: In the interest of health.

05 That the water supply and drainage arrangements, including the disposal of surface water, be in accordance with the requirements of the County Council.
REASON: In order to comply with the Sanitary Services Acts, 1978 - 1964.

06 That off street car parking facilities and parking for trucks be provided in accordance with Development Plan Standards. In this regard, before any development takes place, the applicant is to submit a car parking layout for the site to the Planning Authority for agreement. This is to be marked out on site prior to the occupation of the proposed unit.

06 REASON: In the interest of the proper planning and development of the area.

07 That the area between the building and roads must not be used for truck parking or other storage or display purpose, but must be reserved for car parking and landscaping.

07 REASON: In the interest of the proper planning and development of the area.

08 That the front boundary be set back to the requirements of the Roads Department. Details to be submitted to the Planning Authority for written agreement prior to the commencement of development on site.
REASON: In the interest of traffic safety.

Dublin County Council Comhairle Chontae Atha Cliath **Planning Department**

Bloc 2, Ionad Bheatha na hEireann,
Block 2, Irish Life Centre,
Sraid na Mainistreach Iacht,
Lower Abbey Street,
Baile Atha Cliath 1.
Dublin 1.
Telephone. (01)724755
Fax. (01)724896

09 That details of landscaping and boundary treatment be submitted to and agreed to in writing by Planning Authority and work thereon completed prior to occupation of units. Detailed plans to be sumitted to and agreed by the Planning Authority prior to commencement of development.
REASON: In the interest of amenity.

10 That no advertising sign or structure be erected except those which are exempted development, without prior approval of Planning Authority.
REASON: In the interest of the proper planning and development of the area.

n County Council Comhairle Chontae Atha Cliath **Planning Department**

Building Control Department,
Liffey House,
Tara Street,
Dublin 1.
Telephone:773066

Bloc 2, Ionad Bheatha na hEireann,
Block 2, Irish Life Centre,
Sraid na Mainistreach Iacht,
Lower Abbey Street,
Baile Atha Cliath 1.
Dublin 1.
Telephone. (01)724755
Fax. (01)724896

Register Reference : 91A/0574 Date : 15th April 1991

LOCAL GOVERNMENT (PLANNING AND DEVELOPMENT) ACTS, 1963 TO 1990

Dear Sir/Madam,

DEVELOPMENT : Replacement building to the existing portion of their premises used for storing, garaging and maintaining their plant

LOCATION : Bluebell Works, Bluebell Industrial Estate

APPLICANT : G.P.T. Plant & Tool Hire Ltd

APP. TYPE : PERMISSION/BUILDING BYE-LAW APPROVAL

With reference to above, I acknowledge receipt of your application received on 12th April 1991.

Yours faithfully,

.....

PRINCIPAL OFFICER

D.&.E. Waldron & Associates,
Knock,
Co. Mayo.

Dublin County Council
Comhairle Chontae Átha Cliath

Planning Application Form/ Bye - Law Application Form

PLEASE READ INSTRUCTIONS AT BACK BEFORE COMPLETING FORM. ALL QUESTIONS MUST BE ANSWERED.

1. Application for Permission [✓] Outline Permission [ ] Approval [ ] Place ✓ in appropriate box.
Approval should be sought only where an outline permission was previously granted. Outline permission may not be sought for the retention of structures or continuances of uses.

2. Postal address of site or building BLUEBELL WORKS, BLUEBELL INDUSTRIAL ESTATE, (If none, give description sufficient to identify) CO. DUBLIN

3. Name of applicant (Principal not Agent) G.P.T. PLANT & TOOL HIRE LTD.
Address AS ABOVE Tel. No. £1967.03 N35489

4. Name and address of person or firm responsible for preparation of drawings D.J.E. WALDRON & ASSOCIATES KNOCK, CO. MAYO Tel. No 094-88204

5. Name and address to which notifications should be sent D.J.E WALDRON & ASSOCIATES, KNOCK, CO. MAYO

6. Brief description of proposed development REPLACEMENT BUILDING TO EXISTING BUILDING BEING USED FOR STORING, GARAGING & MAINTAINING THEIR PLANT

7. Method of drainage PUBLIC STORM SYSTEM 8. Source of Water Supply N/A

9. In the case of any building or buildings to be retained on site, please state:-
(a) Present use of each floor or use when last used. (REFER TO DRAWINGS) OFFICE, PARTS STORE & HEAVY MAINTAINENCE
(b) Proposed use of each floor AS ABOVE

10 Does the proposal involve demolition, partial demolition or change of use of any habitable house or part thereof? YES (REFER TO DRG. FOR DETAILS)

11.(a) Area of Site 4.140 Sq. m.
(b) Floor area of proposed development 523.566 J. Jnd Sq. m.
(c) Floor area of buildings proposed to be retained within site 523.4 Sq. m.

PERMISSION is being sought from Dublin County Council & P.C. Dublin. Signed G.P.T. Plant & Tool Hire Ltd.

12.State applicant's legal interest or estate in site (i.e. freehold, leasehold, etc.) OWNER

13.Are you now applying also for an approval under the Building Bye Laws? Yes [✓] No [ ] Place ✓ in appropriate box.

14.Please state the extent to which the Draft Building Regulations have been taken in account in your proposals PART A, D, E, H, J, K, L, M, N, P, Q

15.List of documents enclosed with application. AS PER ATTACHED SCHEDULE £813.10 + £130.45 12/4 N35197 8

16.Gross floor space of proposed development (See back) 523.56 Sq. m.

No of dwellings proposed (if any) N/A Class(es) of Development COMERCIAL

Fee Payable £2950.58 Basis of Calculation AREA OUTSIDE THE EXTERNAL WALLS 562.03 X 5.25

If a reduced fee is tendered details of previous relevant payment should be given

Signature of Applicant (or his Agent) [signature] Date 11-4-91

Application Type P/BBL 91A/0574

FOR OFFICE USE ONLY

Register Reference 2.36.4.16

Amount Received £

Receipt No 18-13

Date

RECEIVED
12 APR 1991
REG. SEC.

LOCAL GOVERNMENT (PLANNING & DEVELOPMENT) REGULATIONS 1977 to 1984.

Outline of requirements for applications for permission or Approval under the Local Government (Planning & Development) Acts 1963 to 1983. The Planning Acts and Regulations made thereunder may be purchased from the Government Publications Sales Office, Sun Alliance House, Molesworth Street, Dublin 2.

1. Name and Address of applicant.

2. Particulars of the interest held in the land or structure, i.e. whether freehold, leasehold, etc.

3. The page of a newspaper, circulating in the area in which the land or structure is situate, containing the required statutory notice. The newspaper advertisement should state after the heading Co. Dublin.

   (a) The address of the structure or the location of the land.
   (b) The nature and extent of the development proposed. If retention of development is involved, the notice should be worded accordingly. Any demolition of habitable accommodation should be indicated.
   (c) The name of the applicant.

   NB. Applications must be received within 2 weeks from date of publication of the notice.

4. Four (4) sets of drawings to a stated scale must be submitted. Each set to include a layout or block plan, proposed and existing services to be shown on this drawing, location map, and drawings of relevant floor plans, elevations, sections, details of type and location of septic tank (if applicable) and such other particulars as are necessary to identify the land and to describe the works or structure to which the application relates (new work to be coloured or otherwise distinguished from any retained structures). Buildings, roads, boundaries and other features bounding the structure or other land to which the application relates shall be shown on site plans or layout plans. The location map should be of scale not less than 1: 2500 and should indicate the north point. The site of the proposed development must be outlined in red. Plans and drawings should indicate the name and address of the person by whom they were prepared. Any adjoining lands in which the applicant has an interest must be outlined in blue.

5. In the case of a proposed change of use of any structure or land, requirements in addition to 1, 2, & 3 are.
   (a) a statement of the existing use and the proposed use, or, where appropriate, the former use and the use proposed.

   (b) (i) Four (4) sets of the drawings to a stated scale must be submitted. Each set to consist of a plan or location map (marked or coloured in red so as to identify the structure or land to which the application relates) to a scale of not less than 1:2500 and to indicate the North point. Any adjoining lands in which the application has an interest must be outlined in blue.

   (ii) A layout and a survey plan of each floor of any structure to which the application relates.

   (c) Plans and drawings should indicate the name and address of the person by whom they were prepared.

6. Applications should be addressed to: Dublin County Council, Planning Department, Irish Life Centre, Lr. Abbey Street, Dublin 1, Tel. 724755.

SEPTIC TANK DRAINAGE: Where drainage by means of a septic tank is proposed, before a planning application is considered, the applicant may be required to arrange for a trial hole to be inspected and declared suitable for the satisfactory percolation of septic tank effluent. The trial hole to be dug seven feet deep at or about the site of the septic tank. Septic tanks are to be in accordance with I.I.R.S. S.R. 6:75.

INDUSTRIAL DEVELOPMENT:
The proposed use of an industrial premises should, where possible, be stated together with the estimated number of employees, (male and female). Details of trade effluents, if any, should be submitted.

Applicants to comply in full with the requirements of the Local Government (Water Pollution) Act,1977 in particular the licencing provisions of Sections 4 and 16.

PLANNING APPLICATIONS

CLASS NO.	DESCRIPTION	FEE
1.	Provision of dwelling — House/Flat.	£32.00 each
2.	Domestic extensions/other improvements.	£16.00
3.	Provision of agricultural buildings (See Regs.)	£40.00 minimum
4.	Other buildings (i.e. offices, commercial, etc.)	£1.75 per sq. metre (Min. £40.00)
5.	Use of land (Mining, deposit or waste)	£25.00 per 0.1 ha (Min £250.00)
6.	Use of land (Camping, parking, storage)	£25.00 per 0.1 ha (Min. £40.00)
7.	Provision of plant/machinery/tank or other structure for storage purposes.	£25.00 per 0.1 ha (Min. £100.00)
8.	Petrol Filling Station.	£100.00
9.	Advertising Structures.	£10.00 per m^2 (min £40.00)
10.	Electricity transmission lines.	£25.00 per 1,000m (Min. £40.00)
11.	Any other development.	£5.00 per 0.1 ha (Min. £40.00)

BUILDING BYE-LAW APPLICATIONS

CLASS NO.	DESCRIPTION	FEE
A	Dwelling (House/Flat)	£55.00 each
B	Domestic Extension (improvement/alteration)	£30.00 each
C	Building — Office/ Commercial Purposes	£3.50 per m^2 (min. £70.00)
D	Agricultural Buildings/Structures	£1.00 per m^2 in excess of 300 sq. metres (min. - £70.00) (Max. - £300.00)
E	Petrol Filling Station	£200.00
F	Development or Proposals not coming within any of the foregoing classes.	£9.00 per 0.1 ha (£70.00 min.)
		Min. Fee £30.00
		Max. Fee £20,000

Cheques etc. should be made payable to: Dublin County Council.
Gross Floor space is to be taken as the total floor space on each floor measured from the inside of the external walls.
For full details of Fees and Exemptions see Local Government (Planning and Development) (Fees) Regulations 1984.

RECEIPT CODE

COMHAIRLE CHONTAE ATHA CLIATH

DUBLIN COUNTY COUNCIL
46/49 UPPER O'CONNELL STREET,
DUBLIN 1.

Issue of this receipt is not an acknowledgement that the fee tendered is the prescribed application fee

N 35197

PAID BY —
CASH
CHEQUE ✓
M.O.
B.L.
I.T.

£170.45

Received this 12th day of ~~March~~ April 1991

from E. Waldron, Knock, Co. Mayo

the sum of one hundred and ~~seventy~~ Pounds forty five Pence, being for for planning application at Bluebell Ind. Est.

S. CAREY
Principal Officer

Noelle Doane Cashier

RECEIPT CODE

COMHAIRLE CHONTAE ÁTHA CLIATH

DUBLIN COUNTY COUNCIL
46/49 UPPER O'CONNELL STREET,
DUBLIN 1.

PAID BY
CASH
CHEQUE
P.O.
B.L.
I.T.

Issue of this receipt is not an acknowledgement that the fee tendered is the correct collection fee.

N 35198

£813.10

Received this 12th day of April 19 91

from Galway Plant - Tool Hire Ltd.
Clonbell Ind. Estate

the sum of eight hundred & thirteen Pounds
ten Pence, being fee for
planning application at Clonbell Ind. Est.
Redacted Diane Cashier

S. CAREY
Principal Officer

16/5/91

RECEIPT CODE

COMHAIRLE CHONTAE ATHA CLIATH

DUBLIN COUNTY COUNCIL
46/49 UPPER O'CONNELL STREET,
DUBLIN 1.

BYE LAW APPLICATION

PAID BY
CASH
CHEQUE ✓
P.O.
S.I.
I.T.

REC. No. N 35489

£ 1967.03

Received this 12th day of April 19 91

from Colwood Hoard & Tool Hire Ltd,
Bluebell Ind. Estate

the sum of one thousand nine hundred & sixty seven Pounds
three Pence being bye-law application at Bluebell Ind Est.

Nolan Do Cashier

S. CAREY
Principal Officer

D. & E. WALDRON & ASSOCIATES
ENGINEERING & ARCHITECTURAL CONSULTANTS
Knock, County Mayo. Telephone: (094) 88204 (2 Lines). Fax: (094) 88610
also
Currach, Castlebar, County Mayo. Telephone: (094) 22929. Fax: (094) 24967

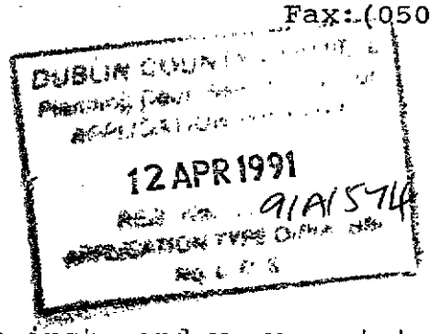
DATE: 8th April, 1991.

REF.:

FAX MESSAGE

TO: Tegral Metal Forming Ltd. Fax:(0507) 38156

For the attention of: L. Gray



Reference:

Message:

We refer to your letter of the 4th inst. and we regret to inform you that the information you supplied is not sufficiently detailed technically. We require your recommendations on the following:

(a) Purlin size and centres.
(b) Underskin size and Corrigation centres.
(c) Insulation details.
(d) Top-skin size and corrigation centres.
(e) Number of sheet fixing per purlin.
(f) Purlin fixing to concrete 4 degree A frame.
(g) Flashing and barge detail fixing.
(h) 10% - 20% roof light fixing.
(i) Certify that all the above comply with the required windload and snowload specified for the Bluebell area of Co. Dublin.

Please treat as urgent and let us hear from you by return.

SIGNED: Eugene Waldron.

Proprietors: Patrick E. Waldron, Tech. (I.E.I.); N.C.E.A. Tech. Eng.
Denis Waldron, B.E., Eur. Ing., C. Eng., M.I.E.I., M.I.W.E.M.
V.A.T. No. 3423071J.

TEGRAL

TEGRAL METAL FORMING LTD.

Sales Office and Works: Athy, Co. Kildare, Ireland. Telephone 0507-31618. Telex 60788. Fax 0507-38166.
Dublin Office: 6 South Leinster Street, Dublin 2, Ireland. Telephone 01-763974. Telex Dublin 93293. Fax 01-762820.

FAX MESSAGE

TO D&E Waldron & Associates.

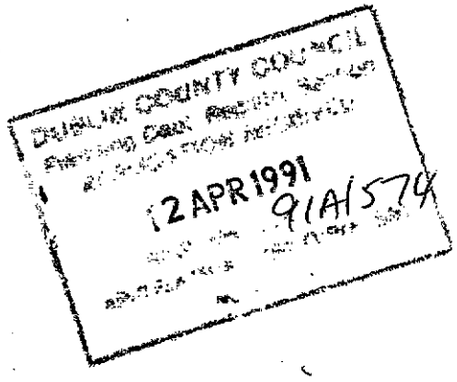
For the attention of Eugene Waldron.

Your ref.	Our ref.	Reply to	Date
	LG/PH		10/4/91

Reply to your fax 8/4/91

(a) 15015 @ 1200c/c achieving an allowable load at 1.04 kn/m2.
(b) TMR 32 .4 Lining Enamel @ 160mm trough centres.
(c) 33mm Polyurethane achieving .59 W/m2/°C U-Value.
(d) TMR32 .7 Plastisol coated steel @ 160mm trough centres.
(e) 3 sheet fixings per purlin i.e. every alternate trough.
(f) A galv. cleat with a slotted base is used to allow correct alignment of cleat on support.
(g) Flashings are manufactured in stan. 2.4m lengths and are custom made to suit individual requirements. They are fixed using a self drill self tapping stitching screw @ 300mm c/c.
(h) These are available to match inner & outer sheet profiles in general purpose and fire retardant grades, supplied in 6.5m or 5m lengths.
(i) The above mentioned comply with the required windload and snowload for the Bluebell area of Dublin.

Yours faithfully,



D. & E. WALDRON & ASSOCIATES

ENGINEERING & ARCHITECTURAL CONSULTANTS

Knock, County Mayo. Telephone: (094) 88204 (2 Lines). Fax: (094) 88204.

also

Currach, Castlebar, County Mayo. Telephone: (094) 22929.

REF:

G. P. T. Ltd.,
Bluebell Works,
Bluebell Industrial Estate
Co Dublin

DOCUMENT ISSUE SLIP

No.

DATE 11-4-91

Drawing No.	Revision. A	B	C	D	E	F	G	H	I	J	K	L	DESCRIPTION	Copies.
91/1/1130/01													PLAN & ELEVATIONS	4 No ✓
91/1/1130/02													SITE DETAILS	4 No ✓
91/1/1130/03													SECTIONS DETAILS	4 No ✓
91/1/1130/06													GROUND FLOOR PLAN FOUNDATION PLAN DETAILS	4 No ✓
91/1/1130/08													SITE LAYOUT MAP	4 No ✓
91/1/1130/09													ROOF PLAN	4 No ✓
91/1/1130/11													DOOR OPENING DETAILS	4 No ✓
+ 91/1/1130/12													DRAINAGE DETAILS	4 No ✓
× 91/1/1130/10													SECTION THROUGH DRAINAGE	4 No ✓

RECEIVED
12 APR 1991
Reg. No. 91A/574

Proprietors: Patrick E. Waldron, Tech. (I.E.I.); N.C.E.A. Tech. Eng.
Denis Waldron, B.E., Eur. Ing., C. Eng., M.I.E.I., M.I.W.E.M.
V.A.T. No. 3423071J.

D. & E. WALDRON & ASSOCIATES

ENGINEERING & ARCHITECTURAL CONSULTANTS

Knock, County Mayo. Telephone: (094) 88204 (2 Lines). Fax: (094) 88610

also

Currach, Castlebar, County Mayo. Telephone: (094) 22929. Fax: (094) 24967

DATE: 11th April, 1991

REF.: EW/CC/1130

Dublin County Council,
Planning Department,
Block 2,
Irish Life Centre,
Lower Abbey Street,
DUBLIN 1.

RE: Replacement Building for G.P.T. at Bluebell Works, Bluebell Industrial Estate, Dublin.

Dear Sirs,

We formally wish to apply for Planning Permission and By-law Approval herein.

We enclose herewith 4 copies of the following documentation in respect of the Application (excluding No.1 and 2 below which we are submitting singularly) -

1. Planning Application Form duly completed together with newspaper advertisement.
2. Planning Application fee in the sum of £2,950.58p.
3. Specification.
4. Drawings as per Schedule attached.
5. Structural calculations re Foundation retaining wall,

Proprietors: Patrick E. Waldron, Tech. (I.E.I.); N.C.E.A. Tech. Eng.
Denis Waldron, B.E., Eur. Ing., C. Eng., M.I.E.I., M.I.W.E.M.
V.A.T. No. 3423071J.

floor and yard slab as prepared by Mr. Denis Waldron.

6. Structural calculations from Pre-cast Concrete Portal Frame Manufacturers and Suppliers.

7. Specification from Roof Cladding Suppliers on materials to be used for roof cladding etc.

8. Drainage Drawings and calculations for surface water only - Calculations as prepared by Mr. Denis Waldron.

If you require any further information, please contact us.

Yours faithfully,

D. & E. WALDRON & ASS.

D. & E. WALDRON & ASSOCIATES
ENGINEERING & ARCHITECTURAL CONSULTANTS
Knock, County Mayo. Tel.: (094) 88204. Fax: (094) 88204.
Curraci[illegible] Castlebar, County Mayo. Telephone: (094) 22929.

Project GPT Bluebell Ind Estate
Title Surface water Sewer.
Name GPT
Date 5/4/91 Sheet No. 01

Members ref.	CALCULATIONS	OUTPUT

Area of Permeability of Roof

= 30.4 x 18.37 = 558.45 M^2.

Say 600 M^2.

Impermeable factor = 95%

Area of impermeability = 600 x 0.95

= 570 M^2.

Velocity of flow in a 225 mm of pipe

MH 1 TO MH 3

$$v = -2\sqrt{\left(2 \times 9.81 \times 0.225 \times \frac{1}{28}\right)} \log\left(\frac{0.00006}{3.7 \times 0.225} + \frac{2.51 \times 1.13 \times 10^{-6}}{0.225 \times \sqrt{2 \times 9.81 \times 0.225 \times \frac{1}{28}}}\right)$$

Length = 25 metres.

V = 3.16 M/s

Time of entry = 5 minutes.

Time of flow = $\frac{25 \text{ metres}}{3.16 \text{ M/s}}$ = 7.91 s

= 0.132 Minutes.

Time concentration (Tc) = Time of entry (Te) + Time of flow (Tf)

~~Tc~~

Tc = 5 + 0.132 minutes = 5.132 minutes.

i = $\frac{750}{5.132 + 10}$ = 49.564 $\frac{mm}{hr}$

D. & E. WALDRON & ASSOCIATES
ENGINEERING & ARCHITECTURAL CONSULTANTS
Knock, County Mayo. Tel.: (094) 88204. Fax: (094) 88204.
also
Cu[illegible] Castlebar, County Mayo. Telephone: (094) 22929.

Project GPT Bluebell Industrial Estate

Title Surface Water Sewer.

Name GPT

Date 5/4/91 Sheet No. 02.

Members ref.	CALCULATIONS	OUTPUT

Runoff = 2.78 × 0.057 × 49.564

= 7.8539 l/s = 0.00785 $\frac{m^3}{s}$

Capacity = 3.16 × $\frac{\pi}{4}$ (0.225)^2

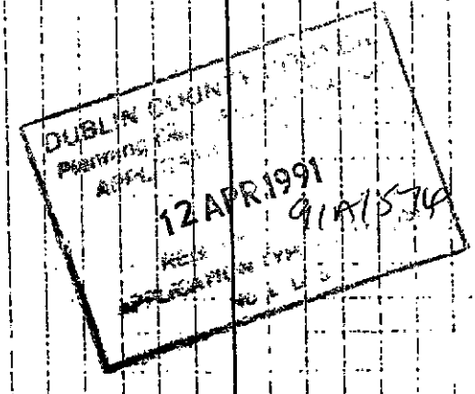
= 0.1256 m^3/s > 0.00785 $\frac{m^3}{s}$ 225 mm at $\frac{1}{28}$

O.K

Main Line 3 – 4.

