SS only

Register Reference : 91A/1934

Date : 10th December 1991

Development : New ground and first floor offices c.490 m.sq. within existing warehouse, alterations to north and west elevations and new ground floor link corridor

LOCATION : Airton Road, Tallaght, Dublin 24.

Applicant : Cable & Wireless (Ireland) Ltd.,

App. Type : PERMISSION

Planning Officer : G.BOOTHMAN

Date Recd. : 6th December 1991

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

Yours faithfully,

for PRINCIPAL OFFICER

DUBLIN CO. COUNCIL SANITARY SERVICES 31 JAN 1992 Returned

Date received in Sanitary Services .....

DUBLIN Co. COUNCIL 16DEC1991 SAN SERVICES

FOUL SEWER

No foul sewer requirement indicated.

PLANNING DEPT. DEVELOPMENT CONTROL SECT Date 03.02.92 Time 3.00

SURFACE WATER

Available — existing S.W. system.

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

J. Rice 23/1/92

Filed.

Register Reference : 91A/1934

Date : 10th December 1991

ENDORSED ______ DATE ______

WATER SUPPLY. Available for zoned use from existing supply. 24 hour storage to be provided.

T. Spain
6/1/92

Refer to C.F.O.

7/1/92

ENDORSED ______ DATE 24/1/92

PLANNING DEPT.
DEVELOPMENT CONTROL SECT
Date 03.02.92
Time 3.00

Geraldine Boothman

5

PLANNING DEPARTMENT   BOOK FOLIO

Date Lodged	
20.12.91	LOCATION: Airton Road, Tallaght
	APPLICANT: Cable & Wireless (Ireland) Ltd.
	PROPOSAL: Offices

REG.REF. 91A/1934

DUBLIN COUNTY COUNCIL
24 JAN 1992
ENVIRONMENTAL HEALTH OFFICERS

(2) Date referred

Chief Medical Officer, Eastern Health Board

(3) Rec'd San. Services

(4) Dispatched by San. Ser. to C.M.O.:

(5) Rec'd Planning:

(6) Date to Planner:

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

(8) DPO Report submitted to S.A.O.:

• THE ABOVE PROPOSAL IS ACCEPTABLE SUBJECT TO,

1/ Compliance with the building bye-laws.

2/ Compliance with the Office Premises Act 1958 and regulations made thereunder.

3/ Compliance with the safety, health and welfare at work Act 1989.

4/ Water closets accommodation and lobbies leading thereto being being permanently & and independently ventilated to the open air.

5/ Permanent ventilation to be provided to all offices.

6/ Either canteen facilities or a tea room shall be provided for the use of the staff.

7/ Adequate heating and lighting to be provided in all places of work.

8/ Where visual display units are utilized compliance with the requirements of the E.E.C Directive on V.D.U.s re. lighting, siting, seating, breaks for staff etc.

9/ Drainage connections to be such as not to give rise to a Public Health Nuisance.

(9) Decision due:

PLANNING DEPT.
DEVELOPMENT CONTROL SECT
4.2.92
2.30

Peter [signature]
31/1/92

ENDORSED: [signature] DATE: 5-2-92
for John O' Reilly SEHO

P/324/92

COMHAIRLE CHONTAE ÁTHA CLIATH

Record of Executive Business and Manager's Orders

| BELGARD |

Register Reference : 91A/1934 Date Received : 6th December 1991

Correspondence Name and Address : Integrated Development Services, 146 Lr. Drumcondra Road, Dublin 9.

Development : New ground and first floor offices c.490 m.sq. within existing warehouse, alterations to north and west elevations and new ground floor link corridor

CN 1572

CONTRIBUTION: Standard: Nil; Paid in full; S. an acreage basis; Other: SECURITY: Bond / C.I.F.: Cash:

Location : Airton Road, Tallaght, Dublin 24.

Applicant : Cable & Wireless (Ireland) Ltd.,

App. Type : Permission

Zoning : 'E'

Floor Area : 490 sq.metres

(GB/CM)

Report of the Dublin Planning Officer, dated 21st January, 1992.

This application is for Permission. The proposal consists of proposed new ground and first floor offices c.490sq. metres within existing warehouse, plus alterations to north and west elevations and new ground floor link corridor.

The applicant is Cable and Wireless (Ireland) Ltd., and their premises is at Airton Road, Tallaght, close to the junction with Belgard Road.

The site is stated to be 12500sq. metres and the floor area of buildings proposed to be retained within the site is c.4100sq. metres.

The history search provided with this application indicates the following planning history:

90A/1671 - Permission granted for alterations.

87A/561 - Permission granted for Water Purification Plant.

ZA.962 - Permission granted for office block extension.

The existing office block for which permission was granted in Reg. Ref. ZA.962 fronts onto Airton Road, connected to the main premises by a link corridor. The

COMHAIRLE CHONTAE ÁTHA CLIATH

Record of Executive Business and Manager's Orders

Reg.Ref: 91A/1934

Page No: 0002

Location: Airton Road, Tallaght, Dublin 24.

current proposal involves a second link corridor, and the conversion of a portion of the warehouse area on the western side.

A brick finish is indicated, to match existing.
With regard to car parking, an additional 20 spaces would need to be provided to comply with Development Plan standards. No site plan was submitted with the application, and one was requested by telephone on the 18/1/92.

In a separate report from Roads Department, attention is drawn to the hap-hazard parking on site at present. Certainly, most of the provided spaces are in use, and the additional 20 would be essential. However, this may mean a reduction in the existing landscaped area to the front.

In the circumstances,

I recommend that a decision to Grant Permission be made under the Local Government (Planning and Development) Acts, 1963-1990, subject to the following 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 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 Acts, 1878-1964.

03 That all external finishes harmonise in colour and texture with the existing premises.
REASON: In the interest of visual amenity.

04 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, 1878-1964.

~~05 That a financial contribution in the sum of £ be paid by~~ the proposer to the Dublin County Council towards the cost of provision of

COMHAIRLE CHONTAE ÁTHA CLIATH

Record of Executive Business and Manager's Orders

Reg.Ref: 91A/1934

Page No: 0003

Location: Airton Road, Tallaght, Dublin 24.

~~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.

5 ~~06~~ The site shall be laid out to ~~(a)~~ provide an additional 20 car parking spaces; ~~(b)~~ prohibit parking in undesirable locations. The site plan shall have the prior agreement of the County Council Roads Engineers.
REASON: In order to comply with the requirements of the Roads Department.

6 ~~07~~ Any necessary alterations to the existing landscaping scheme shall be ~~drawn~~ submitted and agreed in writing with the Planning Authority and implemented concurrent with the development.

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

7. That the use of the offices shall be incidental to the use of the structure for light industrial/warehouse purposes.
Reason: In the interest of the proper planning and development of the area.

COMHAIRLE CHONTAE ÁTHA CLIATH

Record of Executive Business and Manager's Orders

Reg.Ref: 91A/1934

Page No: 0004

Location: Airton Road, Tallaght, Dublin 24.

Richard Cremins S.E.P.
for Dublin Planning Officer
24/1/92

Endorsed:-........................
for Principal 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 (73) conditions set out above is hereby made.

Dated : 30th JANUARY 1992 ....

ASSISTANT COUNTY MANAGER/~~APPROVED OFFICER~~

to whom the appropriate powers have been delegated by order of the Dublin City and County Manager dated 10th December 1991.

DUBLIN COUNTY COUNCIL

REG. REF: 91A/1934.

DEVELOPMENT: Offices.

LOCATION: Airton Road, Tallaght.

APPLICANT: Cable & Wireless (Ireland).

DATE LODGED: 6.12.91.

This application seeks permission for new offices (approximately 490m²) within existing warehouse area and new link corridor at Airton Road.

The site is located at the end of Airton Road within 80-100m of the junction with Belgard road.

Upon site investigation parking was extremely hap-hazard with parking at various locations along the access roads (at locations where parking was prohibited). A significant shortfall of parking is apparent therefore, which would be heightened still further by additional office space.

A development of this size requires 20 car parking spaces in accordance with 1983 Development Plan Standards. No additional car parking spaces are indicated. Roads require additional information furnishing a detailed site plan (1:200 or nearest available) indicating the present parking arrangement and proposals for the required 20 car spaces.

PLANNING DEPT.
DEVELOPMENT CONTROL SECT
Date 23.01.92
Time 3.30

MA/BMcC
15.1.92.

SIGNED: Michael Arthur ENDORSED:

DATE: 16-1-92 DATE: 17/1/92

BYE LAW APPLICATION FEES

REF. NO.: 91A/1730 CERTIFICATE NO.: 17161

PROPOSAL: Offices

LOCATION: Clifton Rd. 2-24

APPLICANT: Cable & Wireless plc Ltd.

	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	Dwellings, (Houses/Flats)	@ £55					
B	Domestic Ext. (Improvement/ Alts.)	@ £30					
C	Building for office or other comm. purpose	@ £3.50 per M^2 or £70 490m^2	£1715	£1715	—		
D	Building or other structure for purposes of agriculture	@ £1.00 per M^2 in excess of 300 M^2 Min. £70					
E	Petrol Filling Station	@ £200					
F	Dev. of prop. not coming within any of the forgoing classes	£70 or £9 per .1 hect. whichever is the greater					

Column 1 Certified: Signed: Grade: Date:

Column 1 Endorsed: Signed: Grade: Date:

Columns 2,3,4,5,6 & 7 Certified: Signed: Grade: Date: 9/11/91

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

PLANNING APPLICATION FEES

Reg. Ref. 91A/1934 Cert. No. 27352

PROPOSAL New offices & link Corridor

LOCATION Custom Road D 24

APPLICANT Cable & Wireless Ireland Ltd

CLASS	DWELLINGS/AREA LENGTH/STRUCT.	RATE	AMT. OF FEE REQ.	AMOUNT LODGED	BALANCE DUE	BALANCE PAID
1	Dwellings	@£32				
2	Domestic	@£16				
3	Agriculture	@50p per m2 in excess of 300m2. Min. £40				
4	Metres 490.0m²	@£1.75 per m2 or £40	857.50	857.50		
5	x .1 hect.	@£25 per .1 hect. or £250				
6	x .1 hect.	@£25 per .1 hect. or £40				
7	x .1 hect.	@£25 per .1 hect. or £100				
8		@£100				
9	x metres	@£10 per m2 or £40				
10	x 1,000m	@£25 per £1000m or £40				
11	x .1 hect.	@£5 per .1 hect. or £40				

Column 1 Certified: Signed: ..... Grade D.I.T. Date 11/12/91

Column 1 Endorsed: Signed: ..... Grade ..... Date .....

Columns 2,3,4,5,6 & 7 Certified: Signed: ..... Grade S.O. Date 11/12/91

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

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

ASSESSMENT OF FINANCIAL CONTRIBUTION

REG.REF.: 91A/1934

CONT. REG.:

SERVICES INVOLVED: WATER/FOUL SEWER SURFACE WATER

AREA OF SITE:

FLOOR AREA OF PRESENT PROPOSAL: 5275 FT² F.Y. 11/12/91.

MEASURED BY:

CHECKED BY:

METHOD OF ASSESSMENT:

TOTAL ASSESSMENT:

MANAGER'S ORDER NO: P/ / DATED

ENTERED IN CONTRIBUTIONS REGISTER:

Standard rd Rated in full on acreage bases

DEVELOPMENT CONTROL ASSISTANT GRADE

CN1572 21/1/92

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

Bloc 2, Ionad Bheatha na hEireann,
Bloc 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/ 0324 /92 Date of Decision : 30th January 1992

Register Reference : 91A/1934 Date Received : 6th December 1991

Applicant : Cable & Wireless (Ireland) Ltd.,

Development : New ground and first floor offices C.490 m.sq. within existing warehouse, alterations to north and west elevations and new ground floor link corridor

Location : Airton Road, Tallaght, Dublin 24.

Floor Area : Sq.Metres

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.

Integrated Development Services,
146 Lr. Drumcondra Road,
Dublin 9.

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

Bloc 2, Ionad Bheatha na hEireann,
Bloc 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/1934
Decision Order No. P/ 0324 /91

Subject to the Conditions on the attached Numbered Pages.

NUMBER OF CONDITIONS:- ....7....ATTACHED.

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

Date: 31/1/92

Bloc 2, Ionad Bheatha na hEireann,
Bloc 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/1934
Decision Order No. P/ 0324 /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 Acts, 1878-1964.

03 That all external finishes harmonise in colour and texture with the existing premises.
REASON: In the interest of visual amenity.

04 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, 1878-1964.

05 The site shall be laid out to provide an additional 20 car parking spaces and in such a manner as to prohibit parking in undesirable locations. The site plans shall have the prior agreement of the County Council Roads Engineers.
REASON: In order to comply with the requirements of the Roads Department.

06 Any necessary alterations to the existing landscaping scheme shall be submitted and agreed in writing with the Planning Authority and implemented concurrent with the development.

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

07 That the use of the offices shall be incidental to the use of the structure for light industrial/warehouse purposes.

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

●Integrated Development Services Ltd.

Property Acquisition and Development Consultants.

146 Lower Drumcondra Road, Dublin 9, Ireland. Telephone: (01) 370936, 379362, 360033. Fax: (01) 369303.

91A/1934
1.4.0
Mnl A.1

M/s Geraldine Boothman,
Dublin County Council,
Planning Department,
Irish Life Centre,
Lower Abbey St.,
Dublin, 2.

17th January, 1992.

RE; PROPOSED NEW GROUND AND FIRST FLOOR OFFICES WITHIN EXISTING WAREHOUSE, ALTERATIONS TO NORTH & WEST ELEVATIONS AND NEW GROUND FLOOR LINK CORRIDOR C. 490M² FOR CABLE & WIRELESS (IRELAND) LTD. AT THEIR PREMISES AT AIRTON ROAD, TALLAGHT, DUBLIN, 24 WITH ELEVATION TO BELGARD ROAD.
PLAN NO. 91A/1934

Dear M/s Boothman,

Further to our telephone conversation of today I now enclose 4 no. copies drawing no. 911109/5 ; Site Layout Plan which will complete our application.

Should you have any queries please contact us immediately.

Yours sincerely,

ADAM HEFFERNAN,
for INTEGRATED DEVELOPMENT SERVICES.

ENCLS.

20 JAN 92

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

15th January, 1992

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

LOCATION: Airton Road, Tallaght

PROPOSED DEVELOPMENT: Offices

APPLICANT: Cable & Wireless (Ireland) Ltd.

PLANNING REG.REF.: 91A/1934

DATE OF RECEIPT OF SUBMISSION: 20th December, 1991

A Chara,

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

Building Bye-Law Approval

Mise, le meas

A. Smith

PRINCIPAL OFFICER

Integrated Development Services,
146 Lower Drumcondra Road,
Drumcondra,
Dublin 9

Dublin County Council
Comhairle Chontae Atha 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. PLANNING APPLICATION BEING PROCESSED REG. REF. 91A/1934

2. Postal address of site or building AIRTON ROAD, TALLAGHT DUBLIN, 24.
(If none, give description sufficient to identify) (AT JUNCTION WITH BELGARD ROAD)

3. Name of applicant (Principal not Agent) CABLE & WIRELESS (IRELAND) LTD.

Address AIRTON ROAD, TALLAGHT, DUBLIN, 24. Tel. No. 598333

4. Name and address of person or firm responsible for preparation of drawings INTEGRATED DEVELOPMENT SERVICES, 146 LOWER DRUMCONDRA ROAD, DRUMCONDRA, DUBLIN, 9. Tel. No 370936

5. Name and address to which notifications should be sent AS NO. 4 ABOVE.

6. Brief description of proposed development NEW GROUND FLOOR AND FIRST FLOOR OFFICES WITHIN EXISTING WAREHOUSE AREA AND NEW LINK CORRIEDOR C.490M².

7. Method of drainage ESTATE DRAINS 8. Source of Water Supply EXISTING MAIN

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. MANUFACTURE, STORAGE & OFFICES.
(b) Proposed use of each floor As (a) Above.

10 Does the proposal involve demolition, partial demolition or change of use of any habitable house or part thereof? NO

11.(a) Area of Site C.12500 Sq. m.
(b) Floor area of proposed development 490 Sq. m.
(c) Floor area of buildings proposed to be retained within site 4100 Sq. m.

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

13. Are you now applying also for an approval under the Building Bye Laws? Yes ☐ No ☐ Place ✓ in appropriate box. YES REC. No. N-54437

14. Please state the extent to which the Draft Building Regulations have been taken in account in your proposal: £1715.00
AS FAR AS POSSIBLE

15. List of documents enclosed with application. SEE LETTER OF APPLICATION

16. Gross floor space of proposed development (See back) 490 Sq. m.

No of dwellings proposed (if any) NONE Class(es) of Development C

Fee Payable £1,715.00 Basis of Calculation £3.5/M² x 490M² = £1,715.00
If a reduced fee is tendered details of previous relevant payment should be given

Signature of Applicant (or his Agent) [signature] Date 20/12/91

FOR OFFICE USE ONLY

Application Type
Register Reference 91A/1934
Amount Received £
Receipt No 4 16.2
Date BB2

RECEIVED
20 DEC 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 accordence 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 m² (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 m² (min. £70.00)
D	Agricultural Buildings/Structures	£1.00 per m² 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 ÁTHA CLIATH

PAID BY

DUBLIN COUNTY COUNCIL

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

CASH

CHEQUE

M.O.

P.O.

BYE LAW APPLICATION

REC. No. N 54437

£1715.00

Received this 20th day of December 19

from Cable & Wireless (Cws) Ltd., Airton Rd, Tallaght

the sum of one thousand seven hundred & fifteen Pounds

Pence, being for for bye-law application at Airton Rd

Cashier

S. CAREY Principal Officer

Integrated Development Services Ltd.

Property Acquisition and Development Consultants.

146 Lower Drumcondra Road, Dublin 9, Ireland. Telephone: (01) 370936, 379362, 360033. Fax: (01) 369303.

Principal Officer,
Dublin Co. Council,
Building Control Section,
Liffey House,
24-28 Tara St.,
Dublin, 2.

20th December, 1991.

RE; PROPOSED NEW GROUND AND FIRST FLOOR OFFICES WITHIN EXISTING WAREHOUSE, ALTERATIONS TO NORTH & WEST ELEVATIONS AND NEW GROUND FLOOR LINK CORRIDOR C. 490M² FOR CABLE & WIRELESS (IRELAND) LTD. AT THEIR PREMISES AT AIRTON ROAD, TALLAGHT, DUBLIN, 24 WITH ELEVATION TO BELGARD ROAD.

Dear Sir,

We have been instructed by Cable & Wireless (Ireland) Ltd. to apply for Building Bye Law Approval regarding the above.

We have already applied for Planning Permission Reg. Ref. 91A/1934.

The Structural Engineers are John Moylan & Associates, 79 Merrion Square, Dublin, 2.

In support of our application please find enclosed;

1 No. Copy;
- Completed application form.
- Clients cheque in the amount of £1,715.00 (Building Bye Law Fee).

2 No. Copies;

Architects Drawings;

- Drawing No. 911109/1 ; Site Location Map.
- Drawing No. 911109/2A; Ground Floor Plan.
- Drawing No. 911109/3A; First Floor Plan and Section.
- Drawing No. 911109/4A; Elevations and Section through Link Corridor and detail.
- Drawing No. 911109/5 ; Site Layout Plan.

Engineers Drawings;

- Engineers Certificate.
- Civil and Structural Specification.
- Outline Structural Calculations.
- Drawing No. E-227 1A ; Structural G.A. Details, Plans.
- Drawing No. E-227 2A ; Structural G.A. Details, Elevations and Sections.
- Drawing No. E-277 3A ; Structural G.A. Details, Foundations.

We trust the above to be in order. However should you have any queries please contact us immediately.

DUBLIN COUNTY COUNCIL
Planning Dept. Registry Section
APPLICATION RECEIVED
20 DEC 1991
91A/1934

Yours faithfully,

ADAM HEFFERNAN,
for INTEGRATED DEVELOPMENT SERVICES.

Registered in Dublin, Ireland. No.: 91641 Directors: Peter T. Cagney, M.I.A.V.I., K. J. Hamell, B.Arch. Registered V.A.T. No.: 4690649U

JOHN MOYLAN & ASSOCIATES Consulting Engineers

79 Merrion Square,
Dublin 2.

Telephone: (01) 615337/612475.
Facsimile: (01) 610255.

Att. Mr. Kevin Hamell,
Integrated Development Services,
146. Lower Drumcondra Road,
Dublin 9.

Your Ref.

Our Ref. E-227A/JM

19th December 1991

Re: New Link Block & Offices in Existing Warehouse for Cable & Wireless (Ireland) Ltd. at Airton Road, Tallaght.

Dear Sirs,

We enclose herewith 4 No. copies of the following structural documentation for inclusion in the building bye-law submission for the above project.

(a) Engineers Certificate.

(b) Civil and Structural Specification.

(c) Outline Structural Calculations.

(d) Drg. No. E-227A-01B — Structural General Arrangement Details. Plans.

(e) Drg. No. E-227A-02B — Structural General Arrangement Details. Elevations and Sections.

(f) Drg. No. E-227A-03 — Structural General Arrangement Details. Foundations.

Yours faithfully,

John Moylan
John Moylan & Associates.

DUBLIN COUNTY COUNCIL
Planning Dept Registry Sec
APPLICATION RECEIVED
20 DEC 1991
APPL. REF. 91A/1934

JOHN MOYLAN & ASSOCIATES Consulting Engineers

79 Merrion Square,
Dublin 2.

Telephone: (01) 615337/612475.
Facsimile: (01) 610255.

The Chief Planning Officer,
Dublin County Council,
Block 11,
Irish Life Centre,
Lower Abbey Street,
Dublin 1.

Your Ref.

Our Ref. E-227A/JM

19th December 1991

Re: New Link Block & Offices in Existing Warehouse
For Cable & Wireless (Ireland) Ltd.
At Airton Road, Tallaght

Dear Sirs,

We wish to advise that we have been appointed civil and structural consulting engineers in connection with the above development.

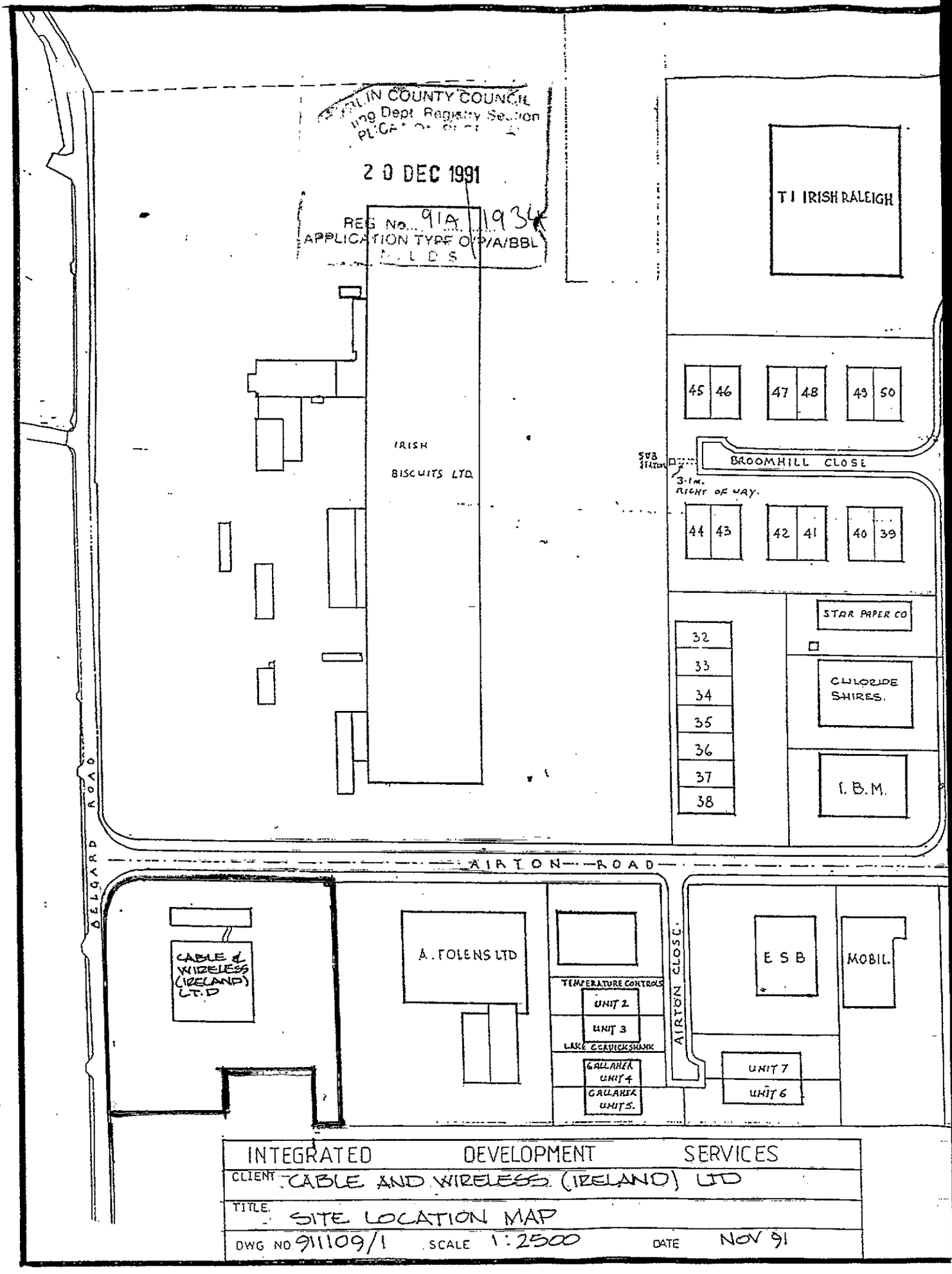
We confirm that all works of a civil and structural content will be designed at this office in accordance with the relevant updated Irish and British Standards and Codes of Practice.

If the job proceeds and if we are engaged to do so the structural works will be supervised by periodic visits to the site in the manner normal to consulting engineers. The frequency of such visits will depend on the apparent need for supervision as the job proceeds.

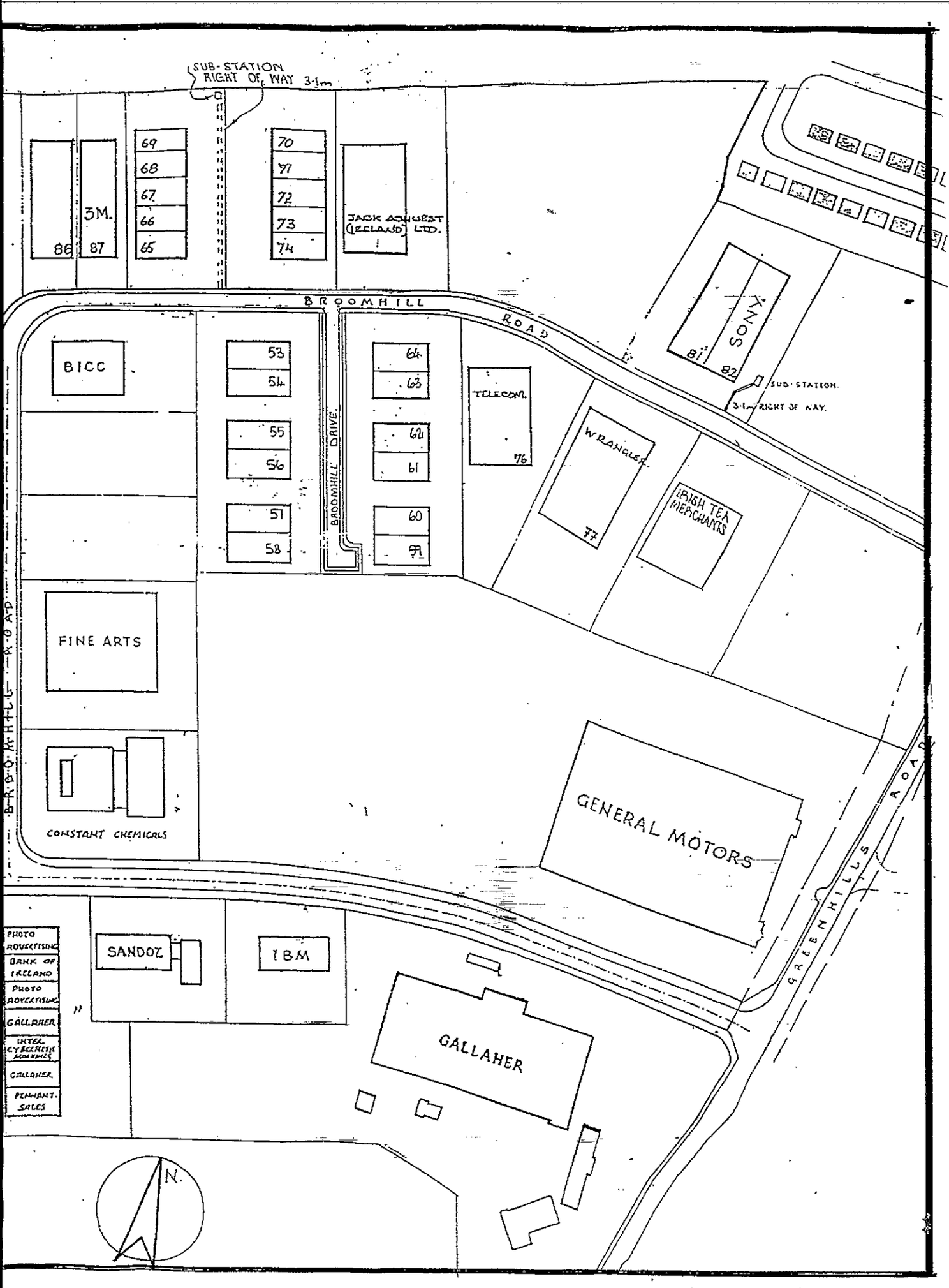
Yours faithfully,

John Moylan

John Moylan
John Moylan & Associates.



INTEGRATED	DEVELOPMENT	SERVICES
CLIENT: CABLE AND WIRELESS (IRELAND) LTD		
TITLE: SITE LOCATION MAP		
DWG NO 911109/1	SCALE 1:2500	DATE NOV 91


SUB-STATION
RIGHT OF WAY 3·1m
69
68
67
66
65
70
71
72
73
74
JACK AUGUST (IRELAND) LTD.
3M.
86
87
BROOMHILL ROAD
BROOMHILL DRIVE
BICC
53
54
55
56
57
58
64
63
62
61
60
59
TELECOM.
76
81
82
SUB-STATION.
3·1m RIGHT OF WAY.
WRANGLER
77
IRISH TEA MERCHANTS
FINE ARTS
CONSTANT CHEMICALS
GENERAL MOTORS
GREENHILLS ROAD
PHOTO ADVERTISING
BANK OF IRELAND
PHOTO ADVERTISING
GALLAHER
INTER. CYBERNETICS SOFTWARES
GALLAHER
PERMANENT SALES
SANDOZ
IBM
GALLAHER
N.

NEW LINK BLOCK & OFFICES IN
EXISTING WAREHOUSE

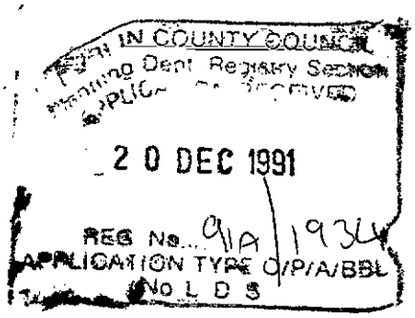
FOR

CABLE & WAIRELESS (IRELAND) LTD,,

AT

AIRTON ROAD,

TALLAGHT



CIVIL AND STRUCTURAL SPECIFICATION

John Moylan & Associates,
Consulting Engineers,
79, Merrion Square,
Dublin 2.

Tel Nos. 615337/612475
Fax No. 610255

December 1991

C O N T E N T S

	PREAMBLE	Page 1
SECTION B	EXCAVATION, EARTHWORKS	Page B 1
SECTION C	CONCRETE	Page C 1
SECTION D	BLOCKWORK	Page D 1
SECTION E	PRECAST CONCRETE FLOOR	Page E 1
SECTION F	STRUCTURAL STEELWORK	Page F 1

PREAMBLE - GENERAL REQUIREMENTS

1.1. DEFINITIONS.

The following terms whenever used in this specification shall be taken to have the meanings indicated below:

The "Engineer" shall mean

John Moylan & Associates,
79, Merrion Square,
Dublin 2.

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

1.2. 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.

1.3. VARIATIONS

No variations to this specification may be made unless approved by the Engineer.

1.4. DEFECTIVE WORK

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 parts of this specification, that part of the works shall be classsed as defective works.

All such work shall be cut out and replaced to the satisfaction of the Engineer.

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

1.5. DESIGN

The reinforced concrete works have been designed generally in accordance with the recommendations contained in British Codes of Practice B.S. 8110. In regard to concrete materials, specification and construction, the Contractor shall comply with the recommendations made in section 6 of B.S. 8110 together with Road Note No. 4 prepared by the Department of Scientific and Industrial Research (Design of concrete mixes) unless specifically excluded or modified hereafter.

1.6. WORKS PROGRAMME

The Contractor shall submit a programme of works for the approval of the Engineer. Notwithstanding such approval, the Contractor shall comply with the Engineer's instructions to carry out any part of the works at any time.

1.7. SITE INVESTIGATIONS

Prior to submitting his tender the Contracator shall carry out a thorough examination of the site. He shall satisfy himself as to his ability to complete the Works in accordance with the Contract and ensure that he has made adequate provision in his tender for all supervision, plant, temporary works, etc. necessary for such completion.