225 mm ϕ at $\frac{1}{80}$

Capacity = 0.1256 m^3/s O.K



D. & E. WALDRON & ASSOCIATES
ENGINEERING & ARCHITECTURAL CONSULTANTS
Knock, County Mayo. Tel.: (094) 88204. Fax: (094) 88204.
also
Currach, Castlebar, County Mayo. Telephone: (094) 22929.

Project G.P.T. Property - Bluebell Ind. Est.

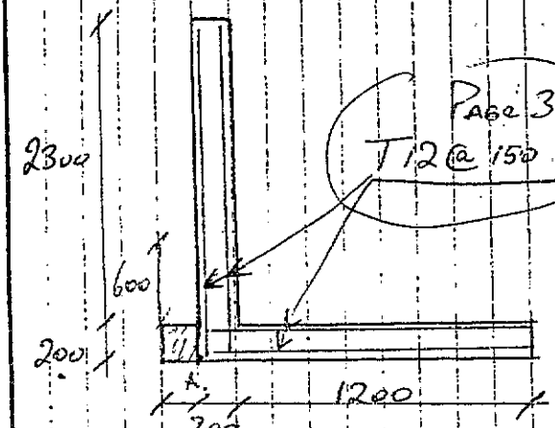
Title Retaining Wall.

Name GPT.

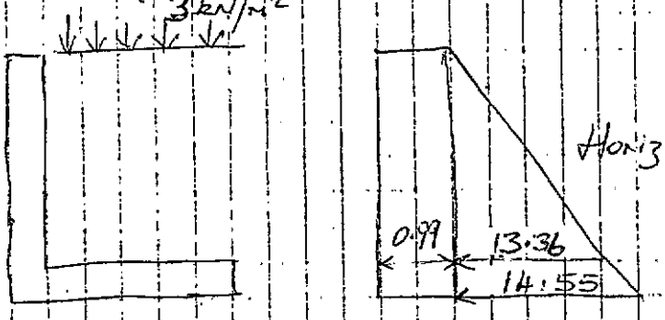
Date 2/4/91 Sheet No. 1

Members ref.	CALCULATIONS	OUTPUT

Refer Drg. No 91/1/1130/10



Backfill :- granular fill.
Coefficient of active pressure = .33
Moist density 1800 kg/m³ = 17.66 kN/m³
Assumed safe bearing capacity 120kN/m²
Coefficient of base friction 0.52
Assumed load-maximum 3kN/m² or 1.6m Path.



Horizontal pressure at 8 metres = .33 × 17.66 × 3
= 5.838

Vertical Loads and Moments about A.

		Load	Dist from A	Moment kNm
1.	Wall.	.2 × 2.3 × 23.6 = 10.86	.1	1.09 kNm
2.	Base.	.2 × 1.4 × 23.6 = 6.6	.7	4.62 kNm
3.	Backfill.	1.2 × 2.3 × 17.66 = 48.74	.8	39.99
4.	Uniform Surcharge.	3 × 1.6 = 4.8	.8	3.84
			TOTAL	48.5 kN
	Total Excluding Surcharge		TOTAL	44.7 kNm

Hasty Litho Printers Ltd 23510

D. & E. WALDRON & ASSOCIATES
ENGINEERING & ARCHITECTURAL CONSULTANTS
Knock, County Mayo. Tel.: (094) 88204. Fax: (094) 88204.
also
Currach, Castlebar, County Mayo. Telephone: (094) 22929.

Project GPT PROPERTY - Bluebell Ind Est.
Title Retaining Wall.
Name GPT.
Date 2/4/91 Sheet No. 2.

Members ref.	CALCULATIONS	OUTPUT

Horiz pressures and moments about A

	Load	Distance from A	Moment kNm
1. Backfill	$\frac{1}{2} \times 14.55 \times 2.5 = 18.19$	0.83	15.10
2. Surcharge	$0.99 \times 2.5 = 2.48$	1.25	3.09
		TOTAL	18.19 kNm

(1) Stability Check - Ultimate limit state
γ_f horiz. = 1.6
γ_f vert. = 0.9

(a) Overturning
(1) without surcharge
overturning moment $\frac{1}{2} \times 14.55 \times 2.5 \times \frac{2.5}{3} = 24.15$ kNm
restoring moment $0.9 \times 44.7 = 40.23$ kNm

(2) with surcharge.
overturning $1.6 \times 18.19 = 29.1$ kNm
restoring $0.9 \times 48.5 = 43.65$ kNm
=> Safe against overturning

(b) Sliding
(1) without surcharge.
sliding force = $18.19 \times 1.6 = 29.1$ kN

frictional resistance
$(10.86 + 6.6 + 48.74) \times .52 \times 0.9$
$= 30.93$ kN > 29.1 kN
=> sliding - OK

Note horiz force of backfill on opposite side which also resists sliding has not been taken into consideration.

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Project GPT Property

Title Retaining wall.

Name GPT.

Date 2/4/91 Sheet No. 3.

Members ref.	CALCULATIONS	OUTPUT

(2) Bearing Pressure.

S.L.S. Yf for vert. and horiz. forces = 1.0

Total Vertical load N = 71 kN.

B.M at centre of base:

$18.19 - 48.53 + 71 \times .7 = 19.39$ kNm.

Soil pressures under base $= \frac{N}{B} \pm \frac{6M}{B^2}$

$= \frac{71}{1.4} \pm \frac{6 \times 19.39}{(1.4)^2} = 50.7 \pm 59.36$

$\Rightarrow$ Max bearing pressure is 110 kN/m²

This is less than 120 allowable $\Rightarrow$ Below 0.K.

(3) Reinforcement.

Ult. B.M. at bottom wall.

Horizontal force

$= 1.6 \times 0.5 \times 0.3 \times 17$

$= 24.66$ kN

Max moment $= 24.66 \times (1.5 + \frac{1}{3})$

$= 21.37$ kNm

$\frac{M}{bd^2 f_{cu}} = \frac{21.37}{1000 \times 150^2 \times 25} = 0.038$

$\frac{100 A_s}{bd} = 0.45$

$A_s = 680$ mm²/m

Use T12 at 150 $A_s = 754$ mm²/m

DUBLIN COUNTY COUNCIL
12 APR 1991

Healy Litho Printers Ltd. 33010

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Project G.P.T. Property Bluebell Ind. Est.

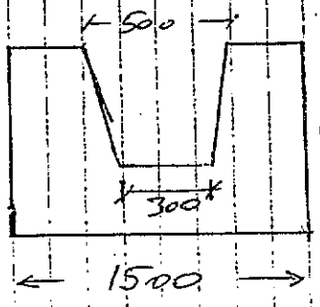
Title Foundation detail.

Name GPT.

Date 2/4/91 Sheet No. 4

Members ref.	CALCULATIONS	OUTPUT

Foundation.



Side column.

loading from 9 x 6 = 54 m² roof and imposed loading

1.2 kN/m² x 54 = 64.8 kN

Column .3 x .3 x 4 x 23.6 = 12.7 kN.

Beam. = 57.3 kN

134.8 kN

Imposed loading including snow = 81 kN

Design load 295.9 kN

Service load 215.8 kN.

Self wt Pad. 21.24 kN/m²

Area footing required = $\frac{215}{120 - 21.24}$

= 2.18 m²

1.5 x 1.5 footing = 2.25.

Design pressure = $\frac{295.9}{2.25}$ = 131.5 kN/m²

50 mm cover 2 rows bars d = 800

Max bm. 131.5 x (.600)² x 2 = 23.67 kNm

$\frac{M}{bd^2} = \frac{23.67}{1000(800)^2} = 0.0036$

$\frac{100\,A_s}{bd} = 0.4$

Minimum % reinforcement required Use T16 @ 200 c/c.

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91A/574

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Project GPT Property Bluebell Ind. Est.

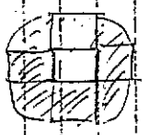
Title Foundation Detail.

Name GPT

Date 2/4/91 Sheet No. 5

Members ref. | CALCULATIONS | OUTPUT

Punching shear



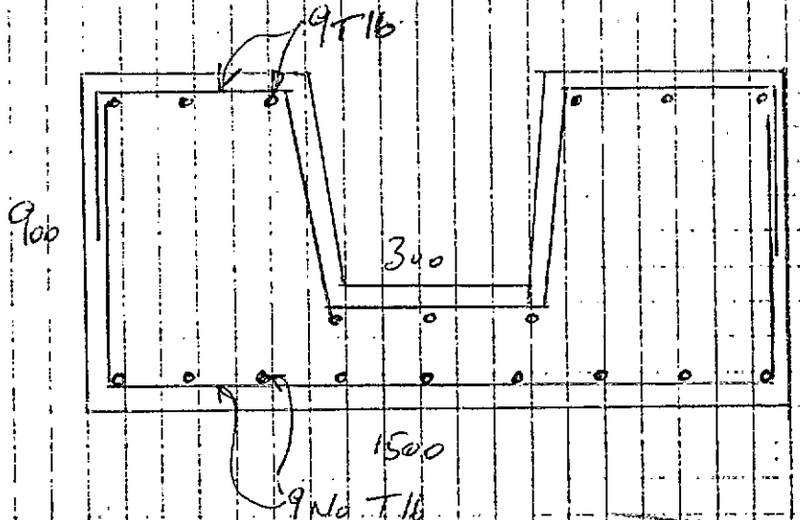
Punching area
$(13 \times \cdot 3) \times 5 + (\cdot 3^2 \times \pi) = 0.73 m^2$

Shaded perimeter.
$\cdot 3 \times 4 + 1 \cdot 3 \times 2 \times \pi = 3 \cdot 08$

$V_{punching} = 131.5 \times 0.73 = 95.995$

$v = \frac{99.99}{3080 \times 800} = 0.04$

Punching shear not a problem.



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Project G.P.T. Blue Bell Ind Est

Title FLOOR SLAB.

Name GPT.

Date 9/4/91 Sheet No. 1.

Members ref.	CALCULATIONS	OUTPUT

FLOOR SLAB.

5kN/m² live loading.

200 Self wt = 4.72 kN/m²

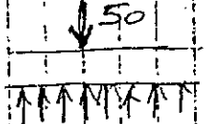
TOTAL Design load = 1.6 × 5 + 4.72 × 1.4
= 14.1 0 kN/m²

14.1 < bearing Pressure of ground
⇒ no vertical reinforcement required.

Point load design for 10 ton axle load
= 5 ton point load.
= 49 kN/load say 50 kN.

Ground to be compacted hardcore to minimum bearing pressure of 150 kN/m²

Consider 1m section of slab.

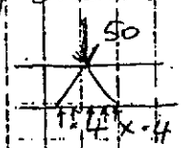


max b.m at centre = $\frac{50 \times .5}{8} + \frac{4.72 \times 1}{8} - \frac{150}{8}$

= 6.84 kNm.

M_u = 9.87 × 250 × 252 × 150
= 8.22 kNm.

Punching Shear



= [illegible]

$b = \frac{50}{1000 \times 150} = 0.33$

$\frac{100 A_s}{bd} = \frac{100 \times 252}{1000 \times 150} = 0.168$

$b_c \geq .43$ ⇒ O.K. for shear

Use 200 H16 @ width 1252 mm.

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Project G.P.T Bluebell Ind. Est.

Title GROUND BEAM.

Name GPT.

Date 24/4/91 Sheet No. 1

Members ref. | CALCULATIONS | OUTPUT

Ground Beam

4" block work 9" blockwork 6"

Beam

35 kN/m udl

6.0

Max B.M = $\frac{wl^2}{8}$ = 157.5 kNm

450

450

d' = 50

d = 400

$M_u = 0.15 \times 25 \times 275 \times (400)^2 + 0.72 \times 410 \times 628 \times 350$

= 229 kNm.

=> O.K for Beam.

$A_s = \frac{0.2 \times 25 \times 275 \times 400 + 0.72 \times 410 \times 628}{0.87 \times 410}$

= 2061.6 mm²

SHEAR.

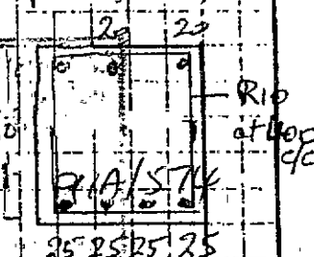
$v = \frac{V}{bd} = \frac{165 \times 10^3}{275 \times 400} = 1.5$

$\frac{100 A_s}{bd} = \frac{100 \times 1964}{275 \times 400} = 1.78$

Allowable Shear = 0.825 => Links required.

$\frac{v(v - v_c)}{0.87 f_y} = 0.15$ of mild steel.

Use R10 at 400 c/c $\frac{A_{sv}}{S_v} = 0.39 > 0.15$ O.K



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Project GPT - Bluebell.

Title Wall Beam.

Name GPT.

Date 8/4/91 Sheet No.

Members ref.	CALCULATIONS	OUTPUT

Height of wall - 6m.

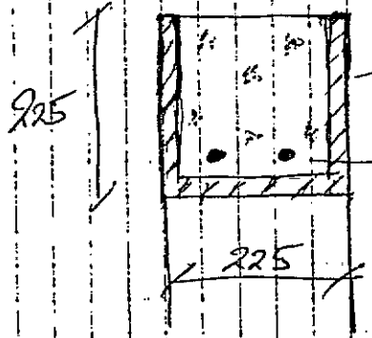
225 inner leaf (Cavity Block)
100 mm outer leaf

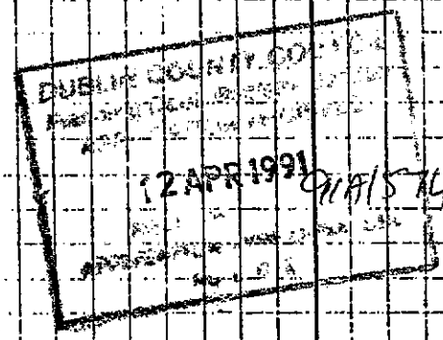
Maximum span of wall = 6m.

Height of wall = 6m > allowable height.

Provide beam with nominal reinforcement at 3m height

Use 225 x 225 beam with
2 No Y16 bars





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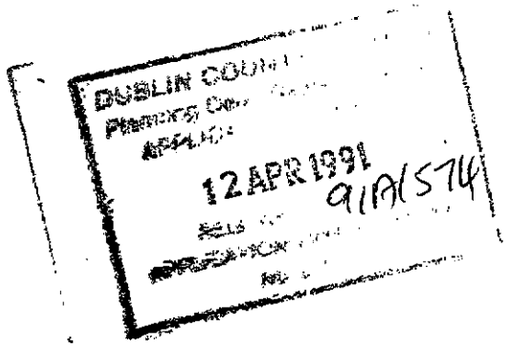
ORAN PRE-CAST LTD

DEERPARK INDUSTRIAL ESTATE
ORANMORE : CO. GALWAY
TELEPHONE: (091) 94537

Building at Blarney Industrial Estate
for G.P.T Ltd
Frame By Oran-Precast Ltd.

Column Design

Span 18.04
Length 30.48 M.
H1 6.48 M. to USB.



Loadings

(1) Dead

(a) Dead. KN

4° Beam	=	28.45
Slab	=	3.50
Conc. Surround	=	10.00
Roof Slab	=	8.10
Services	=	8.10
		58.20

(b) Imposed

.75 x 6 x 9 = 40.5

(2) Wind

Basic Wind Speed = 46 m/sec

$S_1 = 1$

$S_3 = 1$

$S_2 = .75$

Design Wind Speed = 34.50

∴ Dynamic Pressure = .75 kN/m²

Table Force Coeff. = 1

∴ Moment @ Base due to Wind $= \frac{.75 \times 7^2 \times 6}{2} = 110.25$

Moment is Shared by 2 Columns

∴ Moment/Col = 53.12 kNm

(3.) Add. Moment due to Slenderness

$$\frac{Nh}{1750}\left(\frac{l_e}{h}\right)^2\left(1 - \frac{.0035\, l_e}{h}\right)$$

$$= \frac{N(.300)}{1750}\left(\frac{6 \times 1.5}{.3}\right)^2\left(1 - \frac{.0035 \times 6 \times 1.5}{.30}\right)$$ .895

$= .13N$

3

Case I

	N kN	M kNm	
1.4 D.L	81.48		
1.6 L.L	64.80		
M wind		19.01	$\frac{N}{bl} = 1.62$
	146.28		$\frac{M}{bl^2} = .70$

Case II

1.2 D.L	69.84		$\frac{N}{bl} = 1.316$
1.2 L.L	48.60		
1.2 Wind		66.14	$\frac{M}{bl^2} = 3.01$
		15.39	
Wind		81.53	
	118.44		

Case III

			$\frac{M}{bl} = .58$
.9 D.L	52.38		
1.4 Wind		77.14	$\frac{N}{bl^2} = 3.10$
Wind		6.80	
		83.94	
	52.38		

4

From Table 6.9 CP 110 Part 2

$\frac{100 A_s}{bd} = 2.0$

$A_s = 1800 mm^2$

$\therefore$ 4 No 25 dia ϕ Bars Adequate

Stirrups

Horizontal

2 Vertical 8 mm R Links @ 200 Centres

2-9-74-4. 18.0000/ 6.00 100 / 0.750 / 0.257 / 1 1.675 / Stao 2 Page 0.

4 Deg., Beam in standard Range.

O/A Length = 18 Metres.
Bay Dimension = 6 Metres.

Loads are as follows:-

Imposed	= 0.75	KN/M²
6mm MONAD+G/FIBRE+9.5mm P/BD.	= 0.257	KN/M²
Purlin Weight	0.465	KN/M
Gutter Weight	1.419	KN/M

Gamma Factor Dead = 1.4

Gamma Factor Live 1.6

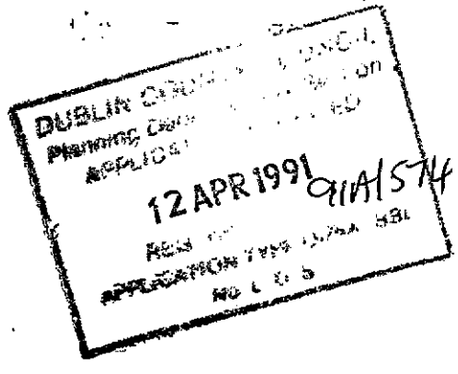
Note:- It is assumed that the imposed load includes an allowance for services of 0.25KN/M² applied at a level below the neutral axis. The gamma factor for live loads will still be applied and this load will be transfered to the compression flange by links extra to those required for shear.

Materials:-

Concrete Strength	= 40 N/MM²
Gamma Factor (Concrete)	=1.5
Link Steel FY.	= 250 N/MM²
Main Steel FY. (D<=16mm)	= 410 N/MM²
Main Steel FY. (D>16mm	= 410 N/MM²
Classification For Bond	= 2
Gamma Factor (Steel)	= 1.15

Design is in accordance with CP110:1972
steel in the compression flange is calculated as tension steel for handling at 24 hours with a gamma factor of 1.75.
This steel is not used as compression steel except to comply with clause 3.3.5.1 regarding neutral axis depth.

Durability and fire resistance:-
The columns supporting the beam will be designed as vertical cantilever or they will rely upon sheer walls for stability. The beam therefore carries a roof only and has no fire resistance requirment,
The condition of resistance requirment.
The condition of exposure is 'Mild' ; cover to main steel is 32 mm and max. link size is 10 mm. This leaves 22 mm. nominal cover. The beam is satis for concrete of 25 N/MM² characteristic strength or greater.



2-9-74-4. 18.0000/ 6.00 100 / 0.750 / 0.257 / 1 1.675 / Stao 2 Page 1.

Using Mould Ref 3 (See Drawing No. 4Deg / ool)
Dimension 'W' = 100 mm
Adjusting the Mould :- 'QO' = 1.180m 'Do' = 320.0MM.

Refer to calculating sheet 4/000/1

Dimension G = 0.411 Metres.
Dimension P = 1.311 Metres.
Dimension E = 0.6 Metres.
Leaving 4 Spaces of 1.675 Metres.
The number of purlins per unit = 10.

Converting to running horizontal dims.

X	W	M	V	D	H
0.300	0.00	22.8	151.8	341	0.00
0.410	7.99	38.0	136.5	349	1.84
1.718	17.85	202.4	123.4	440	3.22
3.389	19.55	374.1	99.8	557	4.81
5.060	19.55	503.0	73.9	674	4.81
6.731	19.55	588.1	47.4	791	4.81
8.401	17.33	628.4	20.2	907	3.10
9.000	0.00	629.2	0.0	945	0.00

M = The bending moement in KNM.
V = The shear in KN.
D = The depth of the section in MM.
H = The value of the load applied below the N/A IN KN.
W = The load at eachpurlin in KN.
All forces are factored.

The Unfactored self weight @ 23.6 KN/M³ = 51.84KN.

The Factored load from the gutter = 14.87KN.

The Factored Reaction = 152.99KN.

This made up as folows:-
Live 40.5 x 1.6 = 64.8 KN
Dead 63.0 x 1.4 = 88.2 KN

Handling Steel

The point of lift is at X = 3.960M
The moement here from self weight = 111.5KNM.
The depth of the section = 597MM
The steel required is 2- 20 mm DIA Bars.

2-9-74-4. 18.0000/ 6.00 100 / 0.750 / 0.257 / 1 1.675/ Stac 2 Page 21

Description of cage provided with curtailment details.

See Drawing No. 4Deg. /001.

Main Bars Provided:-
Bars Mark 'A' 2 No. 32 MM. DIA.
Bar Mark 'B' 1 No. 32 MM. DIA.
Bar Mark 'C' 1 No. 20 MM. DIA.
Bars Mark 'D' 2 No. 20 MM. DIA.
Bar Mark 'E' 1 No. 16 MM. DIA.

* Bars Mark 'D' and 'E' are not used for compression.

Section properties without regard to bond:-

	Bar 'B' (Stop near support)	Bar 'C'	Bar 'B' (Splice)	
X	1.6.	3.27272.		0.
AST.	1608.49.	2412.74.		0.
ASC.	0.	0.		0.
O/A Depth.	431.882.	548.851.		0.
EFF. Depth.	383.882.	500.851.		0.
Lever Arm.	338.812.	432.341..		0.
T=C (KN.).	573.463.	860.195.		0.
Depth To N/A.	101.093.	178.855..		0.
Moement (KNM)=	187.865.	362.458..		0.
M.R. (KNM)=	194.296.	371.899.		0.

	Critical Section	Bar 'C' (Stop Near Apex)	Bars 'D'
X	5.0596	7.2196	0
AST.	2726.9	2412.74	0
ASC.	0	0	0
O/A Depth	673.801	824.843	0
EFF. Depth	622.575	776.843	0
Lever Arm	539.887	708.333	0
T=C (KN.)	972.199	860.195	0
Depth To N/A	248.499	178.855	0
Moement (KNM)=	502.98	601.199	0
M.R. (KNM)=	524.886.	609.007	0

At Apex (Splice Not required)

EFF. Depth= 901 MM Depth to N/A= 179 MM
AST = 2412.7 MM² ASC = 0.0 MM² T=C= 860.2KN
Lever arm = 832.8 MM Moement of resistance = 716.4 KNM

Bar 'B' does not require a Lap

Bar 'C' does not require a Lap

Bar 'J' is welded to bars 'A' to provide anchordage bond.