The report of the site investigation carried out by the Engineer is included for the information of the Contractor. This report does not relieve the contractor of his obligation to examine the site thoroughly and to include in his tender for all costs necessary for the satisfactory completion of the Works. The site investigation has been carried out for the specific purpose of design of the permanent works. The interpretation of the data for the design and/ or costing of temporary works and/or alternative design submissions is the responsibility of the Contractor.

Notwithstanding the site investigation report or the tender, variations in ground conditions which are of a normal nature and could reasonably be foreseen by competent Contractors experienced with Works of this nature on sites of similar geological formation, shall not form any basis for a claim.

The Contractor shall be at liberty to carry out a separate site investigation to investigate subsoil conditions entirely at his own cost. In this event, the Contractor shall consult with the Engineer, prior to commencement of the investigation, on the proposed scope of work and on the proposed method of operations and of testing. The results of any such investigation shall be made known to the Engineer immediately they become available to the Contractor, firstly during the course of field work and secondly on completion of laboratory testing including the provision of a report and/or conclusions.

1.8. SETTING OUT

The Contractor will be supplied with the information necessary to establish the lines and levels of the works. Where master pegs and /or levels have been

established by the Engineer, the Contractor shall check the accuracy of their position, level and/or alignment and shall immediately notify the Engineer of any discrepancies. The Contractor shall ensure that the position of all master pegs and, where given, master levels can be accurately located by referencing them by measurement and/or level to reference points. At least two independent reference points shall be provided for each master peg. All master pegs and reference points shall be clearly marked and where appropriate bedded in concrete. They shall be adequately protected during the construction of the Works. Where it is necessary to remove a master peg additional reference pegs shall be provided.

Prior to commencing construction the Contractor shall set out centre lines and grid lines in sufficient detail to ensure that the work is fully compatible with existing features and any proposed constructions. The centre lines of the Works shall be perfectly co-ordinated with and shall be continuous with the centre lines of the adjacent works or existing roads. The Contractor shall, when instructed by the Engineer, make any adjustments necessary to satisfy these requirements. Where appropriate, reference points shall be adjusted to take account of the new locations of the master pegs.

The Contractor shall be fully responsible for the setting out of the works and the Engineer accepts no responsibility for replacing any of the master pegs or master levels where these have been given given.

1.9. WATCHING, LIGHTING AND PROTECTION OF PUBLIC

The Contractor shall provide for protection of the works and property and for the protection and convenience of the public, adjacent owners, and occupiers including all necessary watching, lighting, barriers, guard rails, warning notices and for all precautions required by the Engineer.

1.10. NOISE CONTROL

The Contractor shall comply with the general recommendations set out in BS 5228 Code of Practice for Noise Control on Construction and Demolition Sites together with any specific requirements described in the Contract.

1.11. PROTECTION OF WATERCOURSES FROM POLLUTION

The Contractor shall ensure that waste products of whatever description associated with the works shall not enter watercourses, whether normally dry or not, which are adjacent to the works. The Contractor shall be solely liable for any claims for damage, including consequential loss or damage, resulting from such pollution.

1.12. PROTECTION OF EXISTING WORKS AND AMENITIES

The Contractor shall take all necessary precautions to safeguard all existing buildings and works from damage by construction activity, plant operation, ground water movement, ground movement and settlement, and all other activities associated with the execution of the Contract. If, in the opinion of the contractor, damage will, or is likely to be, caused to mains, services or adjacent structures, he shall submit to the Engineer his proposals for making surveys, monitoring movements or vibrations and provision of adequate temporary supports to avoid such damage.

1.13. CONDITION SURVEY

The Contractor shall carry out a condition survey and make all necessary records (Photographic or otherwise) of existing structures and other properties that could be affected by the execution of the works prior to the commencement of construction. The results of the condition survey shall be served on all interested parties and shall be maintained as a permanent record of the condition of existing adjoining properties prior to the commencement of construction.

1.14. EXISTING SERVICES

If any privately owned service for water, electricity, drainage, etc. passing through the Site is affected by the Works, then the Contractor shall locate it and provide a satisfactory alternative service before cutting the existing service.

The positions of Statutory Undertakers' mains and services and Public Authorities' sewers shall be verified by the Contractor who must satisfy himself as to the exact position of such apparatus. The Contractor shall take all measures required by any Statutory Undertaker or Public Authority for the support and full protection of the pipes, cables, and other apparatus during the progress of the Works.

1.15. FACILITIES TO OTHER CONTRACTORS OR UNDERTAKERS

The Contractor shall, during the period of the Contract, afford all reasonable facility to other Contractors or Service Undertakers who may be engaged in authorised work on or adjacent to the site.

1.16. MATERIALS, EQUIPMENT AND WORKMANSHIP

All materials and equipment shall be of the best of their type and to the satisfaction of the Engineer. Materials shall, as far as possible be of Irish manufacture or origin, and shall conform to the appropriate Irish Standard Specification. Where no Irish Standard Specification exists, materials shall comply with the relevant British Standard.

1.17. SAMPLING AND TESTING

Materials and mixtures shall be tested in accordance with the appropriate Standard Specification when directed by the Engineer.

1.18. ALTERNATIVE MATERIALS

Where alternative specified materials are permitted, the Contractor shall inform the Engineer of his choice at least 4 weeks before the material is to be used, or longer if such period is required for testing of the material by the Engineer. The material shall not then be changed without the Engineers approval.

1.19. TIDY SITE ON COMPLETION OF WORK

On completion of the work the Contractor shall leave the site in a neat and tidy condition to the satisfaction of the Engineer. Carriageway and footpath surfaces shall be thoroughly swept and freed from mud and loose chippings. Boundary walls, fences and adjacent properties shall be cleaned of any splashings or dirt which may be attributed to the work on the contract and paintwork shall be touched up where it has been damaged due to the Contractor's activity.

SECTION B

EXCAVATION, AND EARTHWORKS

1.1. Nature of Ground

The Contractor shall visit the site and satisfy himself as to the general nature of the ground. It is assumed that foundations can be founded on suitable ground at depths not exceeding 1500mm below reduced ground level following general excavation of the site.

Only when the actual foundations have been excavated can the foregoing assumptions be confirmed, and it is, of course, possible that the design of the foundations may have to be altered if unexpected ground conditions are met.

1.2. Excavation

Excavation shall be to the dimensions and levels shown on the drawings or to such other dimensions and levels as required by the Engineers. Any excavation in excess of that required shall be backfilled with lean mix concrete or such other material, which may be approved by the Engineers, and compacted to their satisfaction.

Excavations for foundations in positions adjacent to existing buildings, roads, sewers and pathways shall be carried out in such a manner and in a sequence that any any time these buildings, roadways, sewers and pathways are not endangered by the excavation. Hand excavation shall be included for in the rates. All propping, shoring and methods of excavation must be discussed with the Engineers and have their approval prior to commencement of the work. Such approval by the Engineers will not relieve the Contractor in any way of his responsibility to ensure the safety of the workings and of adjacent buildings.

1.3. Additional Excavation

Any additional excavation required to accommodate the temporary support of sides of excavations shall be provided and backfilled at the Contractor's expense.

1.4. Strip Topsoil

Topsoil shall be excavated in the areas and to the depths required. Note that these depths vary over the site. The volume of topsoil to be preserved for re-use shall be stockpiled in temporary spoil heaps where directed. Topsoil shall be kept separate from other materials. Surplus topsoil shall be removed from site and taken either to the Contractors own tip or to an area selected by the Client.

1.5. Classification of Excavation

Excavation shall be classified as:-

(a) Excavation in any material except solid rock.

(2) Excavation in solid rock.

Rock shall mean natural rock formation which can be removed properly only by means of explosives, boring or wedging or some other recognised method of quarrying solid rock. It shall also include solid boulders of 1 cubic metre or more, in volume. The Engineer shall be sole judge as to when the material excavated comes under the heading of rock. Where rock is encountered it will be measured up and included in the amount of ordinary excavation in the tender where it occurs and it will also be measured up and paid for at the EXTRA price over ordinary excavation as scheduled for rock in the tender.

1.6. Use of Explosives

Explosives shall not be used without the permission of the Engineer and then only in the manner and to the extent he may prescribe.

1.7. Obstructions

Any obstructions at or below formation level shall be reported to the Engineers and shall be dealt with as directed by them.

1.8. Formation

To minimise moisture softening the formation shall be exposed for as short a time as possible. The last 250m.m. of excavation shall not be taken out until concrete is almost ready to start. The formation shall be lightly rammed. Before any concrete is placed the Contractor shall call on the Engineers or their representative to inspetct the formation. Formwork and excavation shall be clean and free from water at the time of placing concrete.

1.9. Planking and Strutting

The sides of excavations shall be planked and strutted in accordance with statutory requirements and to the approval of the Engineer.

1.10. Propping and Shoring

The Contractor will be held entirely responsible for the strength, adequacy and stability of any necessary propping, shoring, strutting and the like, and shall be responsible for making good any loss or damage resulting from any failure in this respect.

1.11. Pumping

The Contractor shall provide all pumping equipment and other works necessary to keep the excavation free of water and to prevent the direct access of water to the formation.

Excavation shall be so arranged that any water entering the cut is immediately drained away to a sump or other point from which it can be pumped or otherwise disposed of. Before any pumping takes place, especially near existing structure, the approval of the Engineers shall be sought, but this approval will not absolve the Contractor from his responsibility for the safety of existing structures. If the Contractor pumps or otherwise puts water into a drain, he shall be responsible for seeking all permissions and for removing from the system all deposits caused thereby.

12. Filling

Except under foundations, layers of approved filling material consolidated to the satisfaction of the Engineers shall be placed below all ground slabs, on top of which a layer of lean mix shall be placed, all to receive a 1000 g. Visqueen waterproof membrane placed as shown on the drawings. This fill shall be applied only when the formation level is free of mud and slurry, the formation left shall be exposed for as short a time as possible between removing unsuitable soil and applying the fillings. The formation level shall be lightly rammed and generally levelled before filling commences. Backfilling around pads, strip footings and retaining walls shall also be in this approved fill material.

Granular filling where specified shall comprise either of:-

gravels, crushed rock or crushed concrete, to the following gradings (by weight).

SIZE	GRAVELS (% passing)	CRUSHED ROCK/CONCRETE (% passing)
75m.m.	100%	100%
40m.m.	85-100	85-100
10m.m.	45-100	40-70
5m.m.	25-85	25-45
600 Microns	8-45	8-22
75 Microns	0-10	0-2

The Contractor shall supply a grading analysis, done by an independent testing authority, indicating compliance of the proposed filling material with this specification.

The filling shall be deposited in layers not exceeding 250m.m. when compacted and shall be at a moisture level content within the range of 5 -8% for gravel and not exceeding 5% for the crushed stone or concrete.

Each layer shall be compacted to the satisfaction of the Engineers with approved mechanical equipment until the full density is not less than 95% of the density obtained by compacting a sample of the soil, at its in-situ moisture content, by the methods specified in B.S. 1377 Test 12 or equivalent when placed on a hard base. Compaction equipment and the number of passes shall comply with the requirements of 'Specification for Road Works' - Table 8/1 as published by D.O.E.

1.13. Underpinning of Existing Walls

The Contractor shall be responsible for ensuring that his operations do not in any way impair the safety or conditions of existing structures or existing supports and shoring to them. He shall provide any temporary supports required for this purpose, and shall carefully inspect the condition of the structure both before and during execution of the work, and immediately inform the Engineer if he considers that any more stringent procedure than that specified is necessary.

Underpinning is to be carried out to the satisfaction of the Engineer and Local Authority in short sections generally not exceeding 1000 m.m. in length, in such a manner that adequate support is at all times maintained to the underside of the wall for at least three-quarters of its length and that sections of work in progress at any one time are separated by a distance of at least 4000 m.m.

Projecting portions of the existing brick and/or concrete footings are to be carefully cut off where directed, and the underside of the footings are to be cleaned and hacked free of any dirt, soil or loose material before underpinning.

The body of the underpinning is to be constructed in mass concrete mix Type A using Rapid Hardening Portland Cement, and is to be cast to the widths and depths shown on the drawings. The bottoms of excavations are to be prepared as specified for foundations generally.

Excavation and concreting of any section of underpinning shall be carried out on the same day.

The mass of the concrete shall be poured to a level which shall be a minimum of 225 m.m. above the underside of existing foundation. The concrete below the existing foundation shall be well compacted with a bent podger or other means so that the concrete penetrates all the gaps of the underside of the existing footing.

Any 'letterboxes' or similar used by the Contractor to place concrete in this fashion shall be removed after one day as may be necessary to achieve a flush outside surface. Such removal shall be effected without damage to the body of the underpinning concrete.

Alternatively -

The mass of the concrete shall be poured to a level 75m.m. below the underside of existing foundation. The concrete shall be well compacted with a bent podger or other means so that the concrete penetrates all the interstices of the underside of the existing footing. When the mass concrete has set, the final pinning up shall be carried out with a damp stiff Grade 30 concrete mix (using REPC) well rammed into the 15m.m. gap.

Excavation to any section of underpinning shall not be commenced until at least 48 hours after completion of any adjacent sections of the work.

The Contractor shall keep a record on site of the sequence and dimensions of underpinning as actually executed, including the dates of starting excavation, casting concret and pinning up for each section.

1.14. Protection

Protect as necessary, all work described in this section during the progress of the works and clean down and leave perfect on completion.

SECTION C.

CONCRETE

1. FORMWORK AND SURFACE FINISH.

1.1. Construction

1 Formwork shall include all temporary or permanent forms required for forming the concrete together with all temporary construction required for their support.

2 All formwork shall be so constructed that there shall be no loss of material from the concrete.
After hardening the concrete shall be in the position and of the shape, dimensions and surface finish described in the Contract.

3 Where internal metal ties are permitted, they or their removable parts shall be extracted without damage to the concrete and the remaining holes filled with mortar. No permanently embedded metal part shall have less than 35mm cover to the finished concrete surface.

1.2. Formed Surfaces - Classes of Finish.

1 The requirements extra to those given in Clause 1.1.to provide the class of finish described in the Contract shall be:

Class F1 Nil

Class F2 The irrigularities in the finish shall be no greater than those obtained from the use of wrought thicknessed square edged boards arranged in a uniformed pattern. The finish is intended to be left as struck but imperfections such as fins and surface discolouration shall, if required, be made good by methods approved by the Engineer.

Class F3 The formwork shall be lined with a material approved by the Engineer to provide a smooth finish of uniform texture and appearance. This material shall leave no stain on the concrete and shall be so joined and fixed to its backing, that it imparts no blemishes. It shall be of the same type and obtained from only one source throughout any one structure. The Contractor shall make good any imperfections in the resulting finish, as required by the Engineer. Internal ties and embedded metal parts will be allowed only with the Engineer's specific approval.

2 The Contractor shall ensure that permanently exposed surfaces to Class F2 and F3 finish are protected from rust marks, spillage and stains of all kinds.

1.3. Preparation of Formwork before Concreting.

1 The inside surfaces of forms shall, except for permanent formwork, or unless otherwise agreed by the Engineer, be coated with an approved material to prevent adhesion of the concrete. Release agents shall be applied strictly in accordance with the manufacturer's instructions and shall not come into contact with the reinforcement or prestressing tendons and anchorages. Different release agents shall not be used in formwork to concrete which will be visible in the finished Works.

2 Immediately before concreting, all forms shall be thoroughly cleaned out.

1.4. Removal of Formwork.

1 The Engineer shall be informed in advance when the Contractor intends to strike any formwork.

2 Attention is drawn to the provisions of Clause 1.4.4

3 The time at which the formwork is struck shall be the Contractor's responsibility, but the minimum periods between concreting and the removal of forms shall be as follows:-

Sides of beams, walls columns and piles	24 hours.
Soffits of beams and slabs.	7 days.

4 The periods stated above are based on a constant surface temperature of the concrete of 16°C and the use of ordinary Portland cement. They shall be increased during cold weather as directed by the Engineer, and may be changed if other types of cement are used, subject to the Engineer's agreement.

5 Formwork shall be constructed so that the side forms of members can be removed without disturbing the soffit forms and, if props are to be left in place when the soffit forms are removed, these props shall not be disturbed during the striking.

6 For prestressed units the side forms shall be eased as early as possible and the soffit forms shall permit deformation of the member when the prestress is applied.

7 All formwork shall be removed without damage to the concrete.

8 Where it is intended that formwork is to be re-used, it shall be cleaned and made good to the satisfaction of the Engineer.

1.5. Unformed Surfaces - Classes of Finish.

1 Class U1 The concrete shall be uniformly levelled and screeded to produce a plain or ridged surface as described in the Contract. No further work shall be applied to the surface unless it is used as the first stage for a Class U2 or Class U3 finish.

2 Class U2 After the concrete has hardened sufficiently, the concrete Class U1 surface shall be floated by hand or machine sufficiently only to produce a uniform surface free from screed marks.

3 Class U3 When the moisture film has disappeared and the concrete has hardened sufficiently to prevent laitance from being worked to the surface, a Class U1 surface shall be steel-trowelled under firm pressure to produce a dense smooth uniform surface free from trowel marks.

1.6. Remedial Treatment of Surfaces.

1 Any remedial treatment to surfaces shall be agreed with the Engineer following inspection immediately after removing the formwork and shall be carried out without delay.

2 Any concrete, the surface of which has been treated before being inspected by the Engineer, shall be liable to rejection.

1.7. Tolerances.

On all setting out dimensions 3.00 metres and over a tolerance of plus or minus 6mm will be allowed. On all setting out dimensions under 3.00 metres a tolerance of plus or minus 3mm will be allowed. A tolerance of plus or minus 3mm will be permitted on the cross-section dimensions of structural members, unless otherwise required by the drawings. Columns and walls shall not be more than 6mm out of plumb in their storey height and not more than 19mm out of plumb in their full height. The Contractor will be responsible for the cost of all corrective measures required by the Engineer to rectify work which is not constructed within the tolerances set out above.

2. STEEL REINFORCEMENT.

2.1. GENERAL

1 Steel reinforcement shall be stored in clean conditions. It shall be clean and free from loose rust and loose mill scale at the time of fixing in position and subsequent concreting.

2.2. BENDING OF REINFORCEMENT.

1 Reinforcement shall be bent to the dimensions given in the Bar Schedules.

2 All reinforcement shall be bent at temperatures in the range of 5°C and 100°C.

3 Cold worked and hot rolled bars shall not be straightened or bent again once having been bent. Where it is necessary to bend mild steel reinforcement already cast in concrete, the internal radius of bend shall not be less than twice the diameter of the bar.

2.3. PLACING OF REINFORCEMENT.

1 Reinforcement shall be placed and maintained in the position shown in the Contract. Unless otherwise permitted by the Engineer all intersecting bars shall be tied together and the end of the tying wire shall be turned into the main body of concrete.

2 No splices shall be made in the reinforcement except where described in the Contract or where approved by the Engineer.

2.4. COVER BLOCKS.

1 Cover blocks required for ensuring that the reinforcement is correctly positioned, shall be as small as possible consistent with their purpose, of a shape acceptable to the Engineer, and designed so that they will not overturn when the concrete is placed, They shall be made of concrete with 10mm maximum aggregate size and the mix proportions shall comply with Table No 1 or 2 of Clause 3.1 to produce the same strength as the adjacent concrete. Wire shall be cast in the block for the purpose of tying it to the reinforcement.

2.5. WELDING OF REINFORCEMENT.

1 Reinforcement in structures shall not be welded except where permitted in the Contract. All welding procedures shall be subject to the prior approval of the Engineer in writing.

2.6. ATTENDANCE OF STEELFIXER.

During concreting a competent steelfixer shall be in continuous attendance on the concreters to adjust and correct the positions of any reinforcement which may be displaced.

2.7. STANDARDS.

All reinforcement shall comply with the current Irish and/or British Standards:

Mild Steel reinforcement	BS 785
Cold Worked square twisted reinforcement	BS 1144
Hard drawn steel wire fabric mesh.	BS 1221

3. CONCRETE

3.1. CONCRETE MIX DESIGN.

1 Mixes for the classes of concrete shown in Table No 1 shall be designed by the Contractor. Alternatively for Classes 30 and 20, the mixes in Table No. 2 may be used. The class of concrete is denoted by the minimum 28 day works cube strength and the maximum size of aggregate.

2 The cement content in any mix shall not exceed 530kg/M^3 of concrete. The quantity of water used shall not exceed that required to produce a concrete with sufficient workability to be placed and compacted where required.

3.2. CONCRETE FOR ANCILLARY PURPOSES.

1 Class E concrete shall be composed of ordinary Portland cement and aggregates complying with BS 882 including all-in aggregate within the grading limits of Table 3 of the British Standard.

2 The weight of cement mixed with 0.28M^3 of combined or all-in aggregate shall not be less than 50.0kg. The mix shall be proportioned by weight or by volume.

3 The concrete shall be mixed by machine or by hand to a uniform colour and consistency before placing. The quantity of water used shall not exceed that required to produce a concrete with sufficient workability to be placed and compacted where required.

4 The concrete shall be compacted by hand or by mechanical vibration.

3.3. TRIAL MIXES.

1 No structural concrete shall be placed in the Works until the relevant mix has been approved by the Engineer.

2 When the Contractor designs the mix, he shall, at least 35 days before the commencement of concreting, have trial mixes prepared in a laboratory to be approved by the Engineer.

TABLE NO. 1. DESIGNED MIXES

Class	Minimum cement content in concrete	Minimum compressive strength 28 days after mixing	
		Preliminary test	Works test.
$N/mm^2/mm$	Kg/M^3	N/mm^2	N/mm^2
50/40	390	60.0	50.0
50/20	420	60.0	50.0
50/10	470	60.0	50.0
40/40	340	50.0	40.0
40/20	360	50.0	40.0
40/10	390	50.0	40.0
30/40	310	40.0	30.0
30/20	330	40.0	30.0
30/10	360	40.0	30.0
20/40	280	30.0	20.0
20/20	300	30.0	20.0

TABLE NO. 2 STANDARD MIXES

Class of concrete denoted by 28 day minimum works cube strength	Weight of dry sand per 50 kg. cement	Weight of dry gravel, or crushed rock, coarse aggregate, 50kg.						
N/mm^2	Kg.	Maximum size	Maximum size			Maximum size		
Workability		Low only	Low	Medium	High	Low	Medium	High
Slump (m.m.)		0-6	12-25	25-50	50-120	25-50	50-100	100-175
Compacting Factor		.80-.86	.82-.88	.88-.94	.94-.97	.82-.88	.88-.94	.94-.97
30.0	70	100	150	115	90	180	140	115
20.0	90	Not required	190	160	140	225	190	170

NOTES

1 Cement shall comply with IS 1 or BS 12 or BS 146. Aggregate shall comply with IS 5 or BS 882 or BS 1047. The coarse aggregate shall be graded within the terms of the relevant IS or BS.

2 If the specific gravity of either the coarse or the fine aggregate differs significantly from 2.6, the weight of each type of aggregate should be adjusted in proportion to the specific gravity of the materials.

3 The weights are based on the use of a sand having a grading within the limits of grading Zone 2 in BS 882. See Clause 209e of CP114.

4. If a crushed stone sand or a crushed gravel sand is used instead of sand, the weight of the coarse aggregate should be reduced by at least 12 Kg without alterating the weight of sand.

4 The weight of the fine aggregate should be decreased by at least 12Kg if its grading is within the limits of grading Jone 3 of BS 882 and increased by at least 12Kg if its grading is within the limits of grading Zone 1 of BS 882; the weight of coarse aggregate should be increased or decreased respectively, by the same amount so that the total weight of aggregate remains the same.

TRIAL MIXES - continued

The concrete from each mix shall be tested in accordance with Clause 3.8.and must satisfy the strength requirements of Table No. 1.

3 When the mix has been approved, no variations shall be made in the proportions, the original source of the cement and aggregates or in the type, size and grading zone of the latter without the consent of the Engineer who may require further tests to be made.

4. The Engineer may also require practical tests to be made on the Site by filling trial moulds to confirm the suitability of the mix for the Works. In these tests, the type of plant used for mixing, the method of compaction used, and the formwork face to the mould shall be similar in all respects to those intended for use in the Works.

5 When the Contractor intends to purchase factory- made precast concrete units, the Engineer may dispense with trial mixes and laboratory tests, provided that evidence is given which satisfies him that the factory regularly produces concrete which complies with the Specification. The evidence shall include details of mix proportions, water: cement ratio, workability and strengths obtained at 28 days and 7 days.

3.4. ADMIXTURES.

1 Unless agreed by the Engineer neither admixtures nor cement containing additives shall be used.

3.5. DELIVERY AND STORAGE OF MATERIALS.

1 Cement shall be stored in a dry weather-proof shed with a raised wooden floor or in a silo and shall be delivered in quantities sufficient to ensure that there is no suspension or interruption of the work of concreting at any time. If stored in sheds, each consignment shall be kept separate and distinct.

2 Coarse aggregate, unless otherwise agreed by the Engineer, shall be delivered to the Site in separate sizes (2 sizes when the maximum size is 20mm and 3 sizes when the maximum size is 40mm or more).

3 All aggregate brought upon the Site shall be kept free from contact with deleterious matter and in the case of aggregate passing a 5mm sieve they shall be deposited on the site of mixing for not less than 8 hours before use. Aggregates of different sizes shall be stored in different hoppers, or different stockpiles which shall be separated from each other.

3.6. MIXING CONCRETE.

1 The weighing and water-dispensing mechanisms shall be maintained in good order. Their accuracy shall be maintained within the tolerances described in BS 1305 and checked against accurate weights and volumes when required by the Engineer.

2 The weights of cement and each size of aggregate as indicated by the mechanisms employed shall be within a tolerance of $\pm$ 2 per cent of the respective weights per batch agreed by the Engineer. The weight of the fine and coarse aggregates shall be adjusted to allow for the free water contained in them. The water to be added to the mix shall be reduced by the quantity of the free water contained in the fine and coarse aggregates, which shall be determined by the Contractor by a method approved by the Engineer immediately before mixing begins, and further as the Engineer requires.

3 Unless otherwise agreed by the Engineer, concrete shall be mixed in a batch type mixer manufactured in accordance with BS 1305 or in a batch type mixer, a specimen of which has been tested in accordance with BS 3963 and having a mixing performance within the limits of Table 6 of BS 1305. Where appropriate the batch capacity, method of loading, mixing time and drum speed shall conform to the details furnished in accordance with the requirements of BS 3963 for the mix which corresponds most closely to the mix proportions being used. The mixing blades of pan mixers shall be maintained within the tolerances specified by the manufacturer of the mixer and the blades shall be replaced when it is no longer

possible to maintain the tolerances by adjustment.

4 Mixers which have been out of use for more than 30 minutes shall be thoroughly cleaned before any fresh concrete is mixed. Unless otherwise agreed by the Engineer, the first batch of concrete through the mixer shall then contain only two thirds of the normal quantity of coarse aggregate. Mixing plant shall be thoroughly cleaned before changing from one type of cement to another.

5 Concrete shall not be mixed when the air temperature in the shade is below 3°C unless special precautions are taken which have been approved by the Engineer. No frozen material or materials containing ice shall be used.

6 During hot weather the Contractor shall ensure that the constituent materials of the concrete are sufficiently cool to prevent the concrete from stiffening in the interval between its discharge from the mixer and compaction in its final position.

3.7. READY-MIXED CONCRETE.

1 Ready-mixed concrete as defined in BS 1926, batched off the Site, may be used only with the agreement of the Engineer and shall comply with all requirements of the Contract.

2 The concrete shall be carried in purpose made agitators, operating continuously, or truck mixers. The concrete shall be compacted and in its final position within 2 hours of the introduction of cement to the aggregates, unless a longer time is agreed by the Engineer. The time of such introduction shall be recorded on the Delivery Note together with the weight of the constituents of each mix.

3 When truck mixed concrete is used, water shall be added under supervision either at the Site or at the central batching plant as agreed by the Engineer but in no circumstances shall water be added in transit.

4 Unless otherwise agreed by the Engineer, truck mixer units and their mixing and discharge performance shall comply with the requirements of BS 4251. Mixing shall continue for the number and rate of revolutions recommended in accordance with item 9 in Appendix B of BS 4251 or, in the absence of the manufacturer's instructions, mixing shall continue for not less than 100 revolutions at a rate of not less than 7 revolutions per minute.

3.8. SAMPLING

Sampling shall be in accordance with the requirements of BS 1881. Cubes for the works tested shall be made by the Contractor at regular intervals in groups of six. The location and time of such samples shall be agreed with the Engineer.

The Cubes shall be tested by the Nominated Testing Authority, three at 7 days and three at 21 days where Portland cement is used.

3.9. TRANSPORT AND PLACING.

1 The method of transporting and placing concrete shall be to the approval of the Engineer. Concrete shall be so transported and placed that contamination , segregation or loss of the constituent materials does not occur.

2 All formwork and reinforcement contained in it shall be clean and free from standing water, snow or ice immediately before the placing of the concrete.

3 Concrete shall not be placed in any part of the structure until the Engineer's approval has been given.

4 If concreting is not started within 24 hours of approval being given, approval shall again be obtained from the Engineer. Concreting shall then proceed continuously over the area between construction joints. Fresh concrete shall not be placed against in-situ concrete which has been in position for more than 30 minutes unless a construction joint is formed in accordance with Clause 311. When in-situ concrete has been in place for 4 hours no further concrete shall be placed against it for a further 20 hours.

5 Concrete when deposited shall have a temperature of not less than 5°C and not more than 32°C. It shall be compacted in its final position within 30 minutes of discharge from the mixer unless carried in purpose made agitators, operating continuously, when the time shall be within 2 hours of the introduction of cement to the mix and within 30 minutes of discharge from the agitator.

6 Except where otherwise agreed by the Engineer, concrete shall be deposited in horizontal layers to a compacted depth not exceeding 450mm where internal vibrators are used or 300mm in all other cases.

7 Unless otherwise agreed by the Engineer, concrete shall not be dropped into place from a height exceeding 1,800mm When trucking or chutes are used they shall be kept clean and used in such a way as to avoid segregation.

8 No concrete shall be placed inflowing water. Underwater concrete shall be placed in position by tremies, or by pipeline from the mixer. Full details of the method proposed shall be submitted in advance to the Engineer and his approval obtained before placing begins. Where the concrete is placed by a tremie, its size and method of operation shall be in accordance with Civil Engineering Code of Practice 'Foundations'. During and after concreting under water, pumping or dewatering operations in the immediate vicinity shall be suspended until the Engineer permits them to be continued.

3.10. COMPACTION OF CONCRETE.

1 All concrete shall be compacted to produce a dense homogeneous mass. Unless otherwise agreed by the Engineer, it shall be compacted with the assistance of vibrators. Sufficient vibrators in serviceable condition shall be on site so that spare equipment is always available in the event of breakdown.

2 Internal vibrators shall be capable of producing not less than 10,000 cycles per minute, and external vibrators not less than 3,000 cycles per minute.

3 Vibration shall not be applied by way of the reinforcement. Where vibrators of the immersion type are used, contact with reinforcement and all inserts shall be avoided, so far as is practicable.

4 Concrete shall not be subjected to vibration between 4 and 24 hours after compaction.

3.11. CONSTRUCTION JOINTS.

1 The position and detail of any construction joints not described in the Contract shall be subject to the approval of the Engineer, and shall be so arranged as to minimise the possibility of the occurrence of shrinkage cracks. The maximum dimension of any pour shall be approx. 9m.

2 The upper surface of lifts of concrete walls and columns shall be horizontal and if the formwork extends above the joint on the exposed face it shall be cleaned of adhering concrete before the next lift is placed. The concrete placed immediately above a horizontal construction joint shall contain only two thirds the normal quantity of coarse aggregate, shall not be the first batch through the mixer and shall be thoroughly compacted and worked against the existing concrete

3 In the case of vertical surfaces, a 1:1 slurry of cement and concreting sand shall, wherever possible, be well worked into them immediately before the fresh concrete is placed.

4 Where sections of the work are carried out in lifts, the reinforcement projecting above the lift being cast shall be adequately supported so as to prevent movement of the bars during the casting and settling of the concrete.

5 Wherever possible laitance and all loose material shall be removed while the concrete is still green and no further roughening shall then be required. Where this is not possible, it shall be removed by mechanical means provided the concrete has been in position for more than 24 hours. The roughened surface shall then be washed with clean water.

6 Where joints occur in waterproof concrete the stop ends shall be removed within 12 hours after pouring and the laitance removed by compressed air and water jet to the satisfaction of the Engineer. In waterproof structures no pour shall exceed 50 sq. m in area.

3.12. CURING OF CONCRETE.

1 Immediately after compaction and for 7 days thereafter concrete shall be protected against harmful effects of weather, including rain, rapid temperature changes, frost and from drying out. The methods of protection used shall be subject to the approval of the Engineer. When elevated-temperature curing is used, the temperature of the concrete shall not exceed 50°C within 2 hours nor 100°C within 6 hours of the concrete being placed; the rise in temperature within any period of 30 minutes shall not exceed 10°C. The rate of subsequent cooling shall not exceed the rate of heating. The method of curing employed shall prevent loss of moisture from the concrete. Details of the method to be used shall be subject to the approval of the Engineer.

3.13. EARLY LOADING

1 Except as specified for prestressed concrete, concrete shall at no time be subjected to loading, including its own weight, which will induce a compressive stress in it exceeding 0.33 of its compressive strength at the time of loading or of the specified 28 day strength.

2 For the purpose of this clause, the assessment of the strength of the concrete and the stresses produced by the loads shall be subject to the agreement of the Engineer.