4

2-9-74-[redacted] 18.0000/ 6.00 100 / 0.750 / 1 1.675 / Stao 2 Page 3.

Section Properties at Critical Points And Link Requirments.

Note:- Link C/C given on assembly Instructions will vary from those shown below as they are recalculated progessively from the support.

At Face of Support X (M) = 0.300

EFF. Depth= 293 MM Depth to N/A= 101 MM
AST = 1608.5 MM² ASC = 0.0 MM² T=c= 573.5KN
Lever arm= 247.9MM Moement of Resistance = 142.2 KNM

10 MM DIA. Links @ 219 MM C/C PROV. VS = 91.4 KN.
VC = 90.2 KN VR = VC + VS= 181,6 KN
V = 151. 8 KN Value of V From Hanger Load= 0.0 KN
Total Equivalent V = 151.8 KN

At Point Load 1 X (M) = 0.410

EFF. Depth= 301MM Depth To N/A= 101 MM
AST = 1608.5 MM² ASC = 0.0 MM² T=C= 573.5KN
Lever arm= 255.6 MM Moement of resistance = 146.6 KNM

8/MM DIA. Links @ 255 MM C/C Prov. VS = 58.4 KN
VC= 91.7 KN VR=VC+VS = 150.1 KN
V = 136.5 KN Value of V from hanger load = 0.9 KN
Total Equivalent V= 137.4 KN

Beyond point load 1 X (M) = 0.410

8 MM DIA. Links @ 225 MM C/C Prov. VS = 58.4 KN
VC = 91.7 KN VR = VC+VS= 150.1 KN
V =128.5 KN Value of V from hanger load = 0.9 KN
Total EQuivalent V = 129.4 KN

At point load 2 X (M) = 1.718

EFF. Depth = 392 MM Depth to N/A = 179 MM
AST = 2412.7 MM² ASC = 0.0 MM² T=C = 860.2KN
Lever Arm = 323.6 MM Moement of resistance = 278.4 KNM

10 MM DIA. Links @ 157 MM C/C Prov. VS = 85.1KN.
VC = 39.2 KN VR= VC+VS= 124.3 KN
V= 123.4 KN Value of V from hanger load = 1.0 KN
Total Equovalent V = 124.3 KN

Beyond Point Load 2 X (M) = 1.718

10 MM DIA Links @ 199 MM C/C Prov. VS = 67.3 KN
VC = 39.2 KN VR=VC+VS= 106.5 KN.
V = 105.5 KN Value of V from hanger load = 1.0 KN
Total Equivalent V= 106.5 KN

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At Point Load 3 x (M) = 3.389

EFF. Depth = 506 MM Depth to N/A = 245 MM
AST = 2726.9 MM² ASC = 0.0 MM² T=C= 966.5KN
Lever arm = 424.0 MM Moement of resistance = 409.7 KNM

10 MM DIA Links @ 314 MM C/C Prov. VS = 55.0 KN
VC = 50.6 KN VR = VC +VS = 105.6 KN
V= 99.8 KN Value of V from hanger load = 1.6 KN
Total Equivalent V= 101.4 KN

Beyond point load 3 X (M) = 3.389

10 MM DIA Links @ 314 MM C/C Prov. VS = 55.0 KN
VC = 50.6 KN VR= VC +VS = 105.6 KN
V= 80.3 KN Valueof V from hanger load = 1.6 KN
Total Eqiivalent V= 81.9 KN

At point Load 4 X (M) = 5.060

EFF. Depth = 623 MM Depth to N/A = 248 MM
AST = 2726.9 MM² ASC = 0.0 MM² T=C= 972.2KN
Lever arm= 539.9 MM Moement of resistance = 524.9 knm

10 MM DIA Links @ 314 MM C/C Prov. VS = 67.7 KN
VC= 62.3 KN VR= VC + VS= 130.0 KN
V = 73.9 KN Value of V from hanger load = 1.9 KN
Total Equivalent V= 75.9 KN

Beyond Point Load 4 X (M) = 5.060

10 MM DIA. Links @ 314 MM C/C Prov. VS = 67.7 KN
VC = 62.3 KN VR= VC+VS = 130.0 KN
V= 54.4 KN Value of V from hanger load = 1.9 KN
Total Equivalent V = 56.3 KN

At Point Load 5 X (M) = 6.731

EFF. Depth = 739 MM Depth to N/A = 248 MM
AST = 2726.9 MM2 ASC = 0.0 MM² T=C= 972.2 KN
Lever arm = 656.7 MM Moement of resistance = 638.5 KNM

10 MM DIA, Links @ 314 MM C/C Prov. VS = 80.4 KN

VC = 73.9 KN VR= VC +VS= 154.4 KN
V = 47.4 KN Value of V from hanger load = 2.3 KN
Total Equivalent V = 49.7 KN

Beyond Point Load 5 X (M) = 6.731

10 MM DIA. Links @ 314 MM C/C Prov. VS = 80.4 KN
VC= 73.9 KN VR=VC+VS= 154.4 KN
V = 27.8 KN Value of V from hanger load = 2.3 KN
Total Equivalent V = 30.1 KN

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At Point Load 6 X (M) = 8.401

EFF. Depth= 859 MM Depth to N/A = 179 MM
AST = 2412.7 MM² ASC = 0.0 MM² T=C= 860.2KN
Lever Arm = 791.0 mm Moement of resistance = 680.4 KNM

10 MM DIA. Links. @ 314 MM C/C Prov. VS = 93.5 KN
VC = 89.4 KN VR=VC+VS= 182.9 KN
V = 20.2 KN Value of V from hanger load = 2.5 KN
Total Equivalent V= 22.7 KN

Beyond Point Load 6 X (M) = 8.401

10 mm dia. Links @ 314 MM C/C Prov. VS = 93.5 KN
VC = 89.4 KN VR=VC+ VS = 182.9 KN
V= 2.9 KN Value of V from hanger load = 2.5 KN
Total Equivalent V= 5.4 KN.

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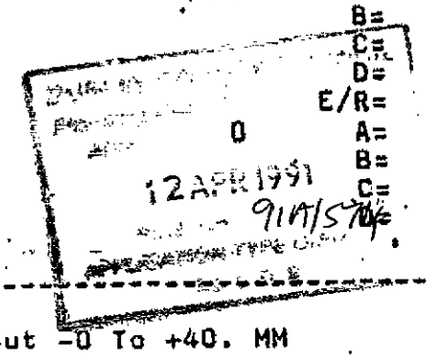
4 Deg. Beam in standard range

O/A Length= 18 M; Bay = 6 M; Web DIM. = 100 MM
Imposed Load = 0.75 KN/M²
Cladding:-6MM Monad + G / Fibre + 9.5MM P/BD. @ 0.257KN/M²
Special Services Load = 0 KN/M²

Bending Schedule
Main Bars

Bar Mark	Type & Size	No. Off	Cut Length MM	Shape Code		Bending Dims. MM.
A	Y 32	2	17860	20	A=	17860
A1	- 0	0	0	20	A=	0
B	Y 32	1	16490	20	A=	16487
B1	- 0	0	0	0	A=	0
B2	- 0	0	0	0	A=	0
C	Y 20	2	5265	20	A=	5265
C1	- 0	0	0	0	A=	0
D	Y 20	4	8955	20	A=	8951
D1	Y 20	2	1115	62	A=	556
					B=	77
E	Y 16	2	8805	20	A=	8801
E1	Y 16	1	725	62	A=	363
					B=	50
H	Y 16	4	895	38	A=	421
					B=	150
J	R 32	2	280	20	A=	280
K	R 10	4	8120	20	A=	8120
K1	R 10	2	600	20	A=	600
M	R 10	2	6305	20	A=	6301
M1	- 0	0	0	0	A=	0
N	- 0	0	0	0	A=	0
P	Y 16	2	1545	991	A=	658
					B=	162
					C=	128
					D=	18
					E/R=	65
Q	- 0	0	0	0	A=	0
					B=	0
					C=	0
						0



Cut Length Tolerance = -0 To + 20 MM , But -0 To +40. MM

Y Denotes High Yield Steel FY = 410 N/MM² For D<=16MM
FY = 410 N/MM² For D>16MM

R Denotes Mild Steel-------FY = 250 N/M²

No of 8MM Purlin Wires (475MM Long) Per Beam = 20
Weight of main bars in KG. BY DIA.:-

6	8	10	12	16	20	25	32
0.0	3.7	28.5	0.0	39.5	119.8	0.0	333.2

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4 Deg. Beam In Standard Range

O/A Length = 18 M; Bay = 6 M; Web DIM. = 100 MM
Imposed Load = 0.75 KN/M²
Cladding: - 6MM Monad +G/Fibre+9.5MM P/BD. @ 0.257KN/M²
Special Services Load = 0 KN/M2

Bending Schedule
Links

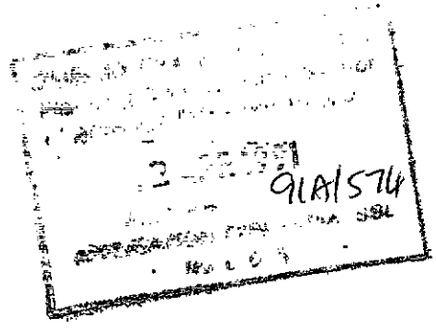
Bar Mark	Type & Size	No. Off	Cut Length MM	Shape Code	Bending Dims. MM
T 30	R 10	1	2310	992	A= 885
U 1	R 6	60	640	993	A= 296
					B= 50
					C= 60
					D= 61

Weight of links in KG. by DIA. :-

6	8	10	12	16	20	25	32
8.5	6.8	68.8	0.0	0.0	0.0	0.0	0.0

Total Weight of links = 84.1 KG.

Grand Total (Links and Bars) = 605.0 KG.



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4Deg. Beam is Standard range

D/A Length = 18 M; Bay=6 M; Web DIM. = 100 MM
Imposed Load = 0.75 KN/M²
Cladding:- 6MM Monad+G/Fibre+9.5MMP/BD. @ 0.257KN/M²
Special Services Load = 0 KN/M²

Assembly Dimensions For Cage

Link C/C MM	Running DIM. MM	Remarks
---	50	Bar(s) Mark A;D;J and H
100	100	Link Mark R 1
---	200	Bar(s) Mark E
100	300	Links Mark R 2 (In Pairs)
219	519	Links Mark R 3 (In Pairs)
231	750	Links Mark R 4 (In Pairs)
---	757	Bar(s) Mark B
---	880	Bar(s) Mark K
243	993	Links Mark S 1 (In Pairs)
57	1050	Links Mark S 2 (In Pairs)
	1177	Link Mark T 1 and link mark U1
127	1310	Link Mark T 2 and link mark U1
133	1448	Link Mark T 3 and link mark U1
138	1592	Link Mark T 4 and link mark U1
144	1743	Link Mark T 5 and link mark U1
151	1942	Link Mark T 6 and link mark U1
199	2155	Link Mark T 7 and link mark U1
213	2383	Link Mark T 8 and link mark U1
228	2613	Bar(s) Mark C
---	2629	Link Mark T 9 and link mark U1
246	2895	Link Mark T 10 and link mark U1
266	3186	Link Mark T 11 and link mark U1
291	3500	Link Mark T 12 and link mark U1
314	3814	Link Mark T 13 and link mark U1
314	3960	Lifting Hook Mark P.
---	4128	Link Mark T 14 and link mark U1
314	4442	Link Mark T 15 and link mark U1
314	4756	Link Mark T 16 and link mark U1
314	5070	Link Mark T 17 and link mark U1
314	5384	Link Mark T 18 and link mark U1
314	5698	Link Mark T 19 and link mark U1
314	5849	Bar(s) Mark M
---	6012	Link Mark T 20 and link mark U1
314	6326	Link Mark T 21 and link mark U1
314	6640	Link Mark T 22 and link mark U1
314	6954	Link Mark T 23 and link mark U1
314	7268	Link Mark T 24 and link mark u1
314	7582	Link Mark T 25 and link mark U1
314	7896	Link Mark T 26 and link mark U1
314	8210	Link Mark T 27 and link mark U1
314	8310	Bar(s) Mark D1
314	8524	Link Mark T 28 and link mark U1
---	8551	Bar(s) Mark E1
314	8700	Bar(s) Mark K1 and M1
---	8838	Link Mark T 29 and link mark U1
---	9000	Link Mark T 30 and link mark U1
314		
162	Repeat About Centre Line	

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4 Deg. Beam in standard range

O/A Length = 18 M; Bay = 6 M; Web DIM. = 100 MM
Imposed Load = 0.75 KN/M²
Cladding :-6MM Monad+G/Fibre+9.5MMP/BD. @ 0.257KN/M²
Special Services Load = 0 KN/M²

Cost Office Information

Volume of Concrete = 2.197m³
Strength Of Concrete= 40.000N/MM²

Steel Specification and Quantities

Main Steel :- FY= 410 N/MM² for D =16MM
FY= 410 N/MM² for D 16mm.
Link Steel :- FY= 250 N/MM²

Weights By DIA. In KG. :-

Main Bars :-

6	8	10	12	16	20	25	32
8.5	6.8	68.8	0.0	0.0	0.0	0.0	333.2

Total Weight In Bars = 521.0 KG.

Links:-

6	8	10	12	16	20	25	32
8.5	6.8	68.8	0.0	0.0	0.0	0.0	0.0

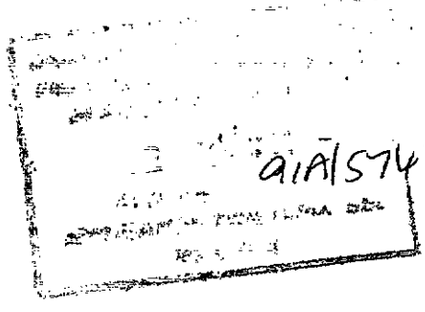
Total Weight in Links = 84.1 KG.

Grand Total Including Hooks and Purlin wires = 605.0 KG.

Weight of Beam = 5690.5 KG.

Number of Purlins per Beam = 10

The Beam is cast from Mould No. 3

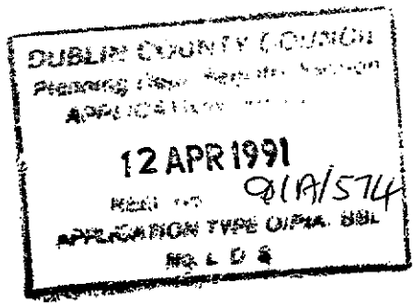


SPECIFICATION

FOR

REPLACEMENT BUILDING
FOR G.P.T., DUBLIN.

AT



BLUEBELL WORKS,
BLUEBELL INDUSTRIAL ESTATE,
CO. DUBLIN.

DOCUMENT PREPARED BY:

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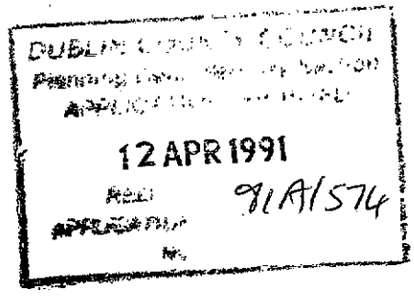
D E F I N I T I O N S

FOR THE PURPOSE OF THIS SPECIFICATION, THE TERM "CONTRACTOR" SHALL MEAN THE EMPLOYER AND/OR HIS SERVANTS OR AGENTS WHO MAY CARRY OUT THE WORKS UNDER THE DIRECTIVE OF THE EMPLOYER'S ENGINEER.



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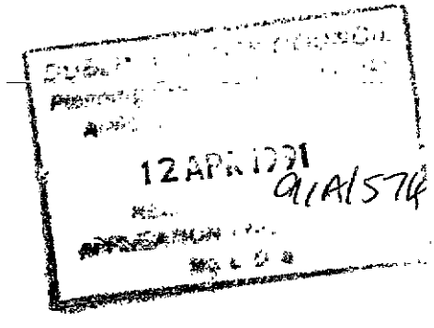


(1) PROTECTION, DRYING AND CLEANING THE WORKS: (Page 1)

1. PROTECTION OF THE WORK, FROM INCLEMENT WEATHER:

The Contractor shall provide and maintain adequate means of protection of the whole of the works from frost, snow, rain and hot sun, and any other inclement or weather injury or damage and shall make good or reinstate at his sole expense and to the satisfaction of the Architect any works so damaged.

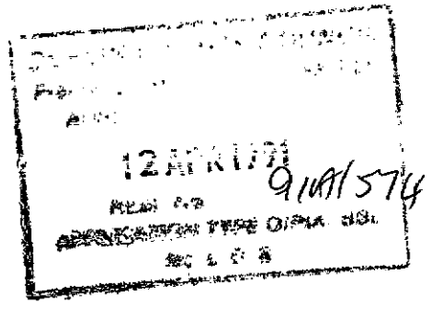
Works requiring the use of water shall not be executed when the temperature is 34 degrees F. on a rising thermometer or below 36 degrees F. on a falling thermometer, except when written permission and the approval of the Architect to the method to be employed. Nevertheless, should any work be damaged by frost, the work shall be pulled down and made good at the Contractor's expense.

2. DRYING THE WORKS:

Allow for providing all necessary equipment, fuel and attendance for drying and controlling the humidity of the works as and when required.

3. REMOVING RUBBLE AND CLEANING:

The Contractor shall remove all rubbish, debris, and surplus materials during the progress of the works and at completion. The Contractor shall clean out gutters and downpipes, clean metal work, sweep and clean all floors, clean all cisterns, tanks, sanitary fittings, glass inside and out, drains, paving etc., adjust and oil all hinges and ironmongery, remove protective rappings, touch up paint work and remove paint splashes, and perform all other sundry works to leave the whole of the works and site clean, tidy and fit for immediate occupation at completion. The Contractor shall be deemed to have quoted for the above in relation to all existing gutters, downpipes, sanitary fittings, glazing, ironmongery etc. which may be retained.



(2) SITE CLEARANCE AND DEMOLITION:

A. DEMOLITION:

Existing Storage and Light Maintenance Building shall be demolished and removed from site. Concrete surface which remains following demolition shall be as specified on "Site Finishes" in this Specification.

B. CLEARANCE:

All masonry and rubble shall be removed from the site and disposal of same shall be the responsibility of the Contractor. Existing yard to rear of proposed development shall be cleared of all rubble. The newly exposed area under the area of the outhouse to be demolished shall be prepared to receive re-inforced concrete slab.

(3a) EXCAVATION AND EARTHWORKS: (Page 3)

1. SURPLUS EXCAVATION AND FILLING:

All surplus excavation is to be removed off the site to a suitable tip which is determined by the Contractor. The relevant site levels is as shown on the Drawings and all excavation is to be carried to levels shown.

Filling is to be of an approved material.
The use of excavated material as fill will need the written approval of the Engineer.

2. UNSUITABLE MATERIAL:

Where unsuitable material is encountered it shall be removed off site.
Unsuitable foundation material shall be excavated and replaced with lean mix concrete as instructed by Engineer.

3. OVERSITE HARDCORE:

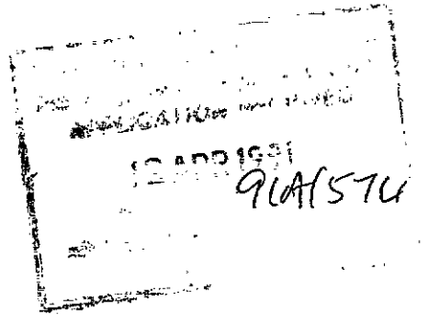
A layer of approved hardcore of minimum thickness 150 mm. shall be laid over the total construction area. The Contractor shall allow for consolidation with a roller of 10 ton rating or equivalent.

4. BOTTOM EXCAVATION:

The bottom of all trench and foundation excavation shall be inspected by the Engineer before covering.
All foundations shall be constructed on suitable soil strata only. The Contractor shall be deemed to have quoted for the construction of foundations from suitable soil strata.
Care shall be taken to protect foundation bases from inclement weather.
All foundation bottoms shall be truly horizontal on undisturbed ground.

5. DEWATERING:

The Contractor shall keep all excavation free from all water by suitable pumping or cut-off drains and channels.
Surface run-off shall be controlled and adequate precautions taken to ensure that trenches do not flood. The discovery of springs is to be brought to the immediate attention of the Architect.



6. PLANKING AND STRUTTING: (Page 4)

The Contractor is to allow for supports to all vertical faces of excavation and for removal prior to back-filling.

7. WORK SPACE:

The Contractor shall determine all additional work space which he feels necessary for carrying out works during excavation, if the area allotted by the Architect is insufficient.

(3b) SUBSTRUCTURE AND FLOORS: (Page 5)

1. FOUNDATIONS (CONCRETE):

All foundations shall be from suitable soil strata to be agreed with on-site inspection of Engineer following excavation.
The Contractor is to allow for blinding all foundations with 50 mm. layer of lean mix concrete.
Unsuitable material shall be replaced with lean mix concrete on the instructions of the Engineer. All concrete pads, columns and beams shall be of the size and shape shown on the Drawings. The Contractor shall allow for all necessary shuttering, supply and fixing of steel reinforcement and for supply and placing of all concrete to provide the sizes shown on Drawings.
The Engineer shall be informed when all concrete pours are to take place.

2. RISING WALLS:

Where ground beam construction is used the rising walls shall be constructed in concrete blocks as detailed.
Cavities shall be filled with lean mix concrete to within 250 mm. of D.P.C.

3. HARDCORE:

A minimum layer of 250 mm. of approved hardcore shall be laid and consolidated with approved roller to the underside of all concrete ground floors.

4. BACKFILLING:

All back-filled material around foundations shall be of approved hardcore and consolidated in 250 mm. layers.

5. DAMP-PROOF MEMBRANE:

The Contractor shall supply and lay 1000 gauge polythene damp-proof membrane underneath all ground floors and over suitably blinded and compacted hardcore (recommended blinding 50 mm. layer).
He shall allow for turning up the membrane to lay with the D.P.C. at walls. The minimum edge lap shall be 300 mm.
Care is to be taken to ensure that the membrane is not punctured during the pouring of concrete floors on top of same.

6. FLOOR: (Page 6)

Proposed floor level shall be to the level as on Drawing.

A 200 mm. thick concrete slab reinforced with A252 mesh shall be allowed for with power float finish throughout. Floor tolerance shall be strictly adhered to.

1. GENERAL:

Concrete shall be made with cement and fine aggregate and coarse aggregate and water. No other agent or ingredient shall be added to the concrete without the prior approval of the Engineer. The Contractor shall ensure that the use of any such approved additive will not adversely affect the strength, durability or appearance of the finished concrete works.