3.14. WATERPROOF CONCRETE (i.e. BASEMENT RETAINING/WALLS AND FLOORS DESIGNED IN COMPLIANCE WITH CP 102)

When the use of waterproof concrete is specified, it shall be the Contractor's responsibility to ensure that the resulting construction is watertight. The Contractor shall carry out at his own cost all necessary remedial measures which the Engineer requires.

3.15. INSPECTION

Inspection of reinforcement and formwork prior to concreting: no concrete shall be poured until the reinforcement has been checked in its final position in the formwork by the Engineer. Sufficient notice shall be given to allow such inspection to take place. Before starting to pour concrete all the reinforcement for that pour shall be in position and properly fixed.

SECTION D

BLOCKWORK

1.1. General

The work shall be carried out in accordance with the requirements of the current editions of the following code of practice and British Standard together with the instructions of this Specification and any further instructions deemed necessary by the Engineer:-

B.S. 5628 ; Part 1: 1978 "Structural Use of Masonry".
B.S. 5628 : Part 3: 1985 "Use of Masonry"
I.S. 325 : Part 1: 1986 "The Structural Use of Unreinforced Masonry.

The Contractor's attention is drawn to the fact that Architectural details of the walls shall be as shown on the Architect's drawings and in accordance with his specification. The colour of bricks or blocks to be used shall be selected by the Architect.

1.2. Materials and Properties

1.2.1. Blocks and Bricks

The minimum standards of concrete blocks concrete bricks and clay bricks are set out in clauses 1.2.2., 1.2.3. and 1.2.4. Reference shall be made to the drawings and to table 13 of B.S. 5628 : Part 3: 1985 for higher standard of bricks and blocks required for particular elements of construction as indicated.

1.2.2. Concrete Blocks - Solid and Hollow for General Use.

Concrete blocks shall be of approved manufacture to I.S.S. 20. All blocks, shall hav a minimum guaranteed crushing strength of $5N/mm^2$. Sample blocks shall be tested at a laboratory to be approved by the Engineer. Blocks must be left at least 28 days after casting before being used. All blocks shall be well compacted and true and square in shape.

1.2.3. Concrete Bricks for General Use.

Concrete bricks shall be of approved manufacture to I.S.S. 189. All bricks shall have a minimum guaranteed crushing strength of $15N/mm^2$. Sample bricks shall be tested at a laboratory to be approved by the Engineer. Bricks must be left at least 28 days after casting before being used. All bricks shall be well compacted and true and square in shape.

1.2.4. Clay Bricks for General Use.

Clay bricks shall be of approved manufacture of ordinary quality to I.S.S. 91. They shall have a water absorption of not greater than 12% and a minimum guaranteed crushing strength of $15N/mm^2$.

1.2.5. Mortar

1.2.5.1. General

The mixing and use of mortars shall be in accordance with the recommendations given in B.S. 5390

1.2.5.2. Material for Mortar

a) Cement - The cement used in the mortar shall be in accordance with I.S.S.I. The use of high alumina cement is not permitted.

b) Lime - Lime used in mortars shall be non-hydraulic limes to conform to the requirements of I.S.S.8.

c) Sand - The sand shall be free from deleterious substances and shall comply with the requirement for quality and grading of sand for mortar given in .B.S.S. 1200.

d) Water - Water shall be free from impurities that are harmful to the mortar. Obtain approval from the Engineer of the source of water supply if the supply is not obtained from a public mains supply.
Where the quality of supply is doubtful the water shall be tested in accordance with B.S. 3148 or equivalent.

e) Admixture - Admixtures may be used subject to the Engineer's written approval.

f) Colouring Compounds - Colouring compounds shall be added to the mortar as required by the Architect.

1.2.5.3. Preparation of Mortars

a) Mix Proportions - The following cement-lime mortar shall be used for all walling constructed using masonry units to clauses 1.2.2., 1.2.3. and 1.2.4.

Mix	Cement	Non-hydraulic lime	Clean Washed Siliceous Sand.
1:1:6	50kg.	50kg.	0.213 cu.m

Reference shall be made to tables 13 and 15 of B.S. 5628: Part 3 1985 for mortar mixes to be used in conjunction with higher standard bricks and blocks.

b) Batching of Mortars

The materials for the mortar shall be measured accurately to conform with the above specified mix proportions either by weight batching or by use of gauge boxes. The proportions of sand are based upon the use of dry sand. Adjust the proportions of sand for bulking due to moisture content. If admixtures are used, the proportions should be further adjusted in accordance with the manufacturer's written instructions.

c) Mixing of Mortars

The mortar shall be mixed by machine. Clean the mixer before starting to mix. Mortars containing cement shall be used within one hour of the mixing of the cement and water and any mortar not then used shall be discarded and not retemptered.

d) Ready Mixed Mortar

Ready mixed sand-lime mortar shall comply with the requirements of B.S. 4721 or equivalent.

1.2.6. Reinforcement, Wall Ties and Bonding Ties

a) Bed Joint Reinforcement (Provisional)

Bed joint reinforcement where shown shall be either of expanded metal complying with the requirements of B.S. 405 or of the "tramline" or truss type (such as Brickforce, Dur-O-Wal or similar approved by the Engineer) made from hard drawn steel wire with an effective diameter of between 3 and 5m.m. The reinforcement shall be galvanised if it is to be used in a wall exposed to the weather i.e. outer leaf of cavity wall. The type of reinforcement to be used shall be indicated on the drawings.

b) Cavity Wall Ties

Cavity wall ties shall be vertical twist ties made from austenitic stainless steel strip complying with the requirements of B.S. 1449 : Part 2 and B.S. 970: Part 4, minimum 18/8 composition and excluding free machining specifications with split end anchorage or their equivalent subject to the Engineer's approval and shall conform to the requirements of the Irish Standard for Wall Ties for Cavity Wall construction and/or B.S. 1243, 1978. The Contractor shall supply the Engineer with written evidence from an approved testing authority to show that the wall ties meet the above specification.

c) Bonding Ties

Metal strips for bonding blockwork and brickwork to concrete shall be austenitic stainless steel (material specification as fo cavity wall ties) dovetail slot and anchor ties or their equivalent subject to the Engineer's approval. Metal strips for bonding blockwork and brickwork to structural steelwork shall be austenitic stainless steel (material specification as for cavity wall ties) vertical twist ties with one end split and the other end turned down. The turned down end shall be pre-drilled to suit a shot fixing. The type of

shot fixing shall be approved by the Engineer. The ties shall be 2.5M x 20mm min. size. Metal strips for bonding brick to brick or block to block shall be flat austenitic stainless steel (material specification as for cavity wall ties) 2.5mm x 20mm. min long.

1.2.7. Damp Proof Courses

Damp proof courses shall be used in accordance with the latest edition of the British Standard Code of Practice CP 102.

D.P.Cs shall be laid on a smooth bed of fresh mortar. Materials for damp proof courses shall be in accordance with I.S. 57: 1972. In laterally loaded walls subject to wind loading only, a"non -slip" type damp proof course shall be used at the base of the wall.

The details and arrangement of the damp proof courses shall be obtained from the Architect.

1.2.8. Handling and Storage of Materials.

a) Cement

Cement shall be stored in such a manner as to ensure that it is not affected by damp and shall be used in the order of delivery.

b) Lime

Store under weatherproof conditions on a raised floor or in suitable silos.

c) Sand

Sands shall be stored separately according to type so that they will not be contaminated. They shall be stored on a hard self drained area.

d) Metals

Reinforcement and ties shall be protected from becoming contaminated, and reinforcement shall be free from loose mill scale and rust.

e) Blocks

Blocks shall be carefully unloaded so as to avoid damage to the units. All blocks shall be stacked on prepared level areas to ensure that the stack is stable and blocks used for fairfaced work shall be protected to prevent the exposed faces from becoming stained or marked. It is essential that blocks are protected from the rain and sun by covering with a suitable protecting membrane.

1.2.9. Testing

Blocks shall be tested by an approved testing authority. A sum of money shall be provided in the Bill of Quantities for such testing. This sum is provisional and at the disposal of the Engineer.

1.3. Workmanship

1.3.1. General

a) Dimensions

All walling shall be set out and built to the correct dimensions, thickness and heights shown on the drawings.

b) Uniformity

All perpends, quoins, joints etc., shall be kept strictly true and square, and other angles shall be plumbed and the whole properly bonded or tied together and the bed joints levelled as the work proceeds. Build walling in level lifts. Where the walling is raked back no part shall rise more than 1.2m above the general level.

c) Bond

The brickwork and blockwork shall be built to the bond indicated on the Architect's drawings. Where no bond is indicated, the units shall be laid in stretcher bond. Where possible the coursing shall be arranged to allow a full block to be positioned directly beneath a lintel bearing. Leave toothing

to provide for the bonding of future work. Where shown on the drawings, form toothing in existing work to provide adequate bond for new work.

d) Cutting

Blocks used for facing shall be cut with a masonry saw. Where it is necessary to cut the blocks wet they shall be allowed to dry before being built into the wall.

e) Chases, Ducts, Openings etc.

The positions and size of the chasings shall be as indicated on the drawings and shall be carried out neatly using a chasing tool. Form ducts, openings etc. in the walling as the work proceeds.

f) Colour Variaition

Distribute evenly throughout any facing work bricks and blocks of verying shades of the same colour. MIx deliveries which vary in colour to avoid contrast between adjoining lifts.

g) Weather

No block laying shall be carried out when the temperature is at or below $3^{o}C$ unless precautions are taken to ensure a minimum temperature of $4^{0}C$ in the work when laid and thereafter to maintain the temperature above freezing point until the mortar has hardened. Should any walling be damaged by front it shall be pulled down and made good at the Contractor's expense. Keep dry each lift including the top surfaces until the commencement of the next-left or other superimposed work. It is essential that internal blockwork walling be protected from rain until such time as the building has been weathered.

h) Laying

Each block and brick shall be laid and adjusted to its final position while the mortar is still plastic. The maximum height of wall built in any one day shall not exceed 1.5m

1.3.2. Mortar Joints

a) Bedding

All blocks shall be laid on a full mortar bed. Vertical joints shall be filled. All joints are to be nominally 10m.m. thick

b) Excess Mortar

Any mortar which extrudes from the joint of fairfaced units shall be cut away and on no account is mortar to be smeared onto the face of the block .

c) Exposed Joints

Details of the type of finish required in all permanently exposed joints shall be obtained from the Architect.

1.3.3. Control Joints

Control joints shall be constructed as indicated on the Engineer's drawings. Joints need not be continued below the ground floor D.P.C. level. The vertical joints between panels or between a panel and another feature should be straight and be produced by terminating alternative courses in full and half units bedded in the normal way. The subsequent sawing of walling to form a contraction or expansion joint will not be allowed. If the walling is finished with a thick applied finish such as plaster or render, the edge of same shall be either chamfered or alternatively the joint may be covered with an architrave or other strip material, care being taken that the cover strip is fixed to the wall on one side of the joint only to allow relative movement to occur at the joint.

The joint sealing compound shall be an approved polysulphide based sealant such as "Thioflex 600" by Expandide or equal and shall be used strictly in accordance with the manufacturer's recommendations bearing in mind gap width, joint location etc.

Long runs of walling of clay bricks shall be provided with a 10mm wide vertical expansion joint about every 12m or as indicated on

the Engineer's drawings. The stability of the wall at an expansion joint shall be achieved as indicated on the Engineer's drawings without the use of metal ties across the joint. Expansion joints shall be cleaned out to ensure that mortar does not bridge the joint. The gap shall subsequently have a fully compressible material (not fibre-board) inserted into the joint and be pointed up with a joint sealing compoind as described above.

1.3.4. Double Leaf (Cavity) Walls.

a) Wall Ties

The walls shall be built with cavities of the width shown on the drawings and tied together with ties embedded in the mortar at least 50mm. Unless otherwide detailed the ties shall be staggered in alternate courses and spaced in accordance with the following table.

Least leaf thickness (mm)	Cavity width (mm)	Spacing of ties Horizontally (mm)	Vertically (mm)
65-90	50-75	450	450
90 or more	50-150	900	450

The spacing may be varied provided that the number of ties per unit area is maintained.

Additional ties shall be provided in every course within 225mm of opening and on each sie of control joints. Ties shall be laid falling to the external leaf.

b) Cavities

The cavity and ties shall be kept clear and clean of mortar droppings or other materials during construction and only extruding mortar shall be struck off flush. No cavity shall be sealed off until inspected and approved by the Architect.

c) Weepholes (cavity walls)

Weepholes 10mm wide by 75mm high, spaced at centres not exceeding 900mm and extending through the vertical mortar joints of the outer leaf, shall be provided at ground level and at positions where the cavity is bridged or at alternative locations indicated on the Architect's drawings.

1.3.5. Partition Walls

Partition walls shall not be built on suspended slabs until after the props have been removed. These walls shall be built in accordance with the details shown on the Engineer's drawings.

1.3.6. Reinforcement

a) Bed Joint Reinforcement

Bed joint reinforcement shall have an effective side cover of mortar of not less than 20mm and shall be continuous except at control joints, or where otherwise indicated. Bed joint reinforcement is to be positioned as shown on the drawings. Sufficient mortar shall be used in the joints in which the reinforcement is bedded to ensure that the whole surface of the steel is in contact with mortar to provide adequate bond and protection against corrosion.

1.3.7. Protection

a) Stability

Ensure the stability of walling during erection. Precautions shall also be taken to ensure stability of walls during backfilling and concreting operations.

b) Finished Work

The tops of constructed walls shall be protected from rain and in addition fairfaced work shall be protected against staining from construction activities.

1.3.8. Making Good

At the completion of the work all temporary holes in mortar joints of fairfaced work shall be filled with mortar and suitably tooled. Any damaged walling shall be repaired with approved materials or

replaced to the satisfaction of the Architect.

1.3.9. Tolerances

The permissible deviation for walls shall be as follows:-

a) Level: ± 10mm for dimensions to any nominally horizontal surface measured from the nearest reference level.

b) Position on Plan : ± 10mm for dimensions to any nominally vertical surface at the lower edge measured horizontally from the nearest reference line.

c) Plumbness : ± 5mm in any 1 meter not more than 20mm for plumbness floor to floor.

d) Straightness: ± 10mm measured horizontally

e) Joint Thickness (i) Horizontal joints - joint thickness ± 3mm

(ii) Vertical joints - joint thickness ± 3mm

SECTION E

SPECIFICATION FOR PRE-CAST CONCRETE FLOORS

INDEX

1. GENERAL

2. DESIGN

- 2.1. Types of Floor
- 2.2. Design Responsibility.
- 2.3. Compliance with Standards.
- 2.4. Drawings.
- 2.5. Calculations.
- 2.6. Loading.
- 2.7. Fire Resistance.
- 2.8. Approvals.

3. MANUFACTURE

- 3.1. Materials.
- 3.2. Surface Finish
- 3.3. Tolerances.

4. ERECTION

- 4.1. Handling and Storage
- 4.2. Propping.
- 4.3. Jointing.
- 4.4. Holes.

1.0. GENERAL

1.1. PRECAST CONCRETE

In addition to the following requirements the manufacture of all precast concrete units shall be in accordance with the requirements of the General Concrete Works unless specifically stated otherwise.

References in brackets in clause headings in this Specification are to clauses or sub-clauses of B.S. 8110 'Structural use of Concrete.' Unless modified by this Specification Precast Concrete work shall comply with the requirements and recommendations of B.S. 8110. In cases of conflict, this Specification takes precedence over B.S. 8110.

2. DESIGN

2.1. TYPES OF FLOOR

This specification applies to proprietary flooring systems supplied only or supplied and erected by specialist manufacturers which are of the following types:-

Reinforced or prestressed hollow slab.

Reinforced or prestressed beam and infill block.

Reinforced or prestressed solid slab and insitu topping.

The contractor shall prvide the system most suited to the contract, unless any of the above types have been deleted.

2.2. DESIGN RESPONSIBILITY

The constractor shall be responsible for all aspects of the design of the floor and shall satisfy himself that adequate bearing for the units has been provided in the supporting structure. Where the specialist is a Nominated Supplier or Sub-Contractor under the JCT form of contract, he shall indemnify the Main Contractor against design errors and defects.

2.3. COMPLIANCE WITH STANDARDS

The design of the floor shall be in accordance with British Standard BS 8110: Part 1: 1985 "Structural Use of Concrete".

2.4. DRAWINGS

Sufficient Engineers and Architects drawings will be supplied to the contractor to enable the floor to be designed. The contractor shall prepare arrangement drawings of the floor which should include the following information:-

Layout of units and spans.
Unit profiles
Support and edge conditions.
Insitu make up areas and reinforcement.
Pre-formed holes and permissable sizes cut on site.
Loading.
Fire resistance.
Temporary support requirements.

The drawings should be submitted to the Engineer or Architect for approval prior to manufacture.