2. DEFINITIONS:

The following terms whenever used in this Specification shall be taken to have the meanings assigned to them below.

"The Engineer" shall mean as on front fly-sheet.

"Structural props" shall mean those components of the strutting to formwork which carry the weight of the concrete and which will be retained in position when the shuttering is removed from concrete faces.

"Satisfactory" shall mean to the satisfaction of the Engineer.

"Approved" or "Approval" shall mean approved by or approval of the Engineer in writing.

"Required" shall mean required by the terms of this Specification or any other contract document.

"B.S.", "I.S", and "C.P." shall mean the British Standard, Irish Standard and Code of Practice current at the date of the tender.

"Testing Authority" shall mean an organisation nominated by the Contractor and approved by the Engineer, fully equipped to carry out all tests and checks required by this Specification. It may be an independent firm or a laboratory set up and maintained by the Contractor or a combination of both.

3. RESPONSIBILITY:

No approval by the Engineer shall in any way relieve the Contractor of his responsibility for the quality of materials and the standard of workmanship in the finished works and for the strength and durability and appearance of the finished concrete works.

4. DEFECTIVE WORKS: (Page 8)

Where, in the opinion of the Engineer, any of the finished works or the materials or workmanship in any part of the works do not comply with all the relevant requirements of this Specification, that part of the works shall be classed as defective work.

All work classed as defective work shall be cut out and removed from the works and replaced to the satisfaction of the Engineer.

The extent of the work to be removed and the methods to be used in the removal and replacement of this work shall be in accordance with the Engineer's directions.

DESIGN:

5. REINFORCED CONCRETE:

The reinforced concrete works have been designed generally in accordance with the recommendations contained in C.P.114 and the Contractor shall comply with the recommendations made in Sections 2, 5, and 6, of this Code of Practice unless specifically excluded or modified hereafter.

6. UN-REINFORCED CONCRETE:

Un-reinforced concrete shall comply with all the relevant requirements of this Specification.

7. PRECAST CONCRETE:

See Precast Concrete Specification.

8. GENERAL:

All materials used in the works shall comply in all respects with the relevant I.S. or B.S. except for any deviations specifically authorised in subsequent clauses of this Specification.

9. CEMENT:

The cement shall be Portland cement complying with I.S. 1 or B.S. 12 or Portland blastfurnace cement complying with B.S. 146.

All cement shall be delivered to the site in bulk cement lorries of approved design or in sealed bags or in sealed tins.

10. AGGREGATE:

Aggregate shall comply with the recommendations of I.S.2 or B.S.882. In special circumstances a deviation from B.S. 882 in respect of grading or aggregate may be accepted subject to the prior approval of the Engineer.
For exposed or prestressed or sulphate resisting cement concretes, the salt content expressed as the percentage of sodium chloride on the dry weight of aggregate shall not exceed 0.1%

For other concretes, the total salt in a mix, (sodium chloride from aggregate plus calcium chloride from any additive) shall not exceed 2.0% of the weight of cement. For structural concrete grades the maximum size of fine aggregate shall be 5 mm. and the coarse aggregate shall be as listed in Clause 6.1.

Any special requirements in regard to size, type or colour of aggregate are specified in Clause 6.1

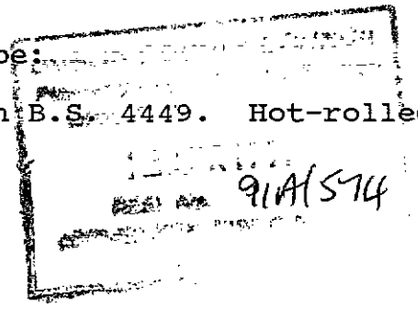
11. WATER:

The water to be used in the works shall be clean and free from all harmful matter in suspension or solution.

12. REINFORCEMENT:

Bars for reinforcement shall be:

Mild steel bars complying with B.S. 4449. Hot-rolled



high yield steel bars complying with B.S. 4449 or 4461. Mesh for reinforcement shall comply with B.S. 4483. All mesh shall be delivered in flat sheets.

14. STORAGE:

All cement shall be stored in a weatherproof shed of adequate size having a raised dry floor or in silos of approved design.

Aggregate shall be stored in approved containers or on hard paved self-draining areas with adequate dividing walls to prevent mixing of different types of aggregate.

Cement and aggregate shall be used in the order in which they are received on site and their storage shall be arranged to facilitate this procedure.

Reinforcement shall be stored on racks clear of the ground. Where materials are to be stored on suspended floors or roofs, the Contractors shall ensure that such storage will not overload or distort the structural frame.

All materials which have been damaged or are contaminated or have deteriorated or do not comply with the requirements of this Specification shall be rejected and shall be removed from the site immediately at the contractors expense.

TESTS

15. GENERAL:

All tests and checks carried out on site shall be in the presence of or as directed by the Engineer.

The Contractor shall send copies of all test results and check results to the Engineer.

The Contractor shall include in his rates for all tests specifically required in this Specification and not billed separately.

The Contractor will not be paid for any special tests called for by the Engineer in consequence of any failure by the Contractor to comply with this Specification.

The Contractor will be paid at rates to be agreed for any other special tests called for by the Engineer

unless the test results show failure by the Contractor to comply with this Specification.

17. READY MIXED CONCRETE:

Complete details of the mix proportions and workability shall be submitted to the Engineer for prior approval. Such approval shall only be given for as long as the Engineer is satisfied that the concrete complies with the Specification and recommendations of B.S. 1926.

The Engineer will require a slump test and may require test cubes from each truck load prior to the concrete being placed.
Each load shall be accompanied by a delivery note stamped with the time of mixing and stating the consignee and quantities of each material including water and additives.

18. CONCRETE TESTS:

All concrete test cubes shall be made and cured and tested amd the results recorded in accordance with the recommendations of B.S. 1881 unless specifically modified in subsequent clauses of the Specification. The testing shall be carried out by the Testing Authority.

The test specimen shall be 150 mm. cubes made in steel moulds of approved design.

Slump tests or compaction factor tests of the mixed concrete shall be carried out as directed by the Engineer.

19. LOAD TESTS:

Load tests of completed parts of the structure may be called for by the Engineer.

The standards of acceptance for structural load test as stipulated in Clauses 6.05 of B.S., C.P. 114 are specifically excluded from this Specification. The test procedure and the standard of acceptance will be specified by the Engineer.

Where the results of such tests indicate that any member or part of the structure does not comply with this Specification, that part of the structure shall be classed as defective work.

20. GENERAL:

Before construction commences, the Contractor shall notify the Engineer of the general method and system of formwork he proposes to use.

All joints in the formwork and joints between the formwork and previous work shall be sufficiently tight to prevent loss of liquid from the concrete through these joints.

Method of fixing and locating formwork which results in holes through the concrete section when the formwork is removed shall not be used.

No metal part of any device for maintaining formwork in the correct location shall remain permanently within the specified concrete cover to the main reinforcement.

The use of concrete retarders or similar preparations on the formwork surfaces shall be subject to the prior approval of the Engineer.

21. MORTICES, HOLES, CHASES IN CONCRETE:

Fixing blocks and ends of brackets and bars and bolts etc., shall be cast in the concrete at the time of placing and together with all mortices and holes and aparatures and chases and grooves etc., shall be accurately set in the formwork before the concrete is placed. No part of the concrete works shall be cut away for any such items or for any reason without the Engineer's approval.

The Contractor shall obtain from all sub-Contractors complete information of their requirements regarding conduits and pipes and fixing blocks or boxes and chases and holes and any other items to be cast or formed in concrete members, subject to the condition that failure of a sub-Contractor to supply such information shall not be allowed to delay the progress of the Contract.

The Contractor shall ensure that all Sub-Contractors are informed of his programme for the structural works at the commencement of the contract. He shall also ensure that the sub-Contractor's requirements relating to concrete members are approved by the Engineer before work is commenced.

At the commencement of the Contract, the Contractor shall supply all the Sub-Contractors with written copies of this section of the Specification.

22. PROPPING:

The vertical propping to all formwork shall be carried down sufficiently far to provide the necessary support without damage or overstress or displacement of any part of the construction.

Structural props shall be retained in position until new construction is sufficiently strong to support its own weight and any loads to be placed on it during the contract period.

Each member shall be supported by structural props which are spaced at not more than 3 metre centres in two directions.

All formwork to soffits shall be constructed so that it can be removed without disturbing the structural props.

23. FINAL PREPARATION:

The internal faces of the formwork may be coated with an approved preparation to prevent adhesion of the concrete to the forms, provided that the use of this preparation will not stain the surface of the finished concrete. None of this preparation shall be allowed to touch the reinforcement.
Immediately before the concrete is placed in any section of the formwork the interior of that section shall be completely cleared of all extraneous materials including water.

Each section of the formwork to structural members shall be inspected by the Engineer immediately before concrete is placed in that section.

24. EXPOSED CONCRETE FACES:

A high standard of surface finish is required on all structural concrete and it shall be without sandy patches, honey-combing, voids or similar blemishes. Concrete which will be exposed in the finished building and precast concrete shall,as well as having no sandy patches, honey-combing or similar defects, be without lips, fins or ledges. Only a very limited number of small blowholes will be acceptable and these shall be filled if so required. Joint marks from the shuttering shall only barely be visible and shall be located by agreement with the Architects. The Contractor's proposals for formwork and lining materials shall be subject to the Architect's approval but such approval shall not absolve the Contractor from his responsibility to produce the required results.

Formwork shall be properly supported and braced to avoid movement or deflection during concreting. Special care shall be taken in treating the formwork; in sealing joints in the formwork; in preventing the loss of cement grout; and in avoiding variable shutted surfaces absorbancy where concrete is to be exposed. Attention is drawn to the desirability of careful concrete mixing, placing and compaction in achieving these results. Should any part of the finished concrete reasonably be considered by the Engineers to be below the specified standard or to be such as to spoil the appearance, the Contractor shall cut out and re-construct such work including adjacent sound work, the replacement of which is necessary to give the required overall appearance.

CONSTRUCTION JOINTS AND EXPANSION JOINTS

25. POSITION OF CONSTRUCTION JOINTS:

The Contractor shall ensure that all construction joints are arranged to minimize the effect of shrinkage of the concrete. Generally the distance between construction joints in the walls and slabs shall not exceed 10 metres. The positions of all joints not shown on the drawings shall be agreed with the Engineer before work is commenced.

26. TREATMENT OF CONSTRUCTION JOINTS:

All construction joints other than horizontal joints shall be formed with proper stop-boards and stop-boards shall be fixed vertically unless otherwise directed.

At all construction joints the laitance shall be completely removed from the Contract face before adjacent section is concreted. Where an adjacent face of concrete is to be exposed in the finished works, treatment of the joint shall be terminated 15 mm. away from the face to be exposed. Horizontal joints at exposed faces shall be formed against a straight batten at least 15 mm. thick.

REINFORCEMENT

27. GENERAL:

Reinforcement bending schedules will be provided listing the cut length and diameter or size and bending dimensions and location of each bar in the works.

Before the bars are cut to length, the Contractor must check:

a) That reinforcement schedules are provided for each part of the structure sufficiently in advance of his concreting programme.

b) That each schedule includes the correct quantities of reinforcement as detailed on the drawing to which it relates.

c) That the grades of reinforcement given in each schedule corresponds to those shown on the relevant drawing.

The Engineer shall be notified of any errors disclosed by these checks.

28. BENDING:

All reinforcement bars shall be accurately shaped in a manner that will not injure the material to the details shown on the Drawings and bending schedules. Bars shall not be bent hot.

29. CLEANING:

All reinforcement shall be freed of all loose mill scale and thoroughly cleaned to remove all loose rust and oil and grease or other harmful matter immediately prior to being placed in position in the works.

30. PLACING:

All reinforcement shall be accurately placed with the correct cover anmd securely fixed in the positions shown on the Drawings by an approved method.

If the weight of mild-steel reinforcement used for approved chairs (excluding those listed on the bending schedules) exceeds 1% of the total weight of reinforcement fixed, the excess will be paid for at the appropriate rates in the Bill of Quantities.

No metal part of any device used for connecting bars or for maintaining reinforcement in the correct position against faces exposed to the elements, earth or water, shall remain permanently within the specified minimum concrete cover to the reinforcement.

31. WELDERS:

Welding of reinforcement shall only be carried out with the Engineer's approval.
Welding of cold-worked high tensile steel reinforcement will not be permitted.

1. TRANSPORTING:

Concrete shall be transported as quickly as possible from the mixer to its final position without segregation or loss of any of the ingredients.

All plant and equipment used for transporting concrete shall be kept clean. All containers used for transporting concrete shall be thoroughly washed out whenever mixing ceases.

2. PLACING:

Concrete shall be placed while still sufficiently plastic for adequate compaction.

At all times when reinforced concrete is being placed, a competent steel fixer shall be in continuous attendance on the Concreters to adjust and correct the position of any reinforcement which may be displaced.

The Contractor shall keep on site a complete record of the works showing the time and date when concrete is placed in each part of the works. This record shall be available at all times for inspection by the Engineer.

3. COMPACTING:

Concrete shall be thoroughly compacted during placing and shall be carefully worked around all reinforcement and embedded fixtures and into the sides and corners of the formwork.

Unless otherwise specified all structural concrete in the grades listed in Clause 6.1 shall be compacted by the use of suitable mechanical vibrators. Wherever possible internal vibrators shall be used.

4. CURING:

All surfaces of freshly placed structural concrete shall be covered with an approved material and cured by being kept moist for 7 days except that for concrete made with rapid hardening cement the minimum curing period shall be 3 days.

Soffit and side forms left in position will be regarded as effective in keeping those surfaces moist.

The Contractor shall notify the Engineer of the system and methods of curing he proposes to use for all structural concrete members before work is commenced.

5. RECORD OF TEMPERATURES:

A maximum and minimum thermometer of approved design shall be kept on site close to the works for measuring atmospheric shade temperature.

A daily record of maximum minimum morning and evening temperatures shall be maintained on site. The daily average temperature shall be calculated as the arithmetic mean of the maximum and minimum morning and evening temperatures recorded in each 24 hours.

STRIKING OF FORMWORK

6. GENERAL:

The structure shall not be distorted, damaged or overloaded in any way by the removal of the formwork from concrete members.

The responsibility for the safe removal of any part of the formwork or strutting shall rest with the Contractor.

7. CONCRETING IN COLD WEATHER:

The Contractor shall ensure that the concrete has a mimimum temperature of 5 degrees C (40 degrees F.) when placed and he shall take all necessary measures to ensure that the temperature of the placed concrete will not fall below 5 degrees C (40 degrees F.) for the specified curing period.

The Contractor shall notify the Engineer of the methods he proposes to use to maintain the specified concrete temperatures.

No frozen materials or materials containing ice shall be used for making concrete.

Any concrete damaged by frost shall be classed as defective work.

CONCRETE IN WATERTIGHT CONSTRUCTION

8. GENERAL:

All work so indicated on the Drawings shall be watertight and to requirements of C.P. 2007.

The Contractor shall include in his rates for such waterproof additives as he deems to be necessary, but the use of such additives shall be subject to the prior approval of the Engineer.

When in the opinion of the Engineer damp patches or leakage of water in the finished works are due to failure of the Contractor to comply with this Specification, the affected work shall be made good at the Contractor's expense.

FINISHING WORK TO CONCRETE FACES

9. GENERAL:

After removal of the formwork, no treatment of any kind other than that required for curing the concrete shall be applied to the concrete faces until they have been inspected by the Engineer.

TOLERANCES

10. SETTING OUT:

On Plan: At every structural level, the Contractor shall set out a horizontal reference grid in a form agreed with the Engineer.

The dimensions between intersections of the reference grids shall be within +/- 2mm. of dimensions given by or computed from the drawings.

The reference grid at each level shall be:

a) vertically above the corresponding grid on the level immediately below within a tolerance of 0.05% of the vertical distance between the levels considered, and
b) vertically above the corresponding grid on the lowest level within a tolerance of 0.05% of the vertical distance between the levels considered.

Levels: At the commencement of the Contract, the Contractor shall establish an approved bench mark. The bench mark shall be used as a site datum for all subsequent levelling on the Contract. At every structural level, the Contractor shall establish a datum level. This datum level shall be:

a) the computed height above the datum on the level immediately below within a tolerance of 0.05% of the height considered, and

b) the computed height from the bench mark within a tolerance of 0.05% of the height considered.

11. POSITION OF STRUCTURAL ELEMENTS:

Unless otherwise indicated on the Drawing, the centre lines of the finished structural elements at all points shall be within +/- 4mm. of their correct position on plan relative to the nearest reference grid line and within +/- 3 mm. of their correct level relative to the datum level.

STANDARD OF WORKMANSHIP

12. TOLERANCES:

Unless otherwise indicated on the Drawings, all dimensions of the precast units shall be within the tolerances given below:

All dimensions of 3 M. and over +/- 6 mm.

All dimensions of less than 3 M. +/- 3 mm.

Precast units shall also comply with each of the following tolerances which may modify these tolerances given above for particular conditions. Tolerances are not cumulative.

Permissible bow 6mm. in 3 M.

Permissible twist from any plane surface as defined by any three exterior corners, +/- 3 mm.

13. FLOOR SLAB:

The maximum permitted deviation from floor level as indicated on the Drawings to be plus or minus 12 mm. In any area when tested with a 3.00 metre straight edge the finished surface shall not show any departure from the true surface of more than plus or minus 5 mm.
At floor joints, the maximum deviation permitted between adjoining surfaces to be 5.0 mm.

14. SIZE OF STRUCTURAL ELEMENTS:

All sections of structural elements shall be within the tolerances below:

For dimensions exceeding 200 mm. but not exceeding 3M. +/-4 mm.

For dimensions exceeding 3M. +/- 8 mm.

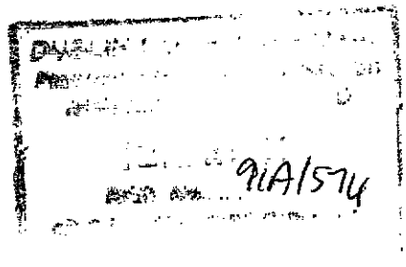
Surfaces exposed in the finished work shall not depart by more than 4 mm. from a 1.5 M. straight edge placed anywhere on the surface.

15. SIZE OF OPENINGS:

Where prefabricated components fit between struck concrete faces the following takes preference over anything specified above. Unless indicated otherwise on the Drawings, the tolerances between the struck concrete faces shall be:

For dimensions less than 3M +/- 4 mm.

For dimensions greater than 3 M. +/- 8 mm.



16. GENERAL:

The requirements of the Reinforced Concrete Specification shall apply to all the precast concrete work except where specifically modified by the clauses set out below.

DESIGN

17. PRECAST CONCRETE:

All per Oran Pre-cast Concrete.

CONCRETE

18. GROUT:

The grout used for filling cavities and ducts shall be made with Ordinary Portland Cement and water.
Subject to the approval of the Engineer admixtures may be used provided they do not contain chlorides or nitrates.

The grout shall be sufficiently fluid to ensure that all cavities are filled completely using a maximum pressure of 0.5N/mm2 (75 p.s.i.)

The w/c ratio of the grout shall not exceed 0.45

19. MORTAR:

The mortar used for dry-packing of joints shall be made of Ordinary Portland Cement, sand and water. The proportions of cement to sand shall be not less than 1:3 respectively by volume, but in any case shall be subject to the Engineer's approval. The mortar strength in compression, measured by 100 mm. test cubes, shall be not less than the strength specified for the units so joined.

20. PROGRAMME:

The Contractor shall ensure that units are stored and delivered to the site to suit construction requirements. This programme shall be agreed with the precast concrete necessary at the site of the works.

21. HANDLING:

Before removal from casting moulds, the concrete shall have attained sufficient strength to prevent any damage, distortion or overstressing of the precast units. The units shall incorporate all necessary hooks or other means for hoisting and movement consistent with the needs of the Contractor, all of which shall be subject to the Engineer's approval. The Contractor shall provide all lifting devices by way of cranage and tackle necessary at the site of the works.

22. PROTECTION:

In all circumstances of casting, storage, handling and final location, until the completion of the works, the precast units, shall be protected against mechanical damage from impact or staining from iron oxide or any source of discoloration. Units so damaged or so permanently stained will be rejected by the Engineer. In any matter concerning the acceptability of finished surfaces, the Architect's decision will be final.

23. IDENTIFICATION:

Immediately after removal from the casting beds, all units shall be marked in a manner and in a position approved by the Engineer.

24. APPROVAL:

All precast units shall be made available for checking of dimensions and surface finishes and shall be approved by the Engineer before erection.

25. ERECTION:

Prior to the commencement of erection, the Contractor shall submit for approval of the Engineer, details of his proposed arrangements for lifting and erecting units on site.

Units which require temporary fixing in position shall be rigidly propped at a suitable point to be indicated by the Engineer.

26. JOINTING:

All joint surfaces shall be thoroughly cleaned. Dry-packed mortar joints shall be formed by compacting the mortar in one inch layers with a steel tool.

Bedded mortar joints shall be formed by bedding the precast units on a firm layer of mortar. The units shall be levelled on steel shims located with the top surface just below the surface level of the mortar. The shims shall have a minimum cover of one inch of mortar or concrete. Thin bedded mortar joints shall be formed with a neat cement mortar spread evenly to form a thin bed just sufficient to take up any high points on the bedding surface. The location of shims shall be subject to the Engineer's approval.

1. CEMENT:

Cement shall comply with I.S. 20, 1964.

2. SAND:

Sand shall comply with B.S. 1200.

3. LIME:

The lime for the gauged mortar is to be thoroughly screened and slaked one month before use, from a local kiln familiar to the Contractor. Only good fresh lime is to be used and kept well protected from the weather. A proper stage is to be provided to receive the lime mortar when made. The mortar is in no case to be deposited on the ground.

If it is desired to use hydrated lime for building mortar, permission must be obtained in writing from the Architects before doing so.

The hydrated lime, if approved, must conform to I.S. 8: semi-hydraulic or non-hydraulic Class B calcium lime.

To improve workability, white (non hydraulic) hydrated limes may be soaked for twenty-four hours before use: grey (moderately hydraulic) hydrated limes two hours before use.

4. GAUGED MORTARS:

Gauged mortar shall be composed by measure of three parts sand as described above to one-quarter part approved lime well knocked up together. When this mixture is thoroughly made, it is to be gauged just before use with one part of cement.

5. CEMENT MORTAR:

Cement mortar, unless otherwise specified, shall be composed of three parts clean coarse sand as described to one part of cement carefully mixed and wetted in small quantities as required for immediate use. Cement mortar shall be used within 30 minutes after mixing.

6. MIXING MORTAR:

The materials for mortars shall be measured in proper gauge boxes on a clean boarded platform, being turned over twice dry and twice while the water is added through

a hose. Alternatively, mixing may be by means of an approved mechanical batch mixer. Additives shall not be used without the Architect's permission.

7. CONCRETE BLOCKWORK:

Concrete blocks shall conform to I.S. 20: 1964 and shall be steam cured, machine made, of uniform texture and shall be obtained from an approved supplier. Dimensions of blocks shall comply with B.S. 2028. 1968.