2.5 CALCULATIONS

The contractor shall provide structural calculations for the floor, which may be manually prepared or in the form of a computer print-out. In either case the information shall be sufficient for submission to checking authorities and should include:-

Service and Ultimate Loading
Section Properties
Material Strengths
Moment and Shear
Span/Deflection Ratio.
Predicted Upward Camber.

A copy of the calculations should be submitted to the Engineer for approval.

2.6. LOADING

The floor shall be capable of supporting the following loads in addition to its self weight:-

Superimposed	kn/m2	
Partitions (Distributed Load)	kn/m2	as noted
Finished	kn/m2	on
Ceiling	kn/m2	the
Services	kn/m2	drawings

Allowances shall be made for block partitions as shown on the drawings. The density of the partitions can be taken as 21 kg/m3. The floor shall be capable of withstanding loads in accordance with British Standard BS 6399: Part 1: 1984 "Design Loading for Buildings."

2.7. FIRE RESISTANCE

The fire resistance of the completed floor slab is to be confirmed in accordance with Tables 4.9 BS 8110 or as determined in tests by the Fire Research Station. The level of fire rating is to be in accordance with the Architects requirements.

2.8. APPROVAL

Approval by the Architect or Engineer indicates correct interpretation of their respective requirements and does not affect the Contrctor's responsibility for the structural and dimensional adequacy of the floor.

3.0. MANUFACTURE

3.1. MATERIALS

All materials used in the manufacture of the floor shall be stable, of suitable quality and in accordance with the appropriate British Standards. The contractor shall be responsible for maintaining adequte quality control in the works and shall be requested by the Engineer or Architect, to provide test data or samples to demonstrate this. No High Alumina Cement is to be used in the concrete. No additives which may be harmful or reduce the durability of the concrete will be permitted.

3.2. SURFACE FINISH

Moulds and equipment shall be capable of producing a clean hard surface finish to the concrete, free of honeycombing or voids. Special finish requirements will be indicated on the drawings and should be in accordance with Clause 6.10.3 of BS 8110.

3.3. TOLERANCES

Unless otherwise stated on the drawings all dimensions of units shall be within the tolerances defined in Clause 6.11.3 of BS 8110.

3.4. SOLID ENDS

Where solid ends to Hollowcone Units have been specified on the drawings weep holes in each core at the ends of the unit are to be provided.

4.0. ERECTION

4.1. HANDLING AND STORAGE

The contractor responsible for erection shall ensure that equipment and storage facilities are adequate to prevent damage or deterioration of the units on site. The contractor shall provide all necessary lifting equipment and shall be deemed to have satisfied himself that adequate access is available to erect the units.

4.2. PROPPING

Temporary propping is to be carried out in accordance with the drawings and minimum times for removal of props should be adhered to.

4.3. JOINTING

The contractor is to carry out all filling of joints and insitu making up, using concrete of minimum characteristic strength 30 N/mm2 at 28 days. All insitu concrete is to be vibrated.

4.4. HOLES

Holes shown on the drawings which are not formed in the works are to be neatly cut on site without impairing the strength of the floor. Holes through lightweight infill blocks are to be formed by removal of a block and replacement with insitu concrete.

4.5. BEDDING

To ensure uniform bearing for the precast units an approved bedding mortar layer consisting of a low water content 3 to 1 sand cement mix is to be provided on all supports over the full area of the support.

SECTION F STRUCTURAL STEELWORK

INDEX

1. PREAMBLE

- 1.0 Definition of Terms
- 1.1 Description of the Work
- 1.2 Plant
- 1.3 Design
- 1.4 Programme
- 1.5 Weights
- 1.6 Quality of Steelwork

2. MATERIALS

- 2.0 Steel
- 2.1 Bolts
- 2.2 Test Certificates
- 2.3 High Strength Friction Grip Bolts

3. FABRICATION

- 3.0 Fabrication Drawings
- 3.1 Correctness of Dimensions
- 3.2 Stiffeners
- 3.3 Sub-letting
- 3.4 Identification
- 3.5 Camber

4. WORKMANSHIP

- 4.0 General
- 4.1 Bolts
- 4.2 Cutting
- 4.3 Drilling
- 4.4 Examination and Testing

5. WELDING

- 5.0 Design
- 5.1 Workmanship

INDEX (CONTD)

6. ERECTION

6.0. General

6.1. Tolerances

6.2. Bracing

6.3. Holding Down Bolts.

7. CORROSION PROTECTION SYSTEM

7.1. Preparation

7.2. Blast Primer

7.3. Preparation and Spot Priming After Fabrication.

7.4. Site Holding Primer

7.5. Site Treatment
Preparation and Spot Priming After Erection

1. PREAMBLE

1.0. DEFINITION OF TERMS

1.0.1. The Engineer shall mean John Moylan Associates.

1.0.2. The Steelwork Contractor shall mean the steelwork firm appointed by the main contractor to supply, fabricate, deliver and erect the structural steelwork as shown on the contract drawings and as directed in this Specification.

1.0.3. The Main Contractor shall mean the firm appointed to carry out the building work under the main contract.

1.1. DESCRIPTION OF WORK.

1.1.1. The steelwork contract includes the supply, fabrication, delivery to the site and erection of the structural steelwork as shown on the steelwork contract drawing and as described in this Specification. This includes all holes, drilling for fixing of patent glazing where applicable connections, stiffeners, supports, bases, bolts, brackets etc., all to the satisfaction of the Engineer.

1.2. PLANT

1.2.1. The steelwork contractor shall provide all equipment necessary for the handling, erection and completion of the steelwork.

1.3. DESIGN

1.3.1. The structural steelwork has been designed in accordance with B.S. 449 Part 2 : 1969 specification for the "The Use of Structural Steel in Building".

1.3.2. The Engineer will supply to the Steelwork Contractor with drawings that will also show all working dimensions and other necessary particulars.

1.4. PROGRAMME

1.4.1. On his appointment the Steelwork Contractor shall produce a programme for the production of workshop and erection drawings. The Steelwork Contractor shall be required to agree with the Engineer a final date for submission of these drawings for approval.

1.5. WEIGHTS

1.5.1. All weights and variations or otherwise will be based on the listed weights or members and no allowance made for rolling margins. All steel sections shall be of "full profile" with no appreciable loss of material through corrosion or deficient rolling. If it is found that any steel weights less than 97½% of the listed weights the steelwork contractor shall replace it with a satisfactory section.

contd/.....

1.6. QUALITY OF STEELWORK.

1.6.1. The quality of the materials, fabrication, and erection of the steelwork in this contract shall comply entirely with the requirements set in the following British Standard and all other Standards therein referred to, except for all clauses dealing with the training and certification of welders. The date of issue of each standard shall be that listed below, or the most recent date of issue. All amendments to the Standards shall be deemed to be parts of the relevant Standards:

BS 4 Part 1	1962	Structural Steel Sections
BS 4 Part 2	1965	Ditto
BS 449 :	1959	Use of Structural Steel in Building.
BS 639 :	1964	Covered Electrodes.
BS 709 :	1971	Methods of testing fusion welded joints and weld metal in steel.
BS 938 :	1962	Metal Arc Welding of Tubes.
BS 968 :	1962	High Yield Stress Steel.
BS 1719 :	1963	Classification of covered Electrodes.
BS 1768 :	1963	Unified Precision Hexagon Bolts & Nuts.
BS 1775 :	1964	Steel Tubes for Structural Engineering Purposes.
BS 1856 :	1964	Metal Arc Welding of Mild Steel.
BS 2451 :	1963	Chilled iron shot and grit.
BS 2521 & 2523 :	1966	Lead based priming paints.
BS 2642 :	1955	Matal Arc Welding of Steel to BS 968
BS 2708 :	1956	Unified Black Square and Hexagon Bolts and Nuts.
BS 2994 :	1958	Cold rolled steel sections.
BS 3139 :	1959	High Strength Friction Grip Bolts
BS 3294 :	1960	Use of High Strength Friction GripBolts
BS 3410 :	1961	Metal Washers
BS 3692 :	1967	I SO Metric precision hexagonal bolts, screws and nuts.
BS 4190 :	1967	I SO metric black hexagon bolts, screws and nuts.
BS 4232 :	1967	Surface finish of blast cleaned steel for painting.

contd/.....

BS 4360 : 1972	Weldable Structural Steels	
BS 4395 :	High strength friction grip bolts and associated nuts and washers for structural engineering.	
	Part 1 :	1969 General Grade.
	Part 2 :	1969 Higher Grade bolts and nuts and general grade washers.
	Part 3 :	1973 Higher Grade bolts (waisted Shank) nuts and general grade washers.

The Steelwork Contractor shall keep a copy of each of the above standards in his shop for reference.

2. MATERIALS

2.0. STEEL

2.0.1. The steel for this contract is to be mild steel, grade 43C, in accordance with B.S. 4360:1972 "Specification for Weldable Structural Steels".

2.1. BOLTS.

2.1.1. Unless specified otherwise, all bolts and nuts shall be ISO metric black hexagon and conform to the requirements of B.S. 4190 : 1967 "ISO Metric Black Hexagon BoltsScrews and Nuts."

2.2. TEST CERTIFICATES.

2.2.1. Manufacturer's test certificates for all steel used for the work shall be supplied to the Engineer. Copies of rolling mill orders shall also be provided.

2.3. HIGH SIRENGTH FRICTION GRIP BOLTS.

2.3.1. Where high strength friction grip bolts are used, they shall be of the load indicating bolt type or have load indicating washers and the torque method or part turn method of tightening shall not be allowed. Reference must be made to the Manufacturer's instructions on the method of tightening and assessing the value of the applied load. The Engineer's approval must be obtained for the type of friction grip bolt to be used. The areas of metal directly under the washers must be clean and free of any paint or similar material. Matching surfaces of connections made with friction grip bolts must be thoroughly cleaned and be free from any paint primer or other foreign matter.

3. FABRICATION

3.0. FABRICATION DRAWINGS

3.0.1. The Steelwork Contractor will be required to prepare his own shop details in accordance with B.S. 449: Part 2: 1969 These drawings shall be supplied in duplicate to the Engineer for approval before fabrication.

Should these shop details be insufficient or unsatisfactory the Engineer may require fresh details to be submitted.

3.0.2. On receiving the Engineer's approval in writing of such detailed drawings, two further copies are to be supplied. Details are to be submitted at least five working days before approval is required and no work is to be put in hand until such approval has been obtained.

3.1. CORRECINESS OF DIMENSIONS.

3.1.1. The Steelwork Contractor will be held responsible for the correctness of dimensions and details, fitting and workmanship and for the strength of all connections, notwithstanding the approval of the Engineer of the detailed drawings, and for all parts of the various structures coming together correctly for assembling in position.

3.1.2. In event of any connection being found unsatisfactory before or after erection or due to errors arising in fabrication, the Steelwork Contractor shall submit to the Engineer his proposals as to the method to be adopted in making good. The Steelwork Contractor shall abide by the ngineer's decision and in the event of replacements being required, the teelwork Contractor shall be responsible for all costs involved.

3.2. STIFFENERS.

3.2.1. Where specified, fitted stiffeners shall be accurately ground over their full bearing faces to fit tightly the angle or section stiffened.

3.3. SUB-LETTING

3.3.1. The Steelwork Contractor shall not sub-let any fabrication or erection without the permission of the Engineer.

3.4. IDENTIFICATION

3.4.1. All steelwork delivered to site are to be clearly marked with their numbers, together with the number of the members onto which they frame at both ends.

3.5. CAMBER

3.5.1. In the absence of any specified camber, all lattice girders and beams of spans greater that seven metres shall have an upward camber of 0.1% of the span at midspan.

4. WORKMANSHIP

4.0. GENERAL

4.0.1. The workmanship throughout the work shall be to the standards of B.S. 449: Part 2.

4.1. BOLTS

4.1.1. All threads on bolts shall be clean and the nuts shall closely fit the bolts so that they can only just be fitted with washers under the nuts. Tampered washers shall be used on tapered sections and flanges to ensure true bearing of the bolt head or nut. Two clear threads shall show beyond the nut on a fully tightened bolt.

4.2. CUTTING

4.2.1. Thermal cutting by hand will be permitted only for wall ends of beams and filler joists and for notching.

4.3. DRILLING

4.3.1. All holes drilled shall be in compliance with B.S. 449: Part 2.

4.3.2. Generally holes, shall be drilled with a maximum of 2mm allowance for black bolts or high strength friction grip bolts.

4.3.3. For close Tolerance Bolts with holes not drilled in one operation the procedure shall be:-

1) Holes to be aligned with diameter equal to nominal size of hole - 0 + 0.15 mm

2) Ream first hole, fit close tolerance bolt, and tighten before reaming second hole.

3) Repeat for each hole.

4) Re-tighten all bolts after last bolt is fitted.

4.3.4. Where hollow sections are drilled, spacer tubes must be welded in position to permit through bolting.

4.4. EXAMINATION AND TESTING

4.4.1. The Engineer or his representative shall at all reasonable times be permitted access to the steelwork contractor's works for purposes of progressing and examination and testing of welded structural components.

4.4.2. The Steelwork Contractor when required shall provide and send sample pieces, carriage paid, to such testing stations as may be directed. Sample pieces shall be 500 mm x 100 mm for plates or as that as practicable.

contd/

4.4.2. Contd.
and 500 mm long of full section for structural shapes, rods, etc. The sample pieces shall be selected by the Engineer and despatched to the testing station where test pieces will be made and tested.

4.4.3. If non-destructive tests are to be carried out on welded joints the Steelwork Contractor shall provide facilities for the Engineer or his representative to carry out these tests.

4.4.4. The Steelwork Contractor shall be held responsible for the costs and fees involved in the testing of welds which are found to be unsatisfactory.

4.4.5. The Employer shall be held responsible for the costs and fees involved in the testing of welds which are found to be satisfactory.

4.4.6. All areas of defective welding shall be cut out and made good to the entire satisfaction of the Engineer and all remedial measures shall be borne by the Steelwork Contractor. The remedial work shall be deemed to include radio-graphical or other suitable examination to verify the acceptance of the repair.

5. WELDING

5.0. DESIGN

5.0.1. The design of all welds shall comply with the requirements of B.S.: 499 1969.

5.1. WORKMANSHIP

5.1.1. The welding of all mild steel sections and plates shall be carried out to the requirements of B.S. 5135 metal arc welding of carbon and carbon manganese steels.

5.1.2. The welding of all structural hollow section shall be carried out to the requirements of B.S. 5135 metal arc welding of carbon and carbon manganese steels.

5.1.3. Evidence of qualification of welders will be required by the Engineers and in cases where recent test certificates or other acceptable proof is not available the Engineer will require welder approval tests to be carried out in accordance with B.S. 4872 "Fusion Welding of Steel"
The test shall be carried out under the supervision of the Engineer and to his satisfaction. The extent of qualification thereby attained shall be in conformity with the recommendation of B.S. 449 Part 2 1969.

6. ERECTION

6.0. GENERAL

6.0.1. The method of transport, handling and erection of materials shall be to the satisfaction of Engineer and in accordance with the drawings or as directed. These operations shall be carried out in such a manner as will not injure, overstress or disfigure any part of the structure. Any member injured, overstressed or damaged in any way shall be rectified as directed by the Engineer.

6.0.2. Site joints and connections shall not be finally bolted until sufficient of the structure is properly plumbed, levelled and aligned and no straining into position will be allowed subsequently.

6.0.3. The Steelwork Contractor is to take all necessary precautions to ensure the stability and safety of the steelwork structure during erection and shall maintain any special temporary guying or other supports until the structure is completed. The steelwork Contractor shall be entirely responsible for any accidents which may arise from lack of suitable precautions.

6.0.4. The Steelwork Contractor will be held responsible for any damage to existing work or buildings or their contents, roads, walls, etc. adjoining or upon the site, arising from the off-loading and erection of steelwork.

6.1. TOLERANCES

6.1.1. Tolerances for erected steelwork shall be as follows:-

1.	Position of first erected column	± 10mm
2.	Linear dimensions: up to 8 m	± 10mm
	from 8 m to 15 m	± 15mm
	from 15 m to 25 m	± 20mm
	over 25 m	± 25mm
3.	Plumb of columns in 30 m height:	± 15mm
4.	Level of base of first erected column	± 5mm
5.	Level of beam at junction with column measured from transferred bench mark.	± 15mm
6.	Level of beam at junction with column measured from transferred bench mark of storey in which beam is located.	± 10mm
7.	Levels of upper or lower surfaces of two or more beams meeting at a column	± 5mm

6.1 TOLERANCES (CONT'D)

8. Difference in level of ends of a beam:

up to 8m long	+– 5mm
from 8m to 15m long	+– 10mm
from 15m to 25m long	+– 15mm
over 25m long	+– 20mm

6.2 BRACING

Bracing is provided to stabilise the completed building. The Steel Contractor shall be responsible for the provision of any extra steelwork considered necessary for the alignment and temporary stability of the steelwork. The cost of this additional steelwork should be included in the contact price.