8. STRUCTURAL BLOCKWORK:

Structural solid concrete blocks shall comply with B.S. 2028; 1968 and shall be Type A blocks, of minimum density, 93.5 lbs. per cu.ft. of minimum average compressive strength of 1000 lbs. per sq. in., of minimum compressive strength of the lowest individual block of 800 lbs. per sq. in. and of maximum drying shrinkage of 0.06%

9. WORKMANSHIP:

Workmanship shall be in accordance with B.S. C.P. 111: 1964 and with B.S. C.P. 121. 101 - "Brickwork".

10. DELIVERY AND CARE ON SITE:

Bricks and blocks shall be unloaded by hand, not tipped, and stacked on a clean level surface under cover. Particular care shall be taken to keep facing blocks clean and dry.

11. SAMPLES:

Separate samples of each type of facing brick taken at random from the load, shall be deposited with and be pproved by the Architect's before being used and all subsequent deliveries shall be up to the standard of the samples approved.

12. CAVITY WALLS:

The two leaves of cavity walling shall be tied together with ties as specified, spaced 900 mm. apart horizontally and 450 mm. vertically and staggered.
At reveals and openings, the ties shall be spaced 225 mm. apart vertically.

Ties shall be carefully laid not to fall towards the inner leaf of the wall. The cavity shall be kept clean of mortar droppings by

lifting screeds or other means as the work proceeds and weepholes be formed over cavity gutters as directed.

13. CAVITY INSULATION:

Allow for 50 mm. aerotile cavity wall insulation between inner and outer leaves to laid in accordance with manufacturers instruction.

14. LAYING:

Brickwork and blockwork shall be carried up in a uniform manner and plumb and no one part shall exceed the height of another by more than 900 mm.
All perpends, quoins, etc. shall be built true and square and the whole structure properly bonded together and levelled round at each floor.

Faced work shall be kept perfectly clean, protected from rain and no rubbing down will be allowed. Scaffold boards shall be turned back during heavy rain and at night to avoid splashing.

15. JOINTING:

Vertical and horizontal joints shall be 12 mm. and no four courses shall raise more than 38 mm. above the same laid dry. All joints shall be pointed as later specified.

16. TESTING:

For the purpose of testing, conformity of blocks with this Specification, ten blocks shall be selected at random from every batch of 1000 blocks and tested at the Offices of Eolas in accordance with I.S. 20.

17. CERTIFICATES:

A manufacturers Certificate of the quality of the blocks shall be produced for all batches of blocks delivered to site.

18. BOND:

Brickwork shall be built in specified Bond. Half brick walls, blocks and casings to cavity walls, shall unless otherwise described, be built in stretcher bond. Bats shall not be used except where required for Bond. All faced work shall be laid in stretcher bond unless otherwise described.

19. FAREFACED BLOCKWORK: (Page 27)

Fare faced blockwork shall be in blocks selected from the bulk of even faces. Pointing of fare faced blockwork shall be with a neat recessed joint as the work proceeds. All cutting in fare faced blockwork shall be executed with a power saw.

20. DAMP PROOF COURSES:

Damp proof courses shall be "Pluvex" first quality damp proof course.
Rolls of damp proof course shall be stored in a reasonable temperature to avoid cracking.
All damp proof courses shall be lapped 150 mm minimum at angles and joints and shall be laid on a level bed of cement mortar and neatly pointed where exposed. All cracked felt, ends of rolls, etc., shall be rejected.

(7) PORTAL FRAME AND ROOF CLADDING: (Page 28)

All works shall be carried out by a Specialist Sub-Contractor who shall be to the approval of the Engineer.

All blockwork shall be securely bonded to stanchion to the approval of Engineer. Fixings shall be by stainless steel wall ties secured to pre-cast concrete columns by 'Abbey' slots.

1. PORTAL FRAMEAND EVE GUTTERS:

Pre-cast concrete frame, guttering door ope surrounds shall be as per Oran Pre-cast Specifiction attached.

2. PROPOSED ROOF CLADDING:

Roof cladding shall be as per Tegral Specification attached.

3. DOWNPIPES:

150 mm. downpipes draining to storm system as per Drainage Drawing shall be allowed for.

1. CEMENTS

Cement shall be ordinary Portland cement and shall comply with I.S.1. White and coloured cements shall comply with I.S. 1 and shall be obtained from an approved manufacturer.

2. LIME PUTTY

Lime putty shall be prepared from hydrated lime complying with B.S. 890, Class A.

Hydrated lime shall be added to water, stirred to a creamy consistency and left to mature at least 16 hours before use.

Alternatively, ready slaked lime may be obtained fron an approved manufacturer.

The lime putty shall be protected from drying out.

3. SANDS

Sands for Gypsum plaster mixes shall comply with B.S. 1198, Table 1, Type 1.

Sand for cement and lime mixes shall comply with B.S. 1199, Table 1.

Sand for use with white Portland cement shall be silver sand and that for use in coloured cement mixes shall be of a suitable colour.

4. PLASTICISER

Plasticisers shall be used only with the approval of the Architect. They shall be of the resin ester type and shall be used in accordance with the manufacturer's instructions.

5. WATER

Water shall be obtained from the mains and shall be kept free from impurities.

6. STORAGE OF MATERIALS

All plasters, lime and cement shall be stored in a properly roofed weatherproof, dry, well ventilated shed, used exclusively for this purpose, with a wood floor not less than 150 mm clear above the earth.

The different types of plaster shall be separated by partitions and arranged so that they may be used in order of delivery. Stocks shall be completely turned over by use in periods under three months. No Gypsum plaster shall be used after three months from the date of its manufacture unless it is tested and proved to be in good condition to the Architect's satisfaction. All sands shall be stored separately, according to type on clean, hard, dry standings and shall be protected from contamination.

7. PREPARATION OF SURFACES

Surfaces to receive plastering shall be dry brushed to remove all loose particles, dust, laitance, efflorescence, etc., and any projecting fins on concrete surfaces shall be hacked off. All traces of mould oil shall be removed from concrete surfaces by scrubbing with water containing detergent and rinsing with fresh water.

Surfaces shall be wetted and re-wetted as required to equalise suction before the first coat of plaster is applied. In particular, dense hard concrete surfaces shall be wetted and re-wetted as required before plaster is applied.

8. SCUDDING

Scudding shall consist of one volume of Portland cement and two volumes of clean, sharp, coarse sand prepared as a thick slurry with P.V.A. or other approved additive and hand thrown on to wall. It shall be left as thrown, but wetted with a fine spray when necessary to ensure proper setting.

9. DUBBING OUT

Dubbing out shall be in the same mix as the subsequent coat and shall not exceed 10 mm. thick in one application.

10. SCUD AND TWO COATS CEMENT PLASTERING:

The following shall be applied to the exterior of the building:

First Coat - Scud as described

Second Coat - Float coat composed of cement/sand 1 : 3 by volume with keyed finish.

Third Coat - To be composed of cement/sand 1 : 3 by volume. Finish from a wood float to a uniform shade and to a perfectly plumb and level surface showing no joinings.

11. FROSTY WEATHER:

Plastering shall not be started or continued when the air temperature falls below 3 degrees centigrade unless precautions are taken to raise and maintain the temperature of the air, materials and structure at not less than the above temperature until completion of hydration.

Plastering shall be protected from the frost, extreme drying conditions and continued dampness.

12. MIXING OF MATERIALS

All materials shall be thoroughly mixed in the proportions described. No mixes of plasters other than those described shall be used.

(9) SITE DRAINAGE: (Page 32)

1. DRAINAGE:

The installation of storm drainage system to drain proposed portal frame roof as outlined on Drainage Drawing together with fill to retaining wall.

2. WORKMANSHIP:

All workmanship shall be in accordance with B.S. C.P. 301.

3. UP.V.C. PIPES AND FITTINGS:

These are to comply with B.S. 4660, 1971.

4. CONCRETE PIPES:

These are to comply with relevant Irish Standards.

5. STEP IRONS:

These are to comply with B.S. 1247.

6. MANHOLE COVERS:

All manhole covers are to be heavy duty, 10 ton covers to B.S. 497.

7. EXCAVATION:

Excavation for all drainage trenches to be in straight lines to the agreed depth on site and gradient as shown on the Drawings, all to be in accordance with B.S. C.P. 301.

Trench excavation exceeding 7 metres in length shall not be attempted without the prior approval of the Engineer.

All excavation shall be strutted during the course of pipe laying to prevent embankment slippage.

8. BACKFILLING (Page 33)

Extreme care is to be taken when backfilling all pipes and trenches. Only selected fill will be allowed to suit site conditions. Where surface of pipes are within 600 mm. of finished floor or site, Contractor shall allow for reinforced concrete to same, minimum of 150 mm.

9. LAYING OF PIPES:

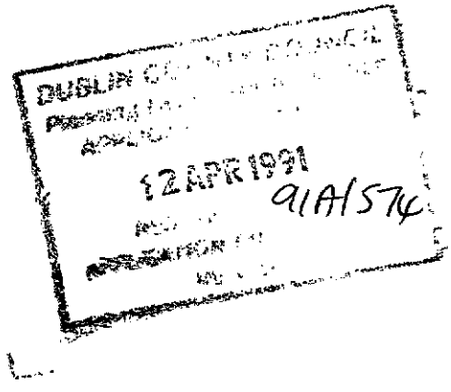
U P.V.C. pipes to be laid in accordance with manufacturers instructions.

10. MANHOLES:

All manholes shall have internal dimensions 1,000 mm. X 750 mm. All manholes shall have 150 mm. thick 30 N. concrete base with fabric mesh. They shall have 225 mm. solid concrete block walls plastered with water-proofed plaster on the inside. All channels shall be formed in half round channel pipe and shall extent for the full length of the manhole.

The benching shall rise vertically from the top edge of the channel pipe to a height of not less than that of the outlet and be sloped upwards, hence to meet the wall of the manhole at a gradient of 1:12. It should be floated to a smooth, hard surface with a coat of 1:12 cement mortar, laid monoithically with a benching.
The top of the vertical part of the benching should be rounded off to a radius of 25 mm.

In the case of branch drains, the benching should be so stepped around the channel branches as to guide the flow of sewage in the desired direction. The invert of branch drains entering a manhole should be above the horizontal diameter of the main channel.



(10) SITE FINISHES: (Page 34)

1. The Contractor shall allow for the the restoration of the site surfaces disturbed during the demolition and re-construction of the proposed building and laying of the proposed drainage system.

(a) RESTORATION OF MACADUM SURFACE:

Cut back and form even edge on existing surface which has been damaged, soiled or stained from the above works to form straight edge on macadum.

Remove damaged macadum to hardcore level. Re-blind and re-surface hardcore provided 300 mm. hardcore layer exists, allowing for gradient away from buildings. Compact and lay 2" of compacted macadum. Any soft spots shall be removed and replaced with suitable hardcore material to Engineer's approval.

NOTE: Macadum shall be in accordance with B.S.1621; 1961.

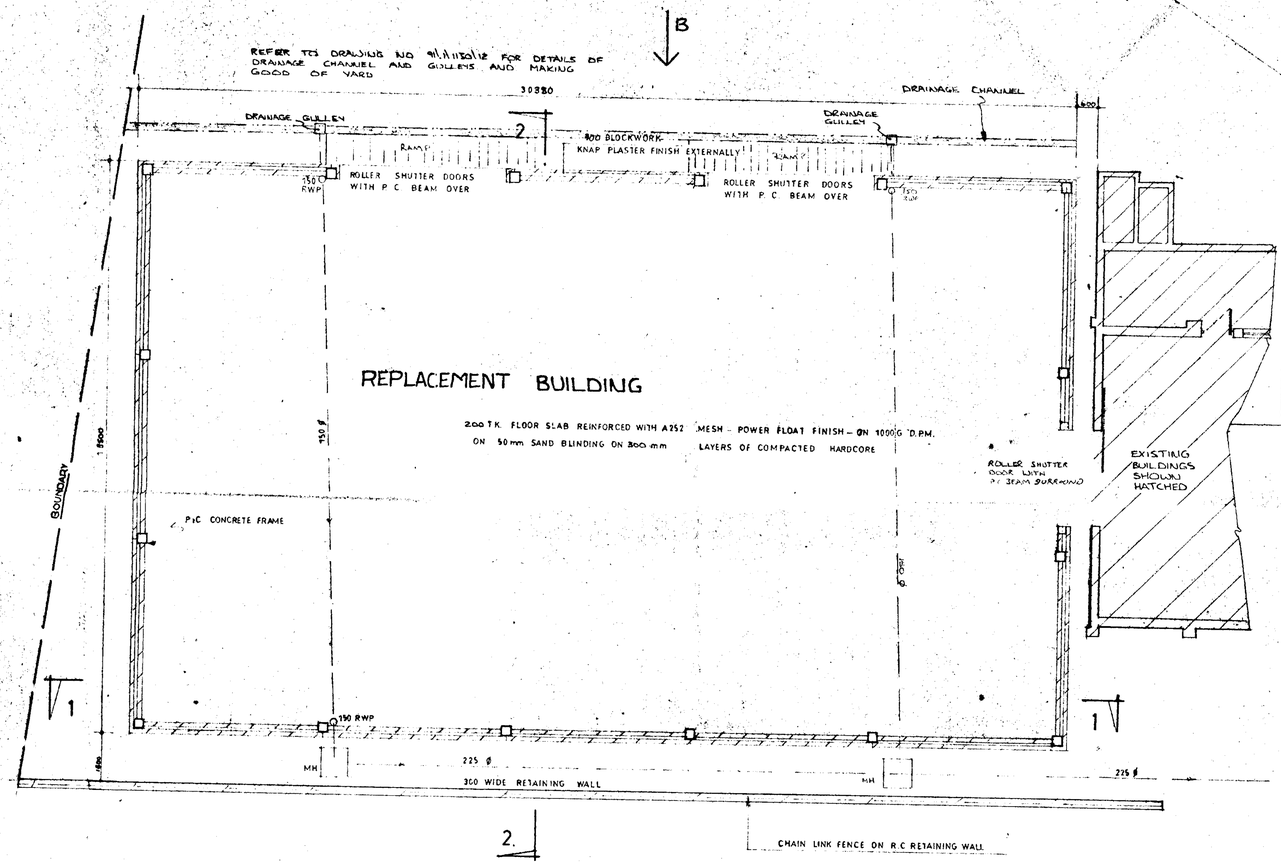
(b) RESTORATION OF CONCRETE SURFACE:

Cut back to form edge on existing surface which has not been damaged, soiled or stained from the works described above to form straight edge on concrete.

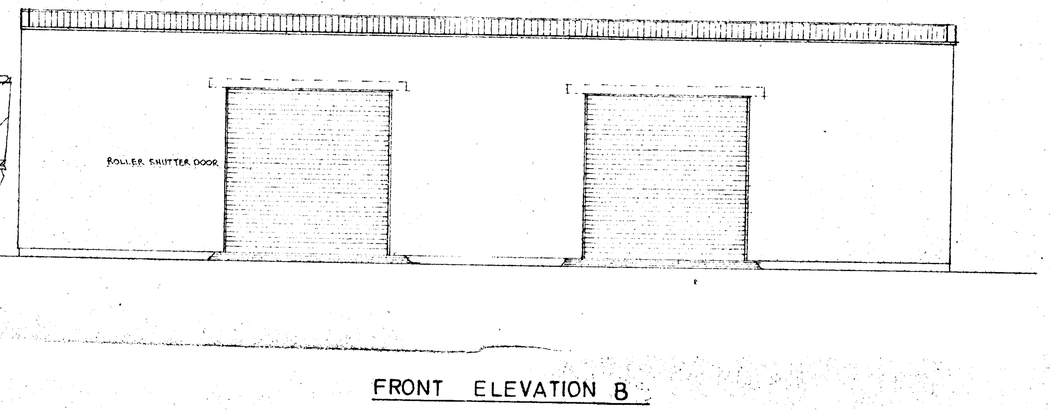
Remove damaged concrete to hardcore level. Re-blind and re-surface hardcore provided 300 mm. hardcore layer exists, allowing for grading away from proposed building and/or existing building.

Existing concrete floor surface to original building being demolished, shall be removed and re-laid to grade from that of original yard surface to new proposed surface water drainage channel.
Refer to Drainage Drawings.
New concrete slabs shall be 200 mm. thick, 25 N. concrete reinforced with A252 mesh, laid on suitably compacted hardcore layer, having a minimum depth of 300 mm.
Any soft spots shall be removed and filled with suitable hardcore to Engineer's instructions.

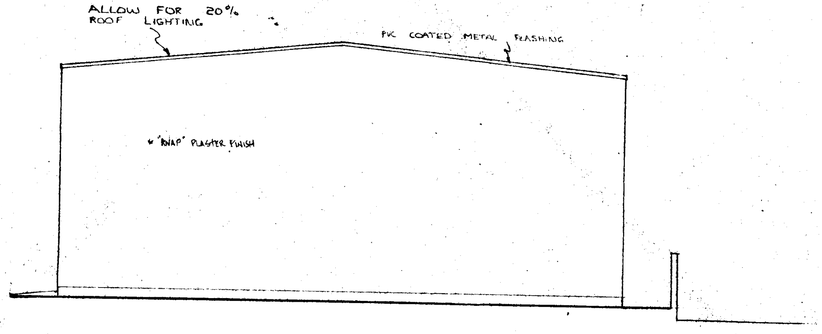
NOTES
1. FIGURED DIMENSIONS ONLY TO BE TAKEN FROM THIS DRAWING.
2. ALL DIMENSIONS TO BE CHECKED ON SITE.
3. ENGINEER TO BE INFORMED IMMEDIATELY OF ANY DISCREPANCIES BEFORE WORK PROCEEDS.



PLAN



FRONT ELEVATION B



SIDE ELEVATION A

NOTE: REFER TO DRAWING NO 9111130/08 FOR POSITION OF BUILDING ON SITE LAYOUT MAP. THIS BUILDING - BUILDING NO 3

No.	Revision	Date

Client
GPT PLANT & TOOL HIRE LTD.

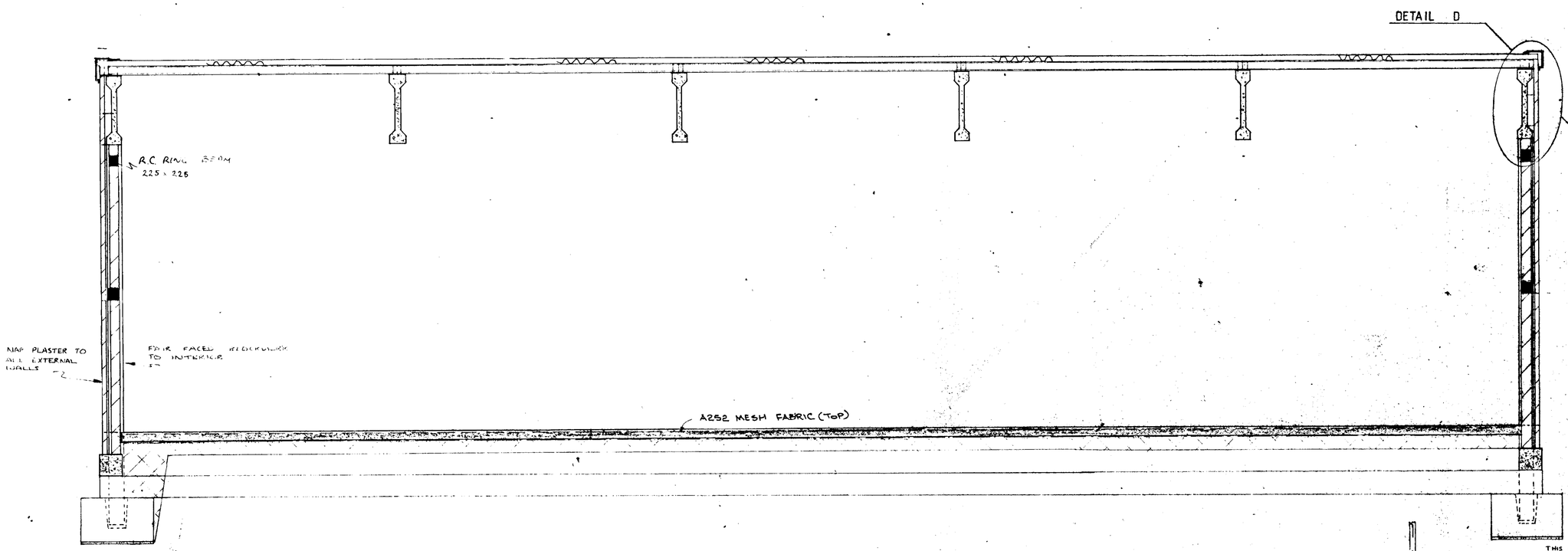
Project
PROPOSED REPLACEMENT BUILDING

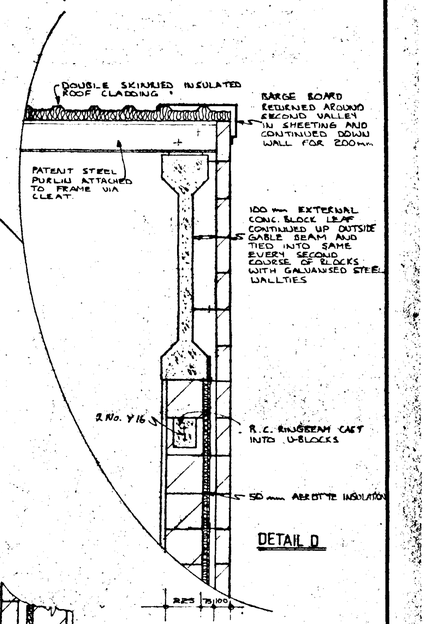
D. & E. WALDRON & ASSOCIATES
ENGINEERING & ARCHITECTURAL CONSULTANTS
KNOCK, Co. MAYO. Tel: 094-88204 Fax: 094-88610
also
Currach, Castlebar, Co. Mayo Telephone 094-22929