6.3 HOLDING DOWN BOLTS

The Steelwork Contractor is to supply to the Building Contractor all the necessary holding down bolts or anchorage devices for the Building Contractor to cast into the foundations. The Steelwork Contractor must satisfy himself prior to erection that the foundations have been properly formed and, in particular, that the holding-down bolts have been accurately set and have the full amount of play required.

7. SPECIFICATION FOR CORROSION PROTECTION SYSTEM TO STRUCTURAL STEELWORK.

7.1. PREPARATION

Shot blast to Swedish Standard SIS055900 to give surface quality Sa 2½ and / or B.S. 4232 Second Quality. Remove all traces of loose rust, grit etc. by compressed air hose or careful clean dry brushing. Inspect for laminations and remove by careful grinding leaving a smooth surface. Dust off and within 2 hours of shot-blast apply 'Blast Primer'.

7.2. BLAST PRIMER

Apply by airless spray:-

1-coat 2-pack Epoxy Zinc Rich Primer to a D.F.T. of 20 microns. (This D.F.T. accords to B.S. 5493: 1977 for 'blast primers'). Allow to dry. Then fabricate as necessary.

7.3. PREPARATION AND SPOT-PRIMING AFTER FABRICATION

After fabrication carefully remove all weld flux and spatter, rough edges, etc. by scraping, chipping and grinding to a smooth surface. Remove any unsound 'scorched' primer around weld areas; also, all dust, dirt, grease, etc. (Wash with White Spirit where necessary). Allow to dry overnight.

7.4. SITE- HOLDING PRIMER.

Apply by airless spray to the clean dry surface:-

1-coat 2-pack Epoxy High Build Zinc Phosphate Primer, to a dry film thickness of 50 microns. Allow 7 days to achieve maximum through hardness before despatch to site.

7.5. SITE TREATMENT

PREPARATION AND SPOT-PRIMING AFTER ERECTION.

After erection all damaged areas (including boltheads etc.) must be thoroughly prepared and carefully spot-primed with primer. Allow to dry overnight.

ROOF PURLINS AND CLADDING RAILS

General :

The following clauses cover the requirements for the design fabrication, galvanising of the roof purlin and side cladding rail system.

The design of the roof purlins and cladding rails shall be in accordance with B.S. 5950, Part 5 as amended.

Materials :

The dimensions and tolerances of cold formed sections shall comply with B.S. 2994.

Material shall conform with B.S. 2989 and shall be Z35 grade steel with a minimum yield stress of 350 N/mm2.

All roof purlins, cladding rails and their components, say bars, bracing, etc. shall be galvanized. All galvanizing shall be hot dip in accordance with B.S. 729 with an average thickness of 20 micrometers.

Storage:

Components which are stored prior to being transported or erected shall be stacked clear of the ground and arranged such that the water cannot accumulate. They shall be kept clean and supported in such a manner as to avoid permanent distortion.

Erection:

Components shall be erected such that they are not bent, twisted or damaged. Any damaged members may be rejected by the Engineer at the Contractors cost.

Members shall be erected to the following tolerances:-

Plan bow: Span /1000

Camber : Span /1000

Out of squareness of flanges : 3 m.m.

Purli n Alignment : + - 5 m.m. relative to adjacent purlin.

Purlin level : + - 3 m.m. relative to adjacent purlin.

NEW LINE BLOCK & OFFICES IN
EXISTING WAREHOUSE.

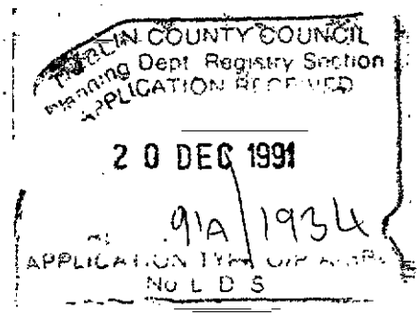
FOR

CABLE & WIRELESS (IRELAND) LTD.

AT

AIRTON ROAD,

TALLAGHT



OUTLINE STRUCTURAL CALCULATIONS

John Moylan & Associates,
Consulting Engineers
79, Merrion Square,
Dublin 2.

Tel Nos. 615337/612473
Fax No. 610255

December 1991

JOHN MOYLAN AND ASSOCIOATES

DESIGN CALCULATIONS

PROJECT CABLE AND WIRELESS NEW OFFICE AREA JOB NO. E227A
ELEMENT CALCULATION INDEX DATE DEC 91

DESIGN INFORMATION	2
STRUCTURAL PROPOSA - TYPICAL LOADINGS	3
LAYOUT PLANS - TYPICAL SECTIONS	4
PRECAST SLAB DESIGN	5
SPAN LOAD TABLES FOR 250 DP. H/C UNITS	6
SPAN LOAD TABLES FOR 200 DP. H/C UNITS	7
BEAMS TO STRUCTURAL FRAME ON GRID 1	8
BEAM AT ROOF LEVEL	9
BEAM AT FIRST FLOOR LEVEL	10
FOUNDATIONS TO STRUCTURAL FRAME ON GRID 1	11
FOUNDATIONS TO LOADBEARING WALL	12
BLOCKWORK DESIGN TO IS 325	13

DESIGN INFORMATION

CLIENT	Cable & Wireless Ltd.		
ARCHITECT	Integrated Development Services		
ENGINEER	John Moylan And Associates		
DESIGN CODES	I.S.325 B.S.8110 B.S.449 B.S.6399		
INTENDED USE OF STRUCTURE	Office		
FIRE RESISTANCE REQUIREMENTS	As per Architects specification		
GENERAL LOADING CONDITIONS	Live	Roof	3 kN/m2
		Floors	4.50 kN/m2
WIND LOADING CONDITIONS	Basic wind speed		44 m/s
EXPOSURE CONDITIONS	Internal		Mild
	External		Moderate
SUBSOIL CONDITIONS	To be determined on site		Assume 150 KN/m2
FOUNDATION TYPE	Strip footings and pads		
CONCRETE	fcu		30 N/mm2
REINFORCEMENT	fy		460 N/mm2
STEELWORK			Grade 43

JOHN MOYLAN AND ASSOCIATES

DESIGN CALCULATIONS

PROJECT CABLE AND WIRELESS NEW OFFICE AREA JOB NO. E227A
ELEMENT STRUCTURAL PROPOSAL & LOADING DATE DEC 91

STRUCTURAL PROPOSAL

THE PROPOSED DEVELOPMENT INVOLVES THE CONSTRUCTION OF A NEW OFFICE AREA WITHIN AN EXISTING WAREHOUSE BUILDING AND PROVIDING A COVERED LINK BETWEEN AN EXISTING OFFICE BLOCK AND THE NEW OFFICE AREA.

THE BASIC STRUCTURAL FORM COMPRISES OF PRECAST FLOOR UNITS AT FIRST FLOOR AND OFFICE ROOF LEVEL SUPPORTED ON A REINFORCED CONCRETE FRAME TO THE EXTERNAL WALL (GRID 1) AND ON LOADBEARING BLOCKWORK ON GRID 2/3.

THE NEW STRUCTURAL FRAME ON GRID 1 WILL INCORPORATE THE EXISTING STRUCTURAL STEEL STANCHIONS AND THEIR PAD FOUNDATIONS.
NEW FOUNDATIONS TO THE INFILL WALL PANELS WILL ENSURE THAT ALL ADDITIONAL LOADS WILL BE TAKEN TO FOUNDATION LEVEL WITHOUT CAUSING ANY SURCHARGE ON THE EXISTING PAD FOUNDATIONS .

TRADITIONAL STRIP/TRENCH FILL FOUNDATIONS WILL BE PROVIDED TO THE BLOCKWORK WALL ON GRID 2/3

ALL STUCTURAL ELEMENTS WILL BE DESIGNED IN ACCORDANCE WITH THE RELEVANT CODES OF PRACTICE AND GREAT CARE WILL BE TAHEN TO ENSURE THAT THE NEW WORKS WILL BE FULLY INTEGRATED WITH THE EXISTING STRUCTURE .

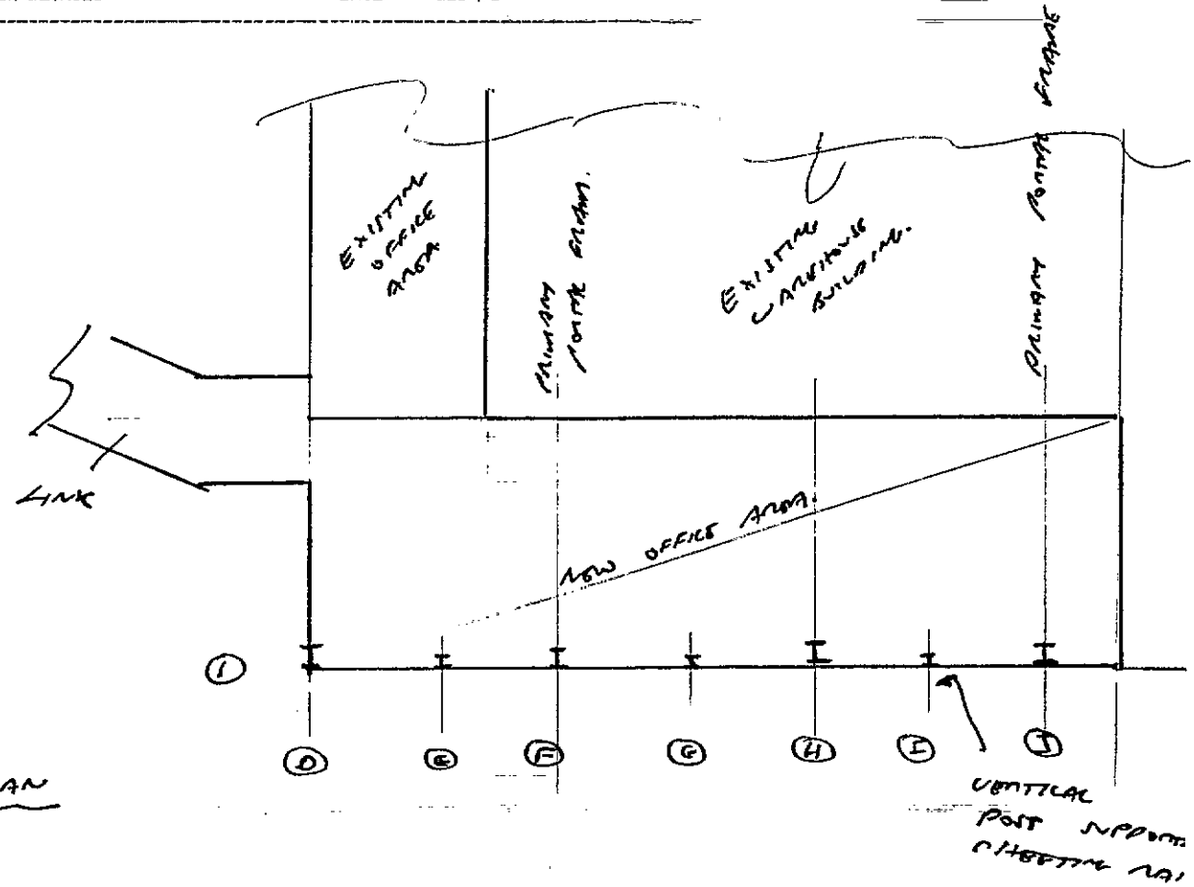
LOADING

		KN/m2
OFFICE ROOF SLAB		
DEAD		
SLAB SELF WT	200 DEEP	2.8
SCREED .		2
CEILING/SERVICES		0.5
		5.3
LIVE		3
		8.3
OFFICE FLOOR SLAB		
DEAD		
SLAB SELF WT	250 DEEP	3.6
SCREED		2
CEILING/SERVICES		0.5
		6.1
LIVE		4.5
		10.6
215 BLOCK WALL PLASTERED B/S		4.7 KN/m/m height
100 BRICK		2.1 KN/m/m height

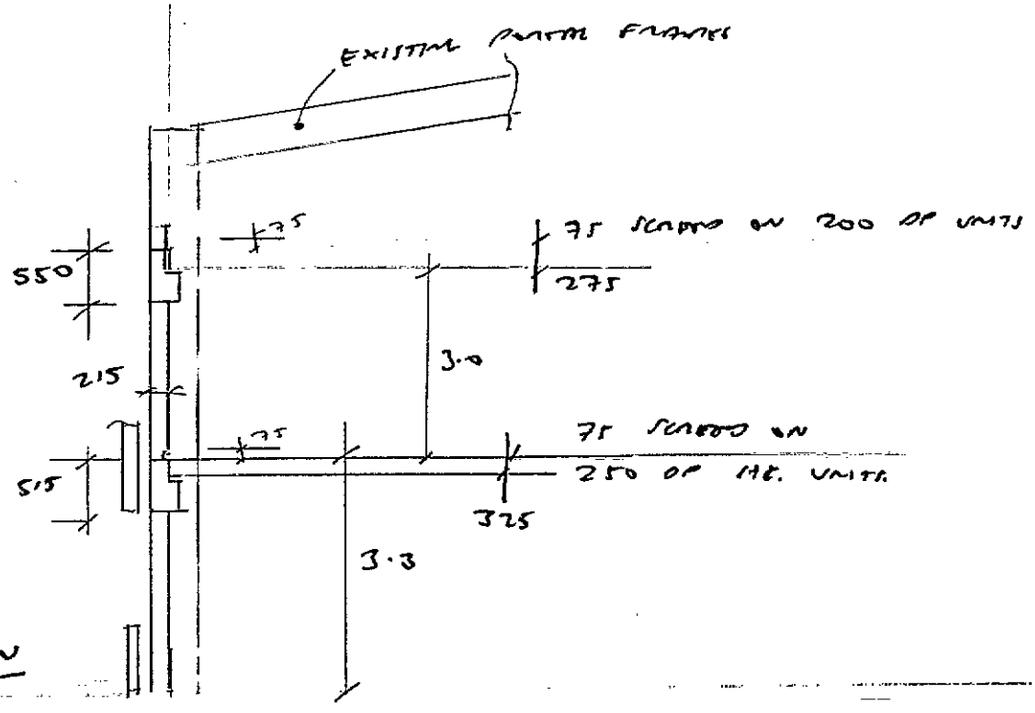
JOHN MOYLAN AND ASSOCIATES

DESIGN CALCULATIONS

PROJECT NEW OFFICE AREA JOB NO. E227A
ELEMENT OTLINE SKETCH DETAILS DATE DEC 91



PLAN PLAN



TYPICAL SECTION

JOHN MOYLAN AND ASSOCIATES

DESIGN CALCULATIONS

PROJECT CABLE AND WIRELESS NEW OFFICE AREA JOB NO. E227A
ELEMENT PRECAST SLAB DESIGN DATE DEC 71

FIRST FLOOR SLAB DESIGN KN/m2

APPLIED LOADING 7

SCREED 2
SERVICES/CEILING 0.5
LIVE 4.5

DESIGN SPAN 8.7 m

REF. CONCAST LOAD SPAN TABLE
SLAB DEPTH 250
SPAN 8.5 9 m
SAFE LOAD WITHOUT CONTRIBUTION OF SCREED 7.9 6.7 KN/m2
INTERPOLATED SAFE LOAD 7.3

250 DEEP HOLLOWCORE SLAB IS OK

OFFICE ROOF SLAB DESIGN KN/m2

APPLIED LOADING 5.5

SCREED 2
SERVICES/CEILING 0.5
LIVE 3

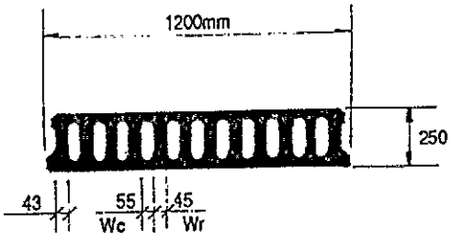
DESIGN SPAN 8.7 m

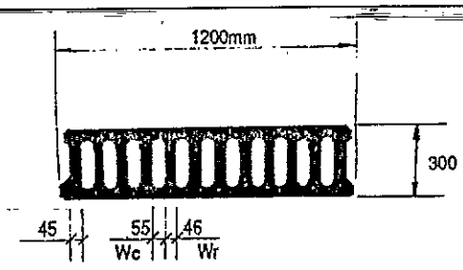
REF. CONCAST LOAD SPAN TABLE
SLAB DEPTH 200
SPAN 8.5 9 m
SAFE LOAD CONTRIBUTION OF SCREED INCLUDED 7.2 6 KN/m2
INTERPOLATED SAFE LOAD 6.6

200 DEEP HOLLOWCORE SLAB IS OK

SEE SPAN LOAD TABLES INCLUDED AS PAGES 6 & 7

CONCAST
Hollowcore load span tables





SECTION PROPERTIES 250mm deep.

A	181226 mm^2
I	1229473024 mm^4
Z_t	9909225 mm^3
Z_b	9763424 mm^3
W	3.55 kN/sq metre.