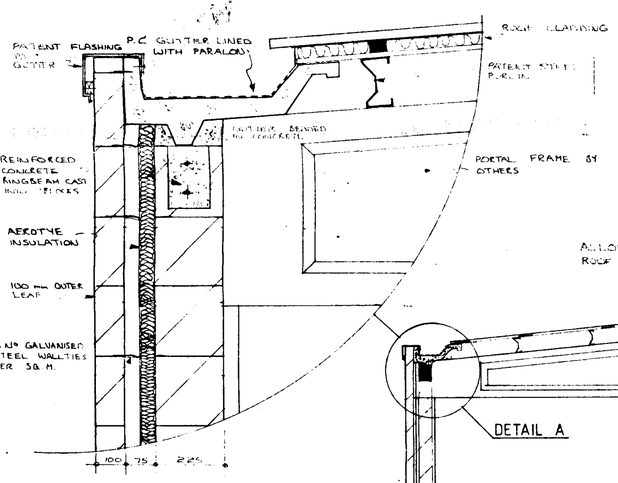
Title
PLAN
ELEVATIONS

Scale 1/100
Date Apr. 91
Drawn PJ
Drawing No. 91/1130/01

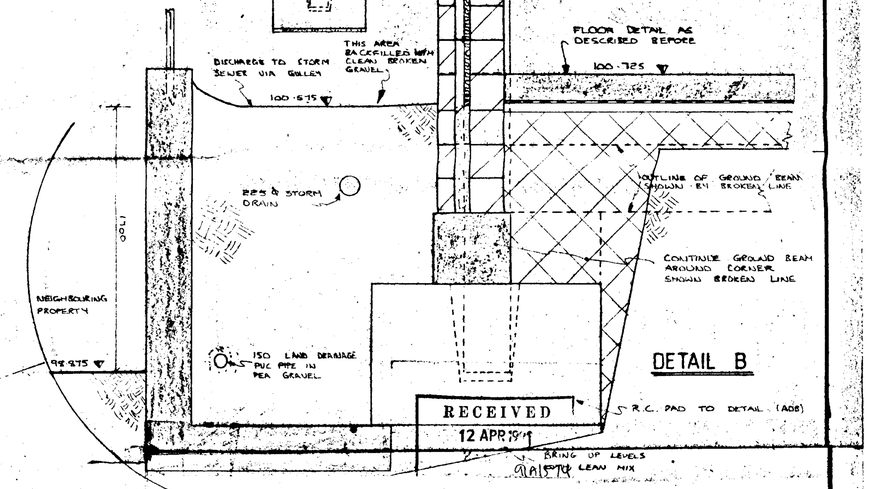
NOTE
WHERE OTHERWISE NOT STATED ALL CONCRETE SHALL BE 30 NEWTON

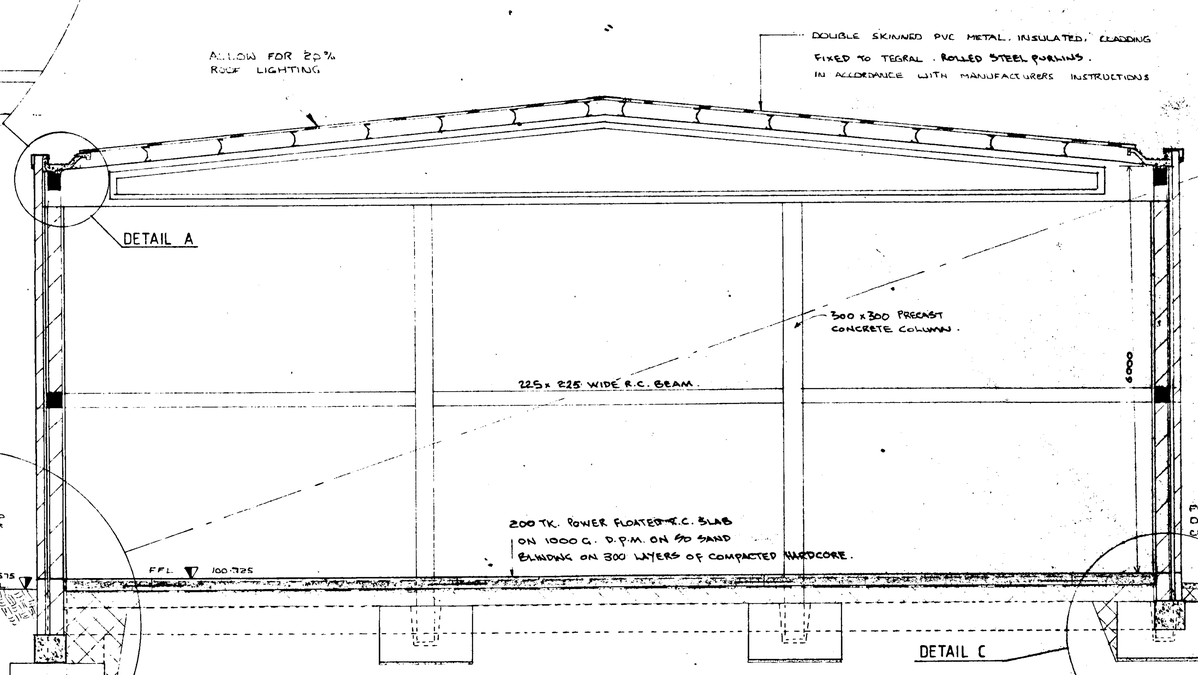


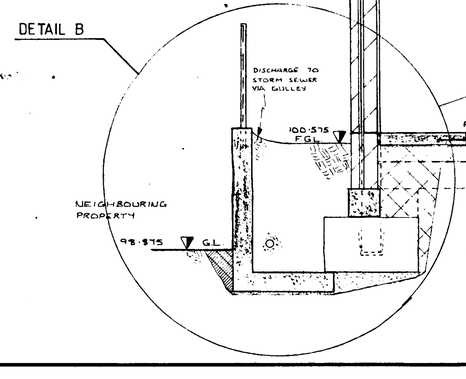


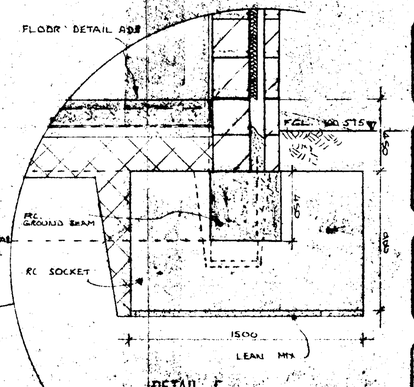


1—1









2—2

No.	Revision	Date

Client
GPT PLANT & TOOL HIRE LTD.

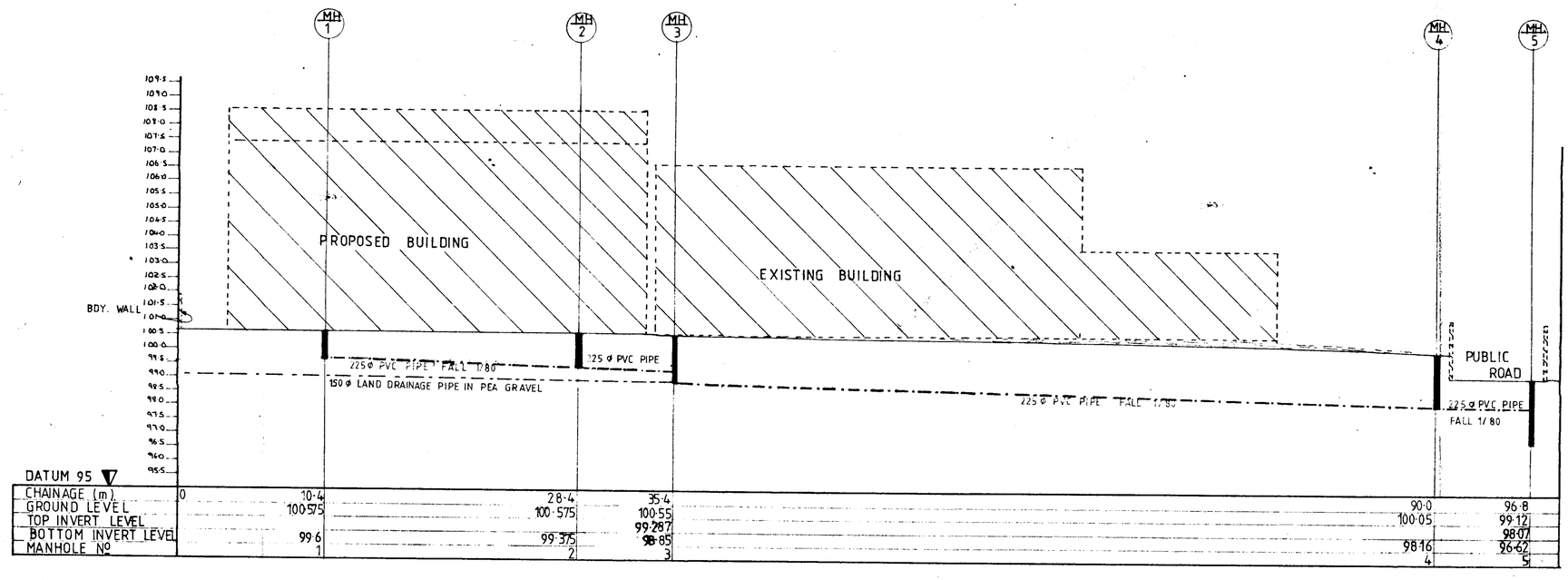
Project
PROPOSED REPLACEMENT BUILDING

D.& E WALDRON & ASSOCIATES
ENGINEERING & ARCHITECTURAL CONSULTANTS
KNOCK, Co. MAYO. Tel: 094-88204 Fax: 094-88610
Currach, Castlebar, Co. Mayo Telephone 094-22928

Title
SECTIONS
DETAILS

Scale 1/20 1/10 1/50
Date Apr 91
Drawn PB
Drawing No. 91/1/1130/03

JOH 12980



CHAINAGE (m)	0	10·4	28·4	35·4	90·0	96·8
GROUND LEVEL		100·575	100·575	100·55	100·05	99·12
TOP INVERT LEVEL		99·6	99·375	99·287	98·16	98·07
BOTTOM INVERT LEVEL				98·85		96·62
MANHOLE Nº		1	2	3	4	5

SECTION THROUGH STORM SEWER AT CHAINAGE 1·5m TRANSVERSE.

No.	Revision	Date

Client
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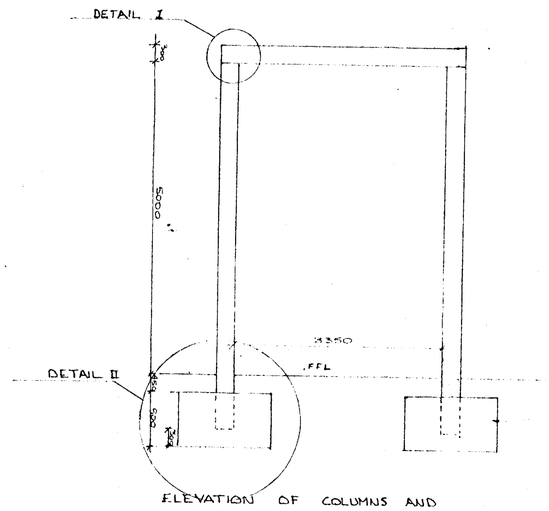
KNOCK, Co. MAYO. Tel: 094-88204 Fax: 094-88610
also
Currach, Castlebar, Co. Mayo Telephone 094-22929

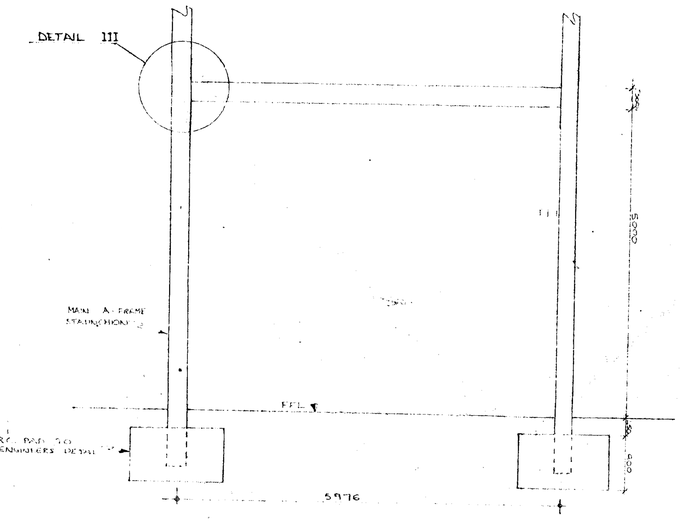
Title
SECTION THROUGH DRAINAGE

Scale 1/20 (HORZ 1/200 VERT 1/100)
Date Apr 91
Drawn PB
Drawing No. 91/17 1130/10

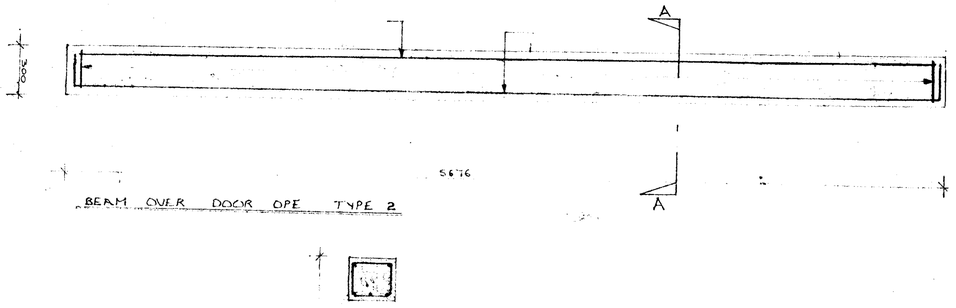
JOH 14640



ELEVATION OF COLUMNS AND BEAM AT DOOR OPE. (N: 1 ON PLAN.)

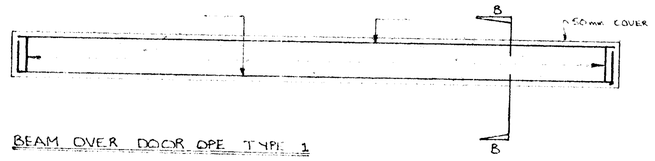


ELEVATION OF COLUMNS AND BEAM AT DOOR OPE. N: 2 ON PLAN



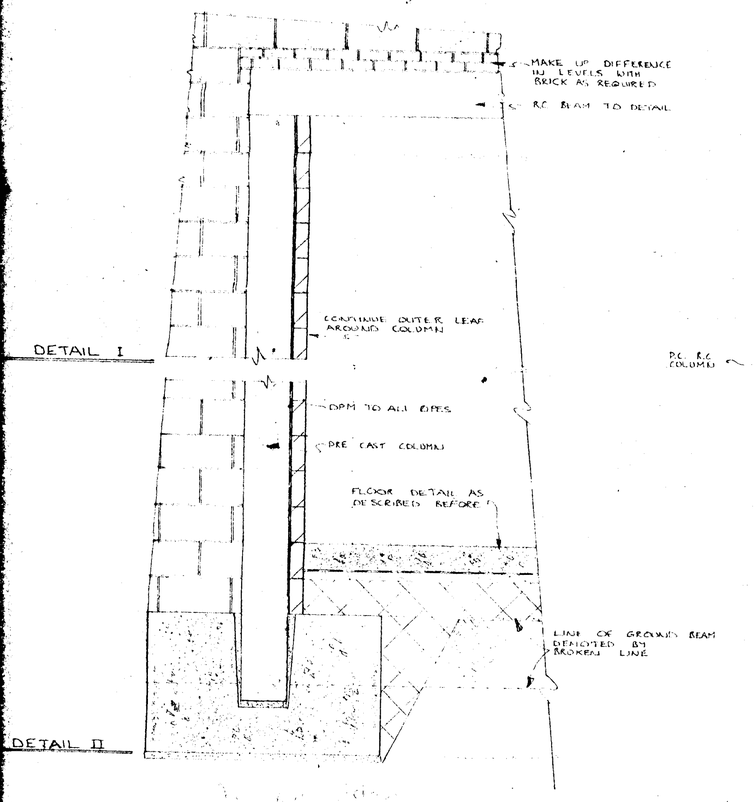
BEAM OVER DOOR OPE TYPE 2

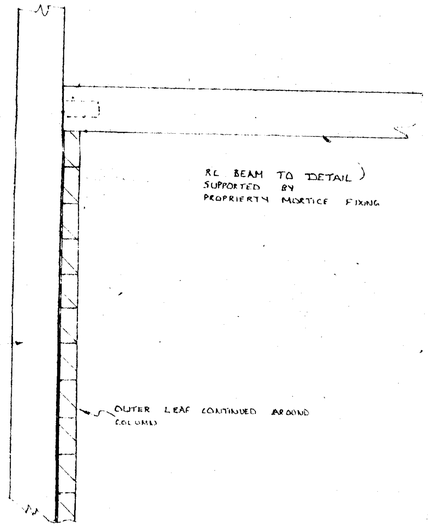
SECTION A-A



BEAM OVER DOOR OPE TYPE 1

SECTION B-B





Note Manufacturers and specifications to follow.

RECEIVED
12 APR 1991
Reg. Sec. 91/15.74

No.	Revision	Date

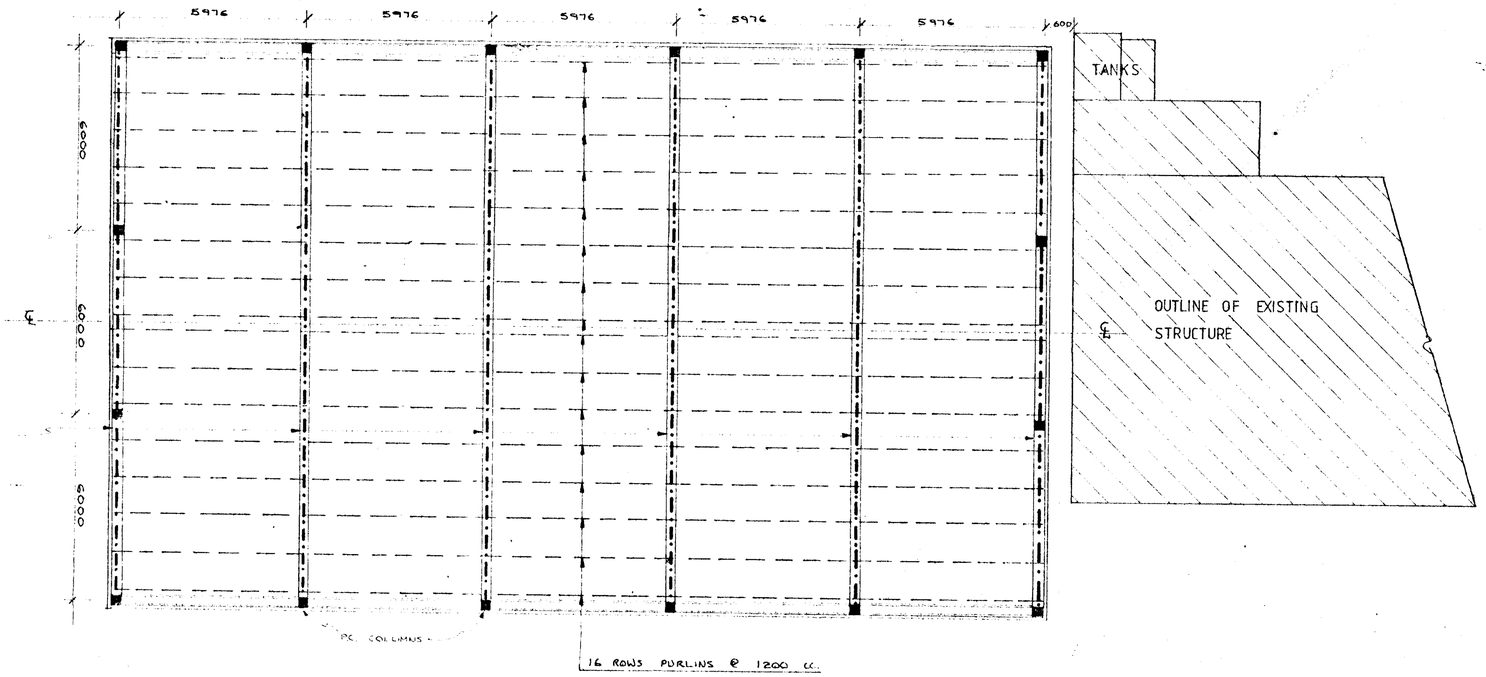
Client
GPT PLANT AND TOOL HIRE LTD

Project
PROPOSED REPLACEMENT BUILDING

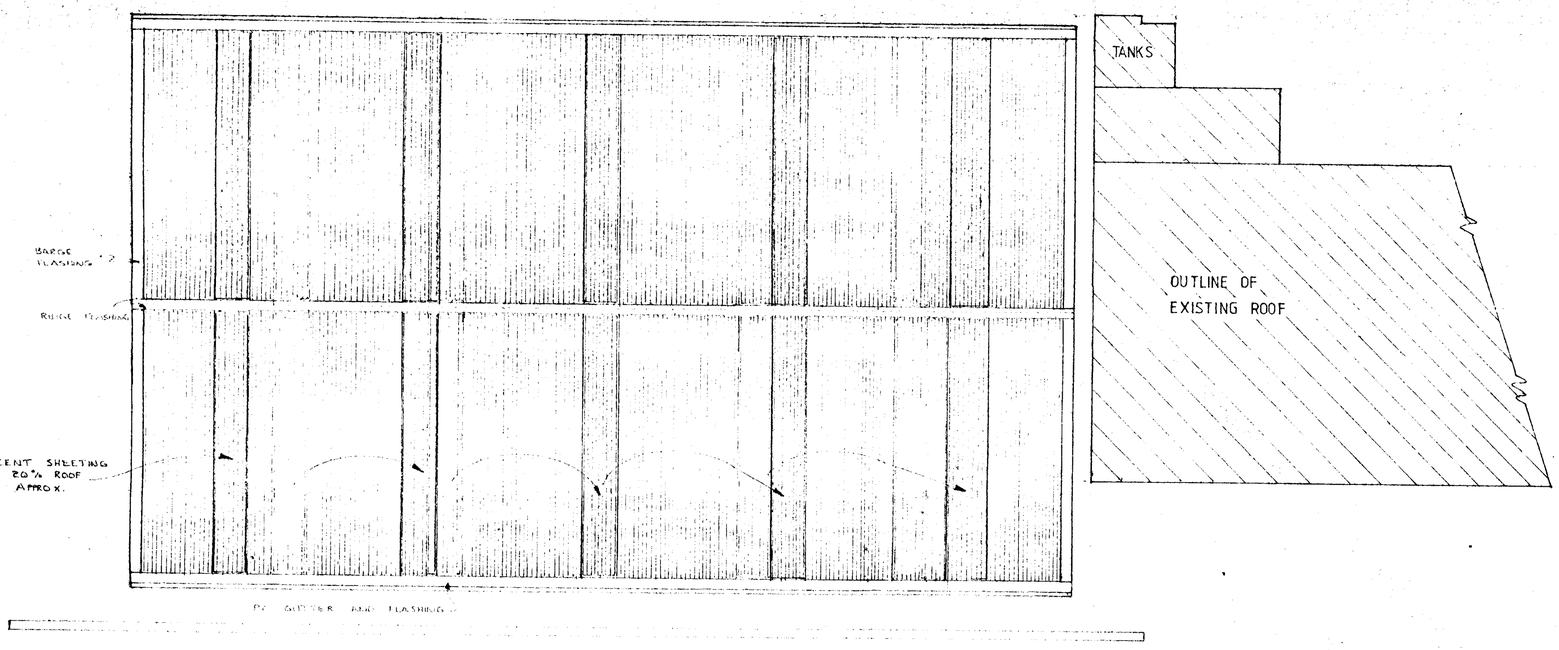
D. & E. WALDRON & ASSOCIATES
ENGINEERING & ARCHITECTURAL CONSULTANTS
KNOCK, Co. MAYO. Tel: 094-88204 Fax: 094-88610
Currach, Castlebar, Co. Mayo Telephone 094-22929

Title
DOOR OPE DETAILS

Scale 1:50 1:20
Date Apr 91
Drawn PD
Drawing No. 91/11/130/111



PLAN OF ROOF STRUCTURE



ROOF PLAN

No.	Revision	Date

Client
GPT PLANT AND TOOL HIRE

Project
PROPOSED REPLACEMENT BUILDING

D. & E. WALDRON & ASSOCIATES
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KNOCK, Co. MAYO. Tel: 094-88204 Fax: 094-88510
also
Currach, Castlebar, Co. Mayo Telephone: 094-22929

Title
ROOF PLANS

Scale
1:100

Date
Apr '91

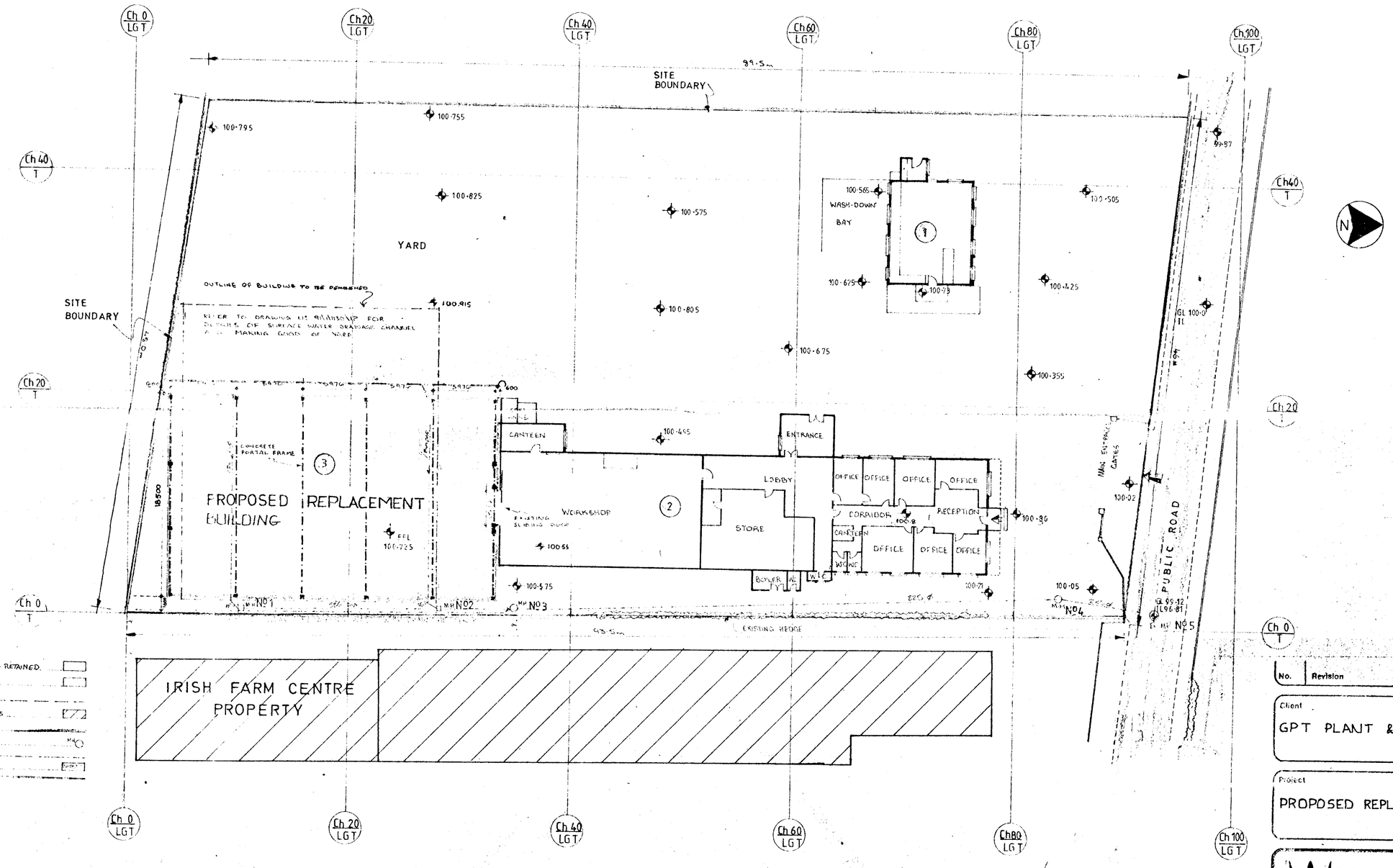
Drawn
PB

Drawing No.
91/N1130/09

JOH 14640

NOTES

1. FIGURED DIMENSIONS ONLY TO BE TAKEN FROM THIS DRAWING.
2. ALL DIMENSIONS TO BE CHECKED ON SITE.
3. ENGINEER TO BE INFORMED IMMEDIATELY OF ANY DISCREPANCIES BEFORE WORK PROCEEDS.
4. (1) DENOTES EXISTING STORAGE
5. (2) DENOTES EXISTING WORKSHOP, STORE AND OFFICES
6. (3) DENOTES PROPOSED REPLACEMENT BUILDING



KEY

EXISTING BUILDINGS SHADED THUS BEING RETAINED
PROPOSED BUILDING SHADED THUS
BUILDING BEING DEMOLISHED SHOWN THUS
NEIGHBOURING BUILDINGS HATCHED THUS
SITE EDGED IN RED
MANHOLE MH
STORM DRAIN
PUBLIC ROAD SHADED THUS
DRAINAGE CHANNEL

SITE LAYOUT MAP scale : 1/200

RECEIVED
12 APR 1991
Reg. 91/1574

No.	Revision	Date

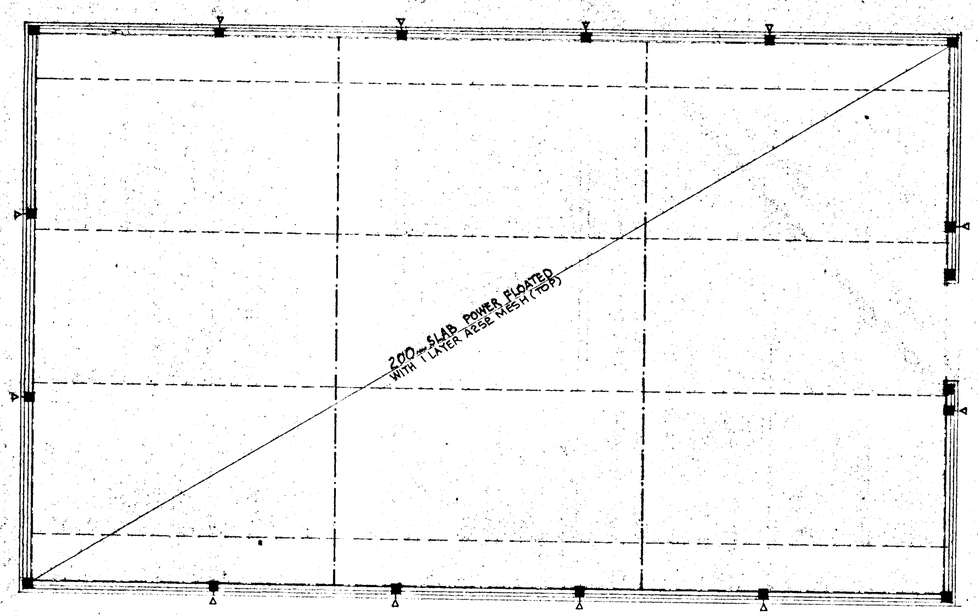
Client
GPT PLANT & TOOL HIRE LTD.

Project
PROPOSED REPLACEMENT BUILDING

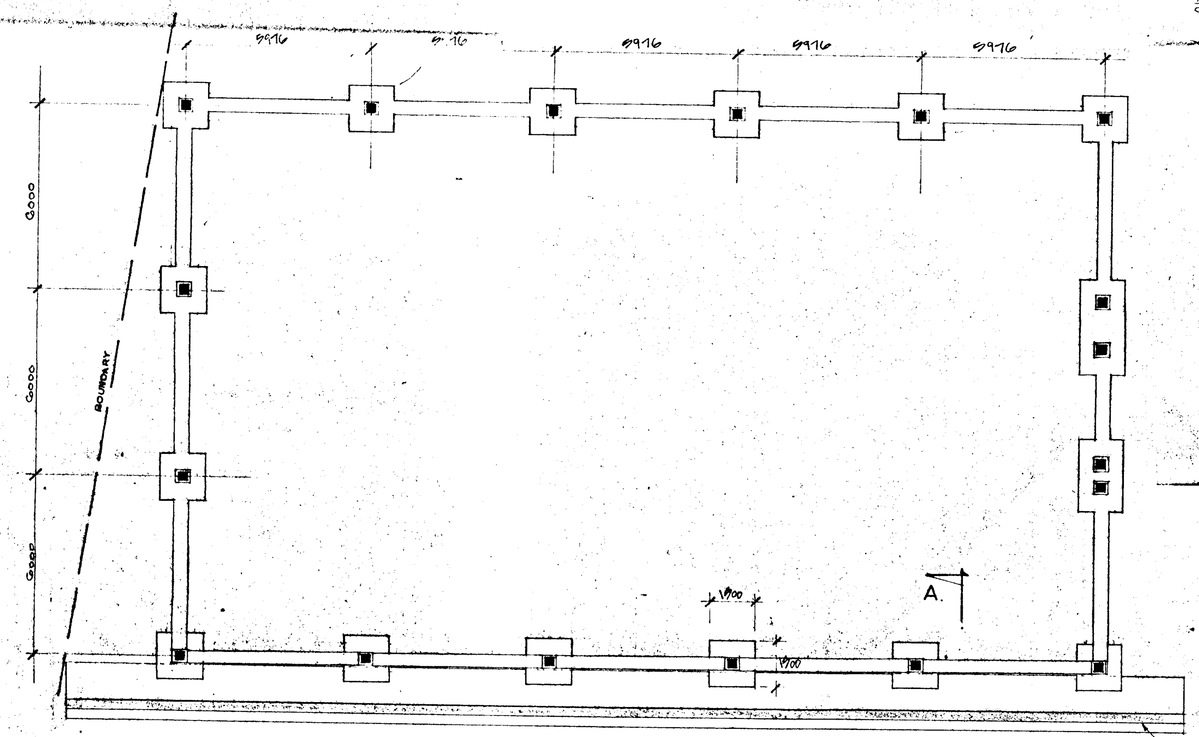
D.&E. WALDRON & ASSOCIATES
ENGINEERING & ARCHITECTURAL CONSULTANTS
KNOCK, Co. MAYO. Tel:094-88204 Fax:094-88010
also
Currach, Castlebar, Co. Mayo Telephone 094-22929

Title
SITE LAYOUT MAP

Scale 1:200
Date Apr. '91
Drawn PB
Drawing No. 91/1574 10a

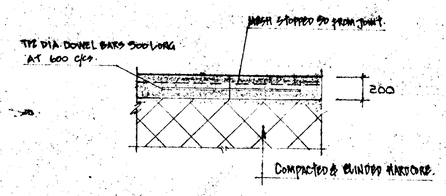


GROUND FLOOR PLAN

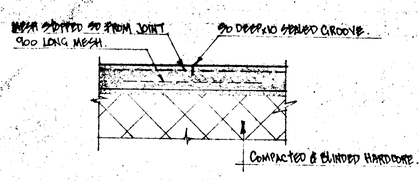


FOUNDATION PLAN

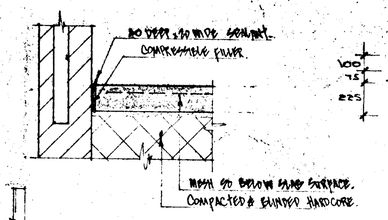
ALL COLUMN PADS TO BE 1500x1500x900 deep

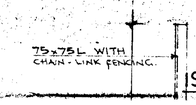


CONSTRUCTION JOINT

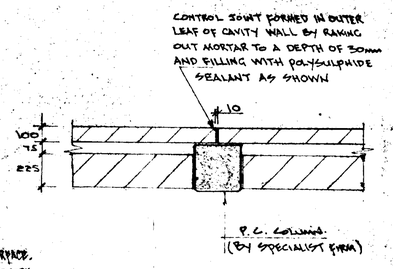


CONTRACTION JOINT

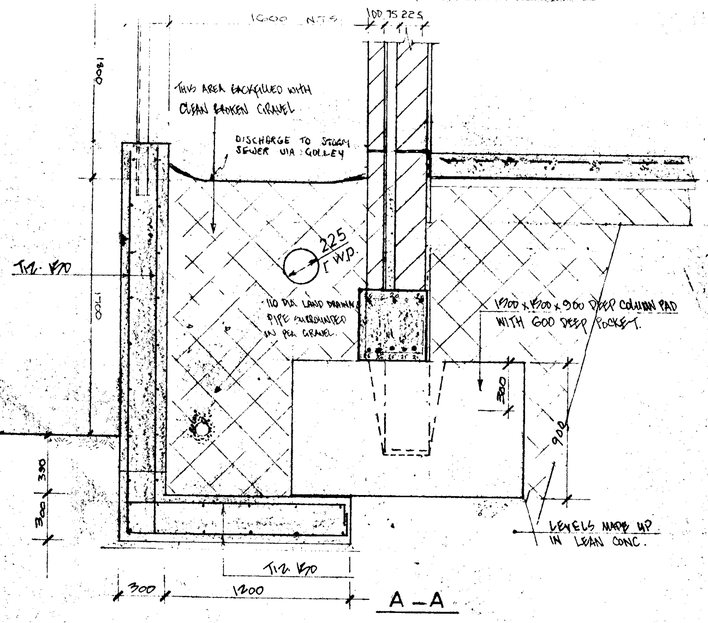


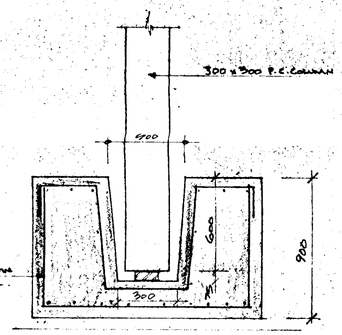


ISOLATION JOINT



CONTROL JOINT





TYPICAL COLUMN BASE

NOTES:-

1. 200mm THICK FLOOR SLAB TO HAVE A POWER FLOATED FINISH. CONCRETE TO FLOOR SLAB TO BE GRADE 30/20 AND TO BE REINFORCED WITH A252 MESH.
2. UNDERFLOOR FILL TO BE COMPACTED IN LAYERS LEVELS OF BACKFILL TO BE BROUGHT UP AT THE SAME TIME ON BOTH SIDES OF THE WALL AND THE DIFFERENCE IN RELATIVE LEVELS TO BE LESS THAN 800mm.
3. BLOCKWORK COMPRESSIVE STRENGTH TO BE MIN. 10 N/mm² & 5 N/mm² IN ACCORDANCE WITH I.S. 20. WORKMANSHIP TO BE IN ACCORDANCE WITH I.S. 325 - PART 1, 1986.
4. WALL TIES SHOULD CONFORM TO B.S. 1243. SPACING OF WALL TIES IN CAVITY WALLS SHALL BE NOT MORE THAN 750mm HORIZONTAL & 450mm VERTICAL. DOUBLE UP No. OF TIES ADJACENT TO OPES. MIN. EMBEDMENT TO BE 50mm IN EACH LEAF.
5. MORTAR TO BE 1:1:6. CEMENT/LIME/SAND.
6. CONCRETE IN STRIP FOOTINGS & COLUMN PADS TO BE GRADE 30/20. BINDING CONCRETE TO BE 15/20
7. LEGEND:-

CONSTRUCTION JOINT.....
CONTRACTION JOINT.....
ISOLATION JOINT.....
CONTROL JOINT..... △
PRECAST COLUMN..... ■

RECEIVED
12 APR 1991
Ref. No. 91/574

No.	Revision	Date

Client
GPT PLANT & TOOL HIRE LTD.

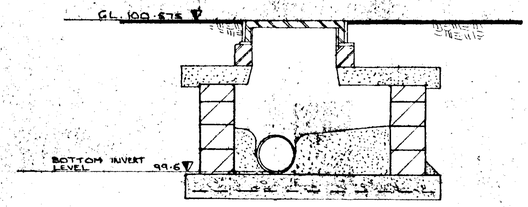
Project
PROPOSED REPLACEMENT BUILDING

D. & E. WALDRON & ASSOCIATES
ENGINEERING & ARCHITECTURAL CONSULTANTS
KNOCK, Co. MAYO. Tel: 094-88204 Fax: 094-88610
Currach, Castlebar, Co. Mayo Telephone 094-22929

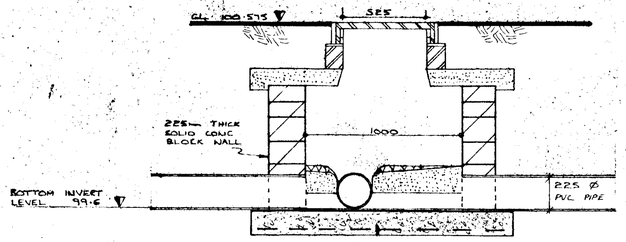
Title.
GROUND FLOOR PLAN
FOUNDATION PLAN
DETAILS

Scale 1/100 1/20
Date Apr. '91
Drawn AP
Drawing No. 91/1/1130/06

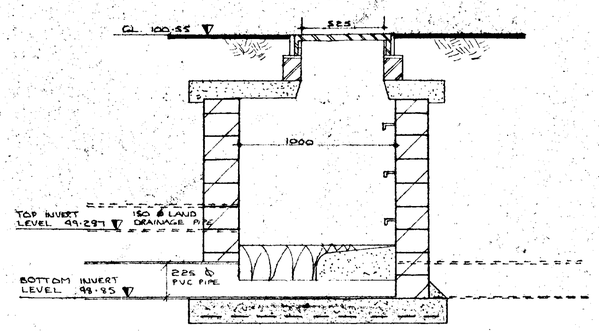
JDH 14640



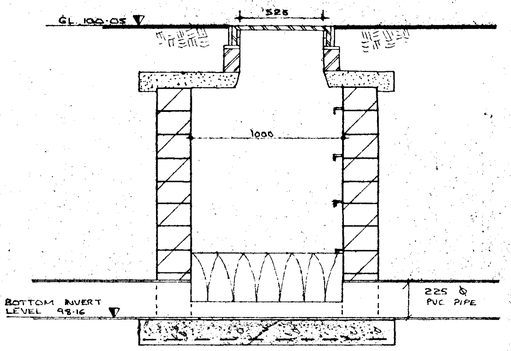
SECTION A-A



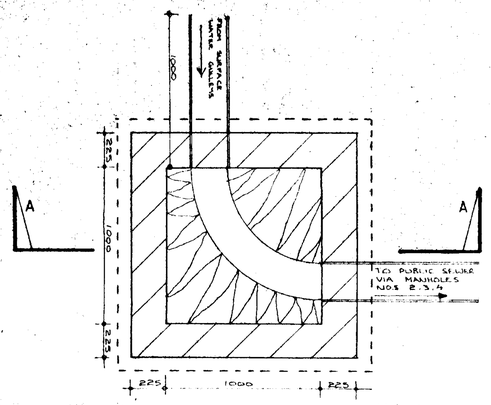
SECTION B-B



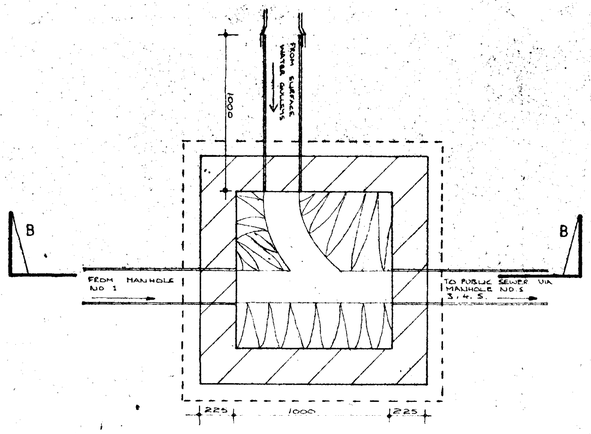
SECTION C-C



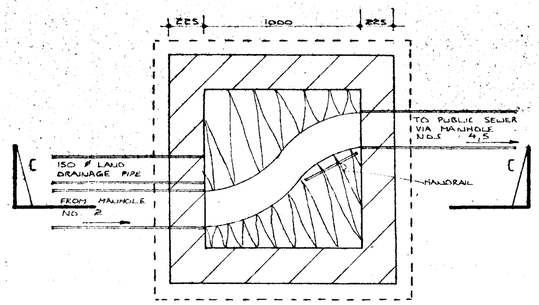
SECTION D-D



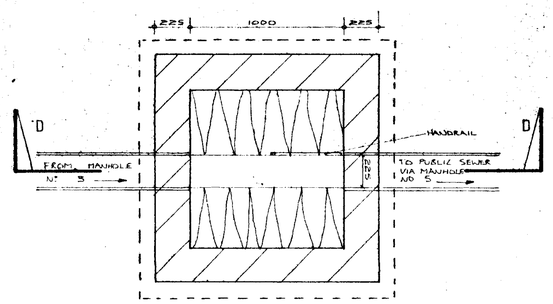
MANHOLE No1 PLAN



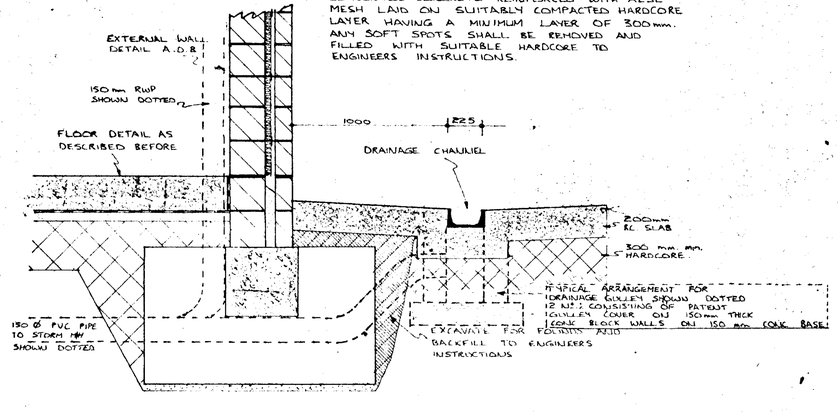
MANHOLE No 2 PLAN



MANHOLE No 3 PLAN

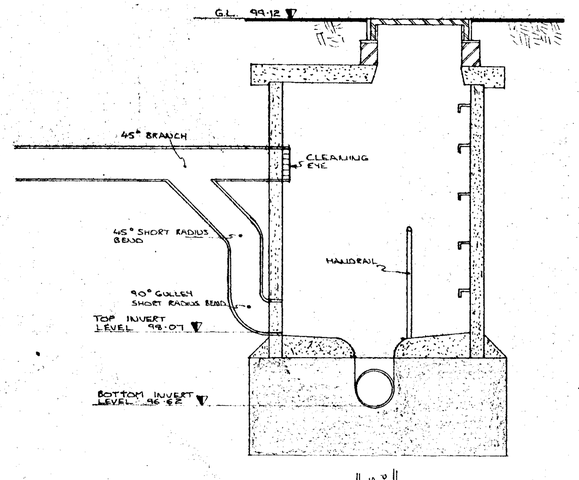


MANHOLE No.4 PLAN

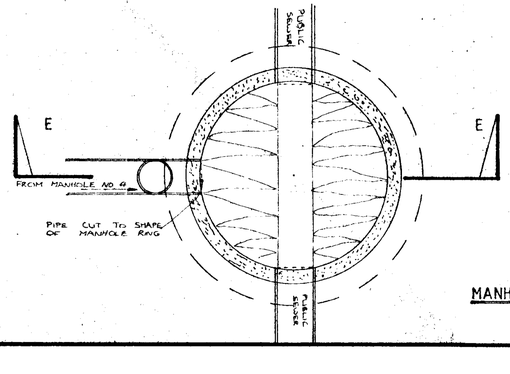


DETAIL OF SURFACE WATER DRAINAGE CHANNEL TO YARD

NOTE
REFER TO DRAWING NO 9111113010B FOR POSITION OF ABOVE DRAINAGE CHANNEL ON SITE LAYOUT MAP.



SECTION E-E



MANHOLE No 5 PLAN

NOTE
THIS DRAWING TO BE READ IN CONJUNCTION WITH DRAWING NO 9111113010A
REFER TO DRAWING NO 9111113010B FOR POSITION OF MANHOLES ON SITE LAYOUT

No.	Revision	Date

Client
GPT PLANT & TOOL HIRE LTD

Project
PROPOSED REPLACEMENT BUILDING.

D. & E. WALDRON & ASSOCIATES
ENGINEERING & ARCHITECTURAL CONSULTANTS
KNOCK, Co. MAYO. Tel:094-88204 Fax:094-88610
Currach, Castlebar, Co. Mayo Telephone 094-22929

Title
DRAINAGE DETAILS

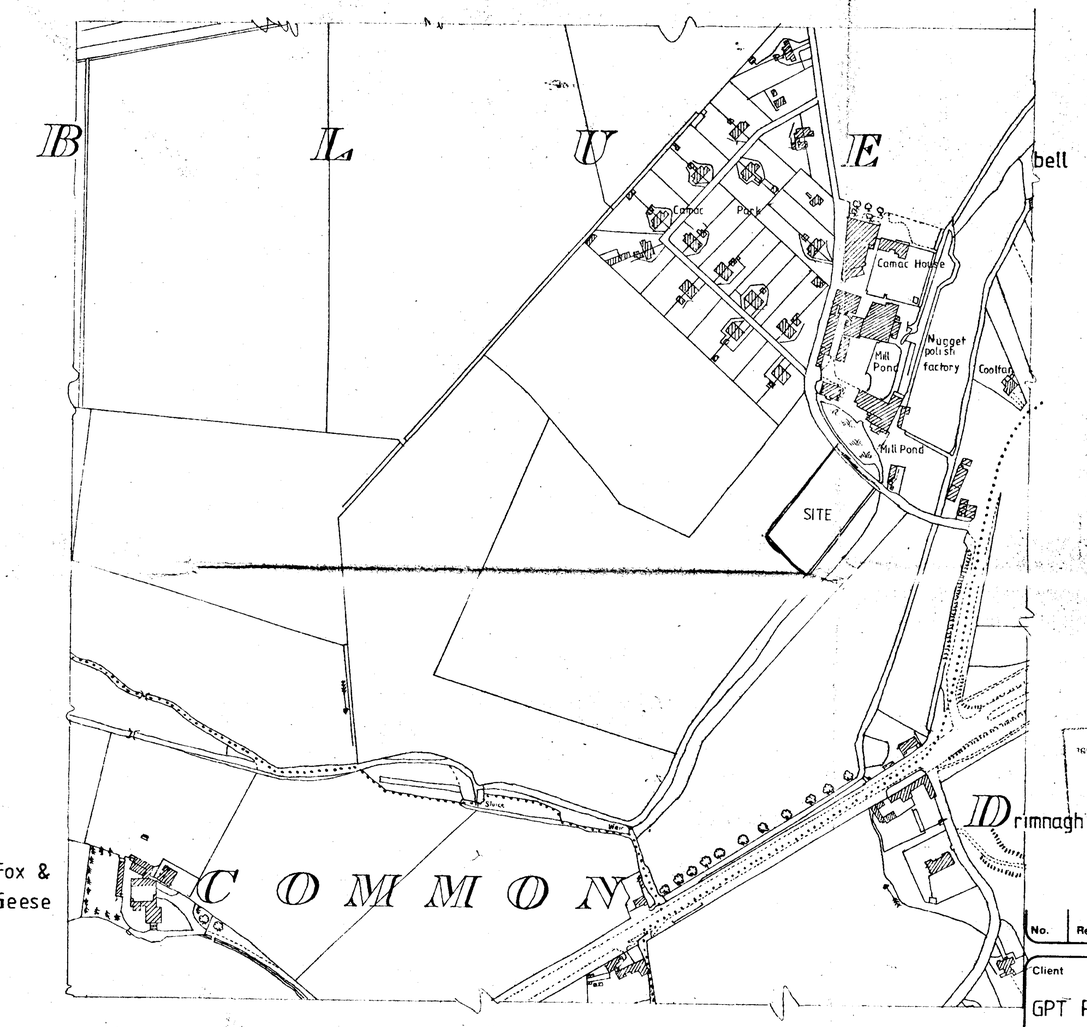
Scale 1:20
Date Apr. 91.
Drawn
Drawing No. 9111113012

SITE LOCATION MAP

scale 1/1000

DUBLIN Sheet no 3262 - 23

site outlined in red



SITE LOCATION MAP

scale 1/2500

DUBLIN { UPPERCROSS / DUBLIN / Co. Boro } SHEET 18 XIII (part of)

Site outlined in red

No.	Revision	Date

Client

GPT PLANT & TOOL HIRE LTD.

Project

PROPOSED REPLACEMENT BUILDING

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KNOCK, Co. MAYO. Tel: 094-88204 Fax: 094-88610
Currach, Castlebar, Co. Mayo Telephone 094-22929

Title

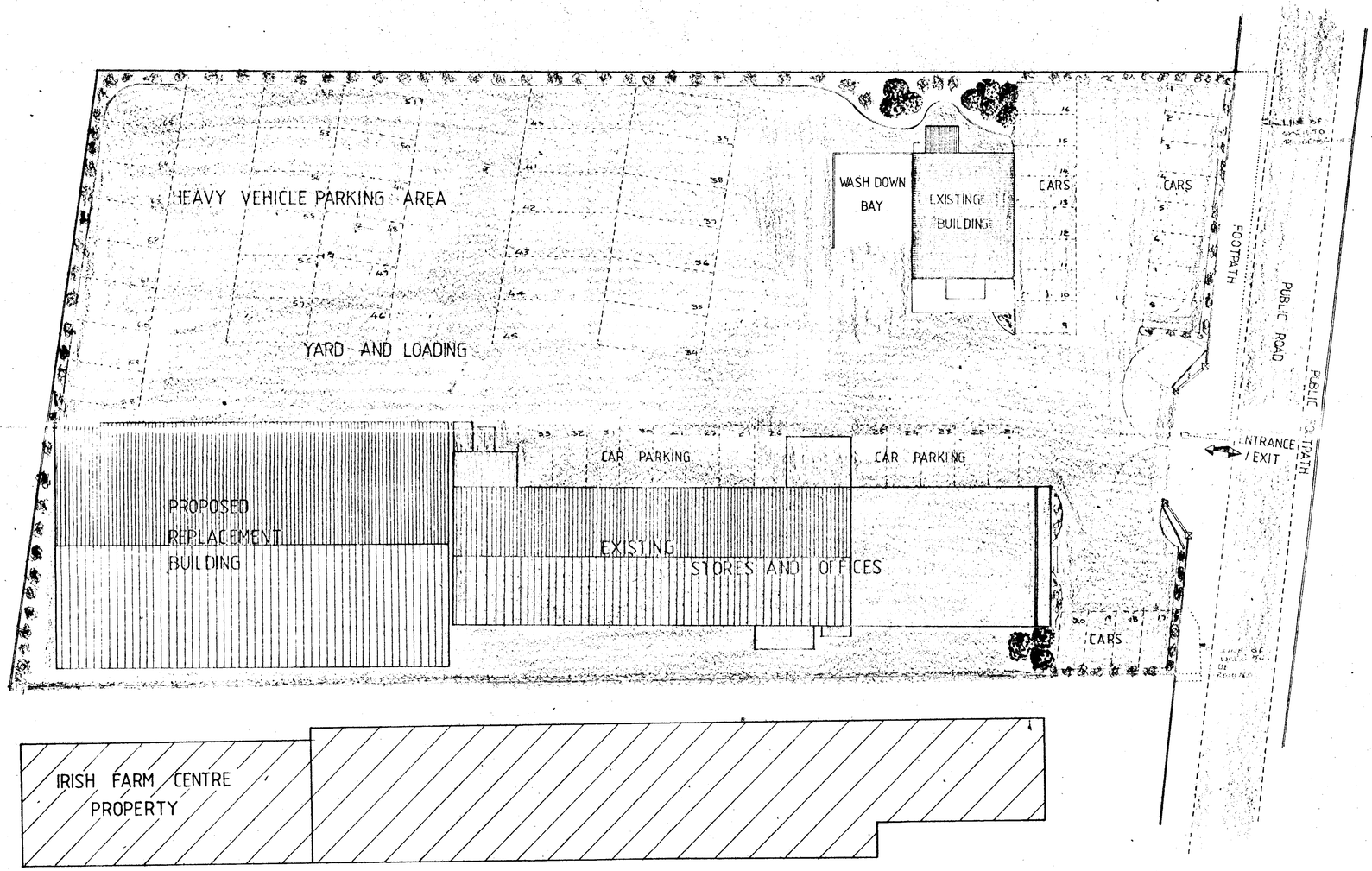
SITE DETAILS

Scale 1/2500 1/1000

Date Apr. '91

Drawn M

Drawing No. 91/1/1130/02



N

KEY

- EXISTING BUILDINGS SHADED THUS
- PROPOSED BUILDING SHADED THUS
- ROADSIDE WALL TO BE DEMOLISHED
- NEIGHBOURING BUILDINGS HATCHED THUS
- YARD + PARKING SHOWN THUS
- PUBLIC ROAD SHADED THUS
- PUBLIC FOOTPATH SHADED THUS
- PARKING SPACE SHOWN THUS
- LANDSCAPING SHOWN THUS

SITE LAYOUT MAP

No.	Revision	Date

Client
GPT PLANT AND TOOL HIRE LTD.

Project
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also
Currach, Castlebar, Co Mayo Telephone 094-22929

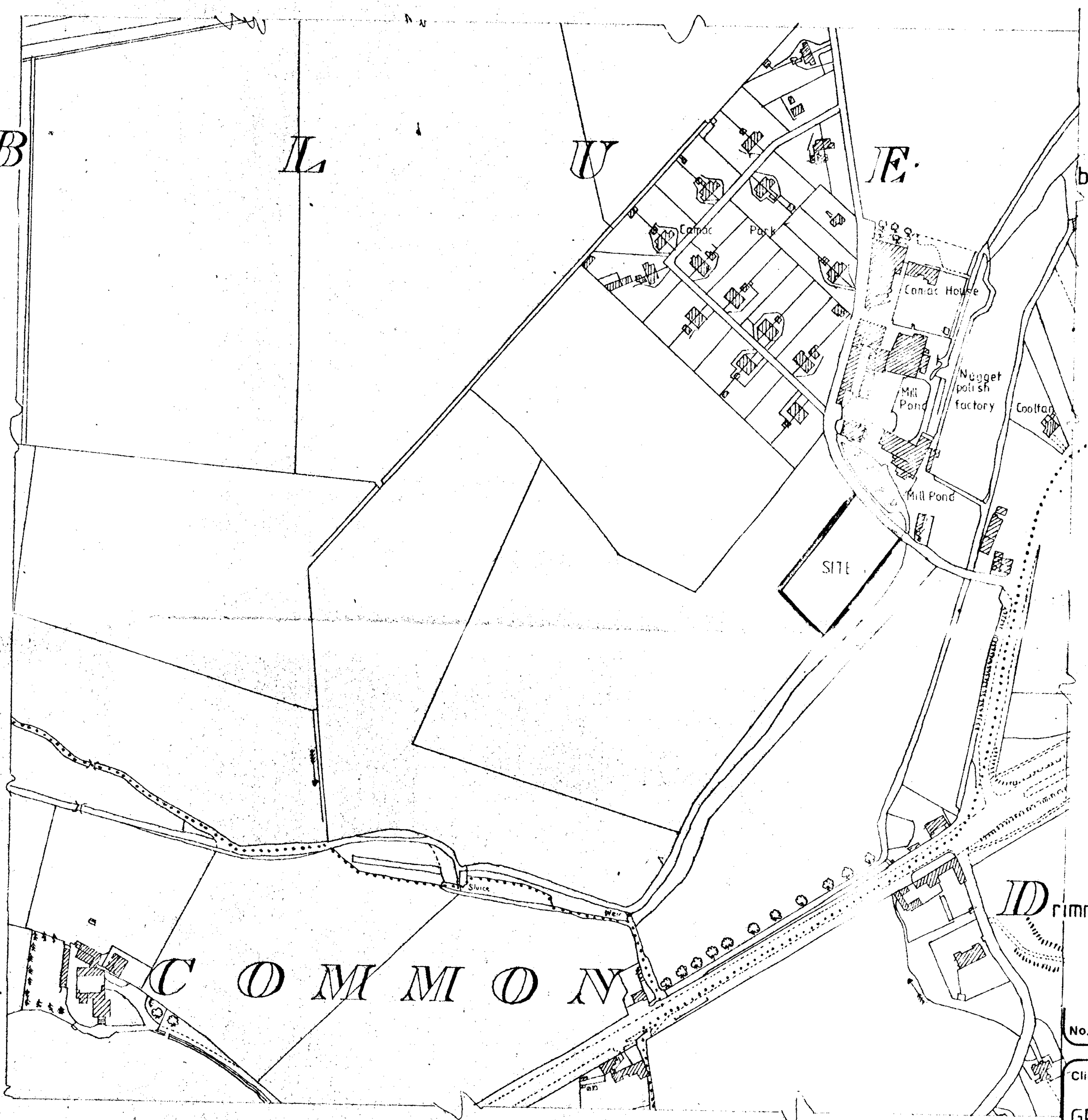
Title	Scale	Date	Drawn	Drawing No.
SITE LAYOUT	1/200	July '91	pb	91/1/1130/20

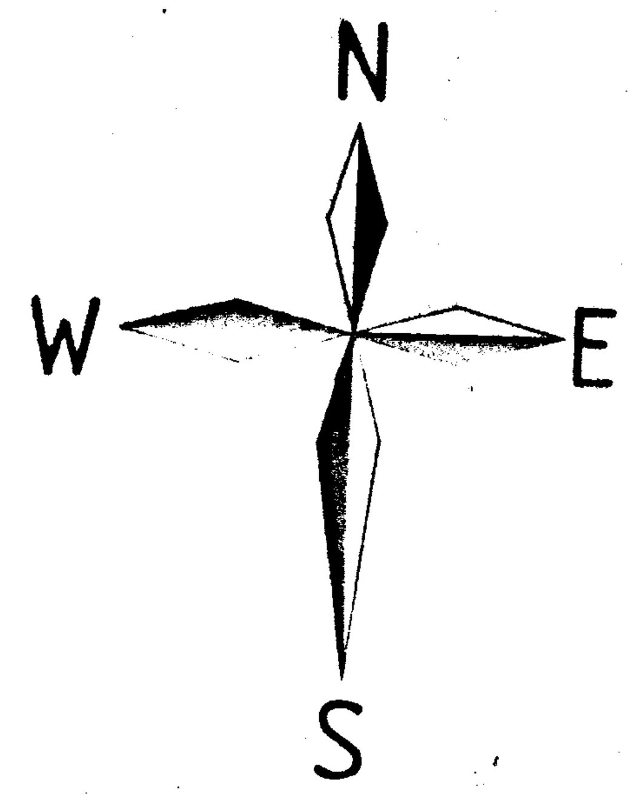
SITE LOCATION MAP

scale 1/1000

DUBLIN Sheet no 3262 – 23

site outlined in red





SITE LOCATION MAP

scale 1/2500

DUBLIN {UPPERCROSS DUBLIN Co. Boro} SHEET 18 XIII (part of)

Site outlined in red

RECEIVED 07 [illegible] 1991 REG. SEC.

RECEIVED 07 AUG 1991 REG. SEC. 919/374

No.	Revision	Date

Client
GPT PLANT & TOOL HIRE LTD.

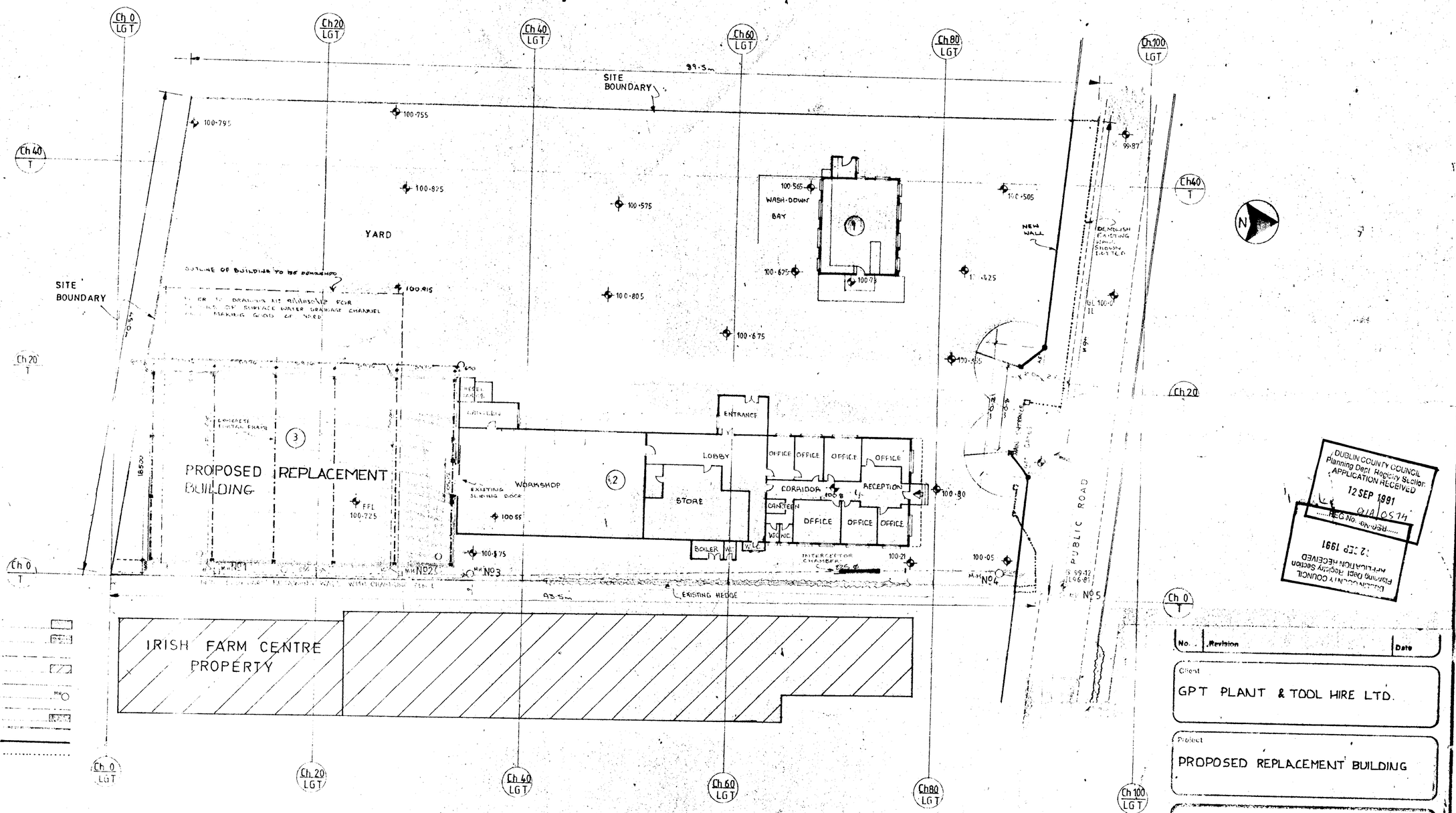
Project
PROPOSED REPLACEMENT BUILDING

D. & E. WALDRON & ASSOCIATES
ENGINEERING & ARCHITECTURAL CONSULTANTS
KNOCK, Co. MAYO. Tel: 094-88204 Fax: 094-88610
also
Curranh, Castlebar, Co. Mayo Telephone 094-22929

Title	
SITE DETAILS	Scale 1/2500 1/1000
	Date Apr.'91
	Drawn M
	Drawing No. 91/1/1130/02

NOTES

1. FIGURED DIMENSIONS ONLY TO BE TAKEN FROM THIS DRAWING.
2. ALL DIMENSIONS TO BE CHECKED ON SITE.
3. ENGINEER TO BE INFORMED IMMEDIATELY OF ANY DISCREPANCIES BEFORE WORK PROCEEDS.
4. (1) DENOTES EXISTING STORAGE
5. (2) DENOTES EXISTING WORKSHOP, STORE AND OFFICES
6. (3) DENOTES PROPOSED REPLACEMENT BUILDING



KEY

EXISTING BUILDINGS SHADED THUS
PROPOSED BUILDING SHADED THUS
BUILDING BEING DEMOLISHED SHOWN THUS
NEIGHBOURING BUILDINGS HATCHED THUS
SITE EDGED IN RED
MANHOLE MH
STORM DRAIN
PUBLIC ROAD (SHADED THUS) DRAINAGE CHANNEL
NEW FRONT BDY WALL
WALL TO BE DEMOLISHED

SITE LAYOUT MAP scale · 1/200

DUBLIN COUNTY COUNCIL Planning Dept. Registry Section APPLICATION RECEIVED 12 SEP 1991 REG No. 91/0574

DUBLIN COUNTY COUNCIL Planning Dept. Registry Section APPLICATION RECEIVED 12 SEP 1991

No.	Revision	Date

Client: GPT PLANT & TOOL HIRE LTD.

Project: PROPOSED REPLACEMENT BUILDING

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Currach, Castlebar, Co. Mayo Telephone 094-22929

Title: SITE LAYOUT MAP

Scale: 1:200

Date: Apr. '91

Drawn: PB

Drawing No.: 91/1152/108