SECTION PROPERTIES 300mm deep.

A	240570 sq mm^2
I	2345347584 mm^4
Z_t	15681806 mm^3
Z_b	15589766 mm^3
W	4.72 kN/sq metre
W_c	55mm core width
W_r	46mm rib width.

MATERIAL PROPERTIES 250 & 300mm units.

Concrete
Transfer strength 35 N/sq mm
Strength at 28 days 50 N/sq mm
Fire rating 250mm deep 1 hour
Fire rating 300mm deep 2 hour
Design to B.S. 8110 (1985)

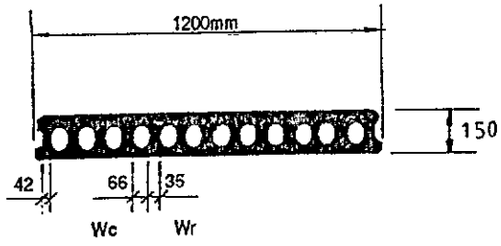
Steel
Wire diameter 5.0mm
ApsFpu 34.7 kN

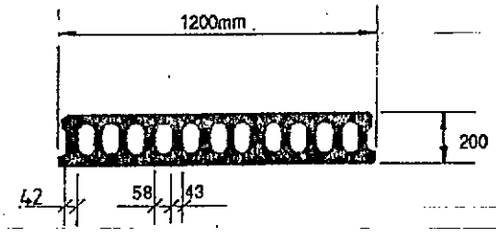
Unit depth	Structural Screed depth	* Ultimate bending moment kN-m	* Ultimate Shear force kN	SAFE WORKING LOAD in kN/sq m excl. self wt. for spans in metres. SPANS IN METRES 8.0	8.5	9.0	9.5	10.0	10.5	11.0	11.5	12.0	12.5	13.0
250	none	194.14	199.47	9.4	7.9	6.7	5.7	4.8	3.8	3.0				
250	50mm	227.50	197.21	11.7	9.8	8.2	6.9	5.7	4.7	3.9	3.2	2.5		
300	none	255.50	228.54	12.2	10.3	8.7	7.4	6.2	5.2	4.4	3.6	3.0	2.4	1.9
300	50mm	289.83	228.54	14.6	12.5	10.7	9.1	7.8	6.7	5.7	4.9	4.1	3.5	2.9
300	75mm	313.05	228.54	16.2	13.9	11.9	10.3	8.9	7.7	6.6	5.7	4.9	4.1	3.3

*Note Ultimate moment and ultimate shear are given per standard unit 1200 wide.
For fire rating greater than that shown above please consult our design department.

CONCAST
Hazelhatch, Newcastle, Co. Dublin.
Telephone: 6288055/6271138/6271346
Fax: 6273326.

CONCAST
Hollowcore load span tables





SECTION PROPERTIES 150mm deep.

A	119504 sq mm^2
I	324714016 mm^4
Z_t	4154925 mm^3
Z_b	4225383 mm^3
W_t	2.34 kN/sq metre
W_c	66mm core width
W_r	35mm rib width

SECTION PROPERTIES 200mm deep.

A	142267 sq mm^2
I	629573953 mm^4
Z_t	6325985 mm^3
Z_b	6265781 mm^3
W_t	2.79 kN/sq metre

Core width 58mm
Rib width 43mm

MATERIALS PROPERTIES 150 & 200mm units.

Concrete
Transfer strength 35 N/sq mm
Strength at 28 days 50 N/sq mm
Fire rating 1 hour
Design to B.S. 8110 (1985)

Steel
Wire diameter 5mm
ApsFpu 34.7 kN

Unit depth	Structural Screed depth	Ultimate bending moment kN-m*	Ultimate Shear force kN*	SAFE WORKING LOAD in kN/m2 excl. self wt. for spans in metres. SPANS IN METRES														
				4.0	4.5	5.0	5.5	6.0	6.5	7.0	7.5	8.0	8.5	9.0	9.5	10.0	10.5	11.0
150	none	63.08	92.05	14.3	10.8	8.4	6.5	5.2	4.1	3.2	2.5							
150	50mm	84.23	92.05	19.9	15.3	12.0	9.6	7.7	6.3	5.0	3.8	2.8						
200	none	137.1	157.9			20.3	16.4	13.3	11.0	9.1	7.6	6.3	5.3	4.5	3.7	3.1	1.5	
200	50mm	178.05	155.89			27.3	22.2	18.7	15.2	12.5	10.4	8.6	7.2	6.0	5.0	4.1	3.2	2.7

*Note Ultimate moment and ultimate shear are given per standard unit 1200 wide.
For fire rating greater than that shown above please consult our deisgn department.

CONCAST
Hazelhatch, Newcastle, Co. Dublin.
Telephone: 6288055/6271138/6271346
Fax: 6273326.

JOHN MOYLAN AND ASSOCIATES

DESIGN CALCULATIONS

PROJECT CABLE AND WIRELESS NEW OFFICE AREA JOB NO. E227A
ELEMENT RC BEAM DESIGN DATE DEC 91

CONSIDER DESIGN OF BEAMS TO THE STRUCTURAL FRAME ON GRID I

FLOOR LOADING	DEAD	wd	6.1
	LIVE	wl	4.5
	SPAN	l	8.7

BEAM AT FIRST FLOOR LEVEL

LOADING

			KN/m	
DEAD				
SELF WT	0.675*0.35*24		5.67	
FLOOR	wd*l/2		26.535	
OUTER LEAF BRICK	1.5*2.1		3.15	
INNER LEAF	1*4.7		4.7	
WINDOW	1.8*0.5		0.9	
		1.4	40.955	57.337
LIVE				
FLOOR	wl*l/2	1.6	19.575	31.32
		1.464678	60.53	88.657

BEAM SPAN 4.4 m
ULT. B.M 0.11 *w*l^2 188.8039 KNm
ULT. SHEAR 0.6 *w*l 234.0544 KN

ROOF LOADING	DEAD	wd	5.3
	LIVE	wl	3
	SPAN	l	8.7

BEAM AT EAVES LEVEL

LOADING

			KN/m	
DEAD				
SELF WT	0.675*0.35*24		5.67	
ROOF	wd*l/2		23.055	
OUTER LEAF BRICK	1.25*2.1		2.625	
INNER LEAF	0.5*4.7		2.35	
		1.4	33.7	47.18
LIVE				
ROOF	wl*l/2	1.6	13.05	20.88
		1.455828	46.75	68.06

BEAM SPAN 4.4
ULT. B.M 0.11 *w*l^2 144.9405
ULT. SHEAR 0.6 *w*l 179.6784

JOHN MOYLAN AND ASSOCIATES

DESIGN CALCULATIONS

PROJECT CABLE AND WIRELESS NEW OFFICE AREA JOB NO. E227A
ELEMENT RC BEAM DESIGN ROOF LEVEL DATE DEC 91

LOCATION		SPAN				
M.	Kn	144.9405	SHEAR DESIGN			
b.	mm	215				
bw		215				
h.	mm	550	V	KN	179.6784	111.6184
Cover		40	v	N/mm2	1.679826	1.043528
No. of Layers		1	ASt. (Support)			
Bar Dia.	mm	25	Bar Dia.	mm	25	
			Number		2	
BENDING DESIGN			Centres		0	
d.		497.5	ASt. Provided	mm2	981.7477	
Fcu.		35	%ASt. (Support)		0.917842	
Fy.		460	vc	N/mm2	0.687093	
M/bd2		2.723738	d (shear)	mm	400	
k		0.077821				
j		0.904391	v (max)	N/mm2	4.732863	
Z (J*d)		449.9345				
Mu.		290.5475	NOMINAL SHEAR LINKS			
d1		52.5	Fys	N/mm2	460	
ASc.		0	Asv/Sv (nom.)		0.214892	
				No. Dia.	C/C	Asv/Sv
ASt.		804.9400		1 10	250	0.628318
DEFLECTION DESIGN			V (nom.)	KN	116.2782	
BASIC L/d		26	Design U.D.L.	KN/m	68.06	
L		4400	x	m	0.931533	
Min. M.F.		0.340162	Asv/sv		0.533327	0.214892
Max. Fs.		288				
Actual M.F.		0.984634				
				No. Dia.	C/C	Asv/Sv
DESIGN STEEL REQ.				1 10	150	1.047197
				1 10	250	0.628318
ASc.		0				
ASt. (Bending)		804.9400				
ASt. (Deflection)		804.9400				
% AS		0.752544				

	ASt.	ASc.
Bar Dia.	25	25
Number	2	2
Centres	0	0
ASt. Provided	981.7477	981.74770425
AS Prov / AS Req	1.219653	ERR

JOHN MOYLAN AND ASSOCIATES

DESIGN CALCULATIONS

PROJECT CABLE AND WIRELESS NEW OFFICE AREA JOB NO. E227A
ELEMENT RC BEAM DESIGN FIRST FLOOR LEVEL DATE DEC 91

LOCATION		SPAN					
M.	Kn	188.8039	SHEAR DESIGN				
b.	mm	215				0	x
bw		215					
h.	mm	515	V	KN		234.0544	234.0544
Cover		40	v	N/mm2		2.488286	2.488286
No. of Layers		2	ASt. (Support)				
Bar Dia.	mm	25	Bar Dia.	mm		25	
			Number			2	
BENDING DESIGN			Centres			0	
d.		437.5	ASt. Provided	mm2		981.7477	
Fcu.		35	%ASt. (Support)			1.043718	
Fy.		460	vc	N/mm2		0.717167	
M/bd2		4.587926	d (shear)	mm		400	
k		0.131083					
j		0.823034	v (max)	N/mm2		4.732863	
Z (J*d)		360.0777					
Mu.		224.6917	NOMINAL SHEAR LINKS				
d1		52.5	Fys	N/mm2		460	
ASc.		0	Asv/Sv (nom.)			0.214872	
					No.	Dia.	C/C Asv/Sv
ASt.		1310.200			1	10	250 0.628318
DEFLECTION DESIGN			V (nom.)	KN		105.0836	
BASIC L/d		26	Design U.D.L.	KN/m		88.657	
L		4400	x	m		1.454717	
Min. M.F.		0.386813	Asv/sv			0.951500	0.951500
Max. Fs.		288					
Actual M.F.		0.836993					
					No.	Dia.	C/C Asv/Sv
DESIGN STEEL REQ.					1	10	150 1.047197
ASc.		0					
ASt. (Bending)		1310.200					
ASt. (Deflection)		1310.200				1	
% AS		1.392903					

	ASt.	ASc.
Bar Dia.	25	25
Number	4	2
Centres	0	0
ASt. Provided	1963.495	981.74770425
AS Prov / AS Req	1.498622	ERR

JOHN MOYLAN AND ASSOCIATES

DESIGN CALCULATIONS

PROJECT CABLE AND WIRELESS NEW OFFICE AREA JOB NO. E227A
ELEMENT FOUNDATIONS TO STRUCTURAL FRAME ON GRID 1 DATE DEC 91

EXISTING PAD FOUNDATIONS

b	1.2
h	1.2
TOP OF PAD BELOW FFL.	0.79
d	0.36

CONSIDER TOTAL LOADING ON NEW STRUCTURAL FRAME FROM NEW OFFICE AREA

	DEAD	LIVE
FLOOR BEAM UDL	40.955	19.575 KN/m
ROOF BEAM UDL	33.7	13.05 KN/m

BEAM SPAN 4.4 m

COLUMN LOADING (EXC. PORTAL ROOF)

		DEAD KN	LIVE KN
SELF WT ENCASEMENT	0.56*0.3*7.8*24	31.4496	
WALL	0.215*24*7.8*(1.1-0.5)	24.1488	
OUTER LEAF	2.1*1.1*7.8	18.018	
ROOF BEAM		148.28	57.42
FLOOR BEAM		180.202	86.13
		402.0984	143.55
	DEAD PLUS LIVE	545.6484	

CONSIDER THE TOTAL LOAD SHARED EQUALLY BETWEEN 2 PADS

LOAD PER PAD	272.8242 KN
R.A.B.P	125 KN/m2
MIN PAD AREA	2.182593
L	2
B	1.091296

PROVIDE 2 NO PADS	L	2
	B	1.2

PADS LOCATED EACH SIDE OF EXISTING PAD FOUNDATION TO PORTAL STANCHION
THE L DIM. IS TO BE CENTRED ON THE NEW 215 R.C COLUMNS

JOHN MOYLAN AND ASSOCIOATES

DESIGN CALCULATIONS

PROJECT CABLE AND WIRELESS NEW OFFICE AREA JOB NO. E227A
ELEMENT FOUNDATIONS TO LOADBEARING BLOCKWORK DATE DEC 91

			KN/m2	
ROOF LOADING				
DEAD			5.3	
LIVE			3	
			8.3	
FLOOR LOADING				
DEAD			6.1	
LIVE			4.5	
			10.6	
WIDTH OF SLAB SUPPORTED			4.35 m	
WALL HT.	0.45+3.3+3+1		7.75 m	
WALL LOADING				
ABOVE FIRST FLOOR LEVEL			KN/m	KN/m
DEAD				
SELF WT	4.7*4		18.8	
ROOF DEAD			23.055	
LIVE		1.4	41.855	58.597
ROOF DEAD		1.6	13.05	20.88
			54.905	79.477
WALL LOADING				
BELOW FIRST FLOOR LEVEL				
DEAD				
WALL SELF WT	4.7*3.5		16.45	
FIRST FLOOR			26.535	
		1.4	42.985	60.179
LIVE				
FIRST FLOOR		1.6	19.575	31.32
			62.56	91.499
TOTAL LOAD AT FOUNDATION LEVEL			117.465	170.976
WITH AN ALLOWABLE BEARING PRESSURE OF			150 KN/m2	
MIN STRIP FOOTING WIDTH WIDTH			0.7831 m	

USE 900* 300 DP. STRIP FOOTINGS

JOHN MO'LAN AND ASSOCIATES

DESIGN CALCULATIONS

PROJECT CABLE AND WIRELESS NEW OFFICE AREA JOB NO. E227A
ELEMENT LOADBEARING BLOCKWORK DESIGN TO IS325 DATE DEC 91

BLOCKWORK DESIGN TO I.S. 325
TRY 5 N BLOCKWORK WITH MORTAR DESIGNATION (3)

TABLE 2 e	Fk		3.6		
	LF		3.5		
	h	3300-325	2975		
	lf		0.75		
	h eff	lf*h	2231.25		
	ECCENTRICITY AT TOP OF WALL				
	LOAD OVER		79.477	107.5	8543.777
	FLOOR 1/2		91.499	143.3333	13114.85
	FLOOR 1/1			71.66666	0
			170.976	126.6764	21658.63
	ex	MIN .05*t	19.17645		
	t eff	215			
	ex/t eff		0.089192		
h eff /t eff			10.37790		
beta			0.903775	TABLE 7 IS 325	
	ULTIMATE LOAD CAPACITY		179.8635	KN	
	Fk*T*beta/LF				
	REQUIRED LOAD CAPACITY		170.976	KN	

5 N BLOCKWORK IS OK

Dublin 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/1934 Date : 9th December 1991

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

Dear Sir/Madam,

DEVELOPMENT : New ground and first floor offices C.490 m.sq. within existing warehouse, alterations to north and west elevations and new ground floor link corridor

LOCATION : Airton Road, Tallaght, Dublin 24.

APPLICANT : Cable & Wireless (Ireland) Ltd.,

APP. TYPE : PERMISSION

With reference to the above, I acknowledge receipt of your application received on 6th December 1991.

Yours faithfully,

.....

for PRINCIPAL OFFICER

Integrated Development Services,
146 Lr. Drumcondra Road,
Dublin 9.

Dublin County Council
Comhairle Chontae Atha 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 AIRTON ROAD DUBLIN 24
(If none, give description sufficient to identify) (AT JUNCTION WITH BELGARD ROAD)

3. Name of applicant (Principal not Agent) CABLE & WIRELESS (IRELAND) LTD
Address AIRTON ROAD TALLAGHT D.24 Tel. No.

4. Name and address of person or firm responsible for preparation of drawings INTEGRATED DEVELOPMENT SERVICES. 146 LWR DRUMCONDRA RD. D.9 Tel. No 370936

5. Name and address to which notifications should be sent AS No 4 ABOVE

6. Brief description of proposed development NEW OFFICES C.490 M² WITHIN EXISTING WAREHOUSE AREA, AND NEW LINK CORRIDOR.

7. Method of drainage EXISTING DRAINS 8. Source of Water Supply EXISTING MAIN

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. MANUFACTURE, STORES, OFFICES
(b) Proposed use of each floor AS ABOVE

Irish Press 5/12/91

10 Does the proposal involve demolition, partial demolition or change of use of any habitable house or part thereof? NO

11.(a) Area of Site C. 12500
(b) Floor area of proposed development 490
(c) Floor area of buildings proposed to be retained within site C. 4100 Sq. m.

CO. DUBLIN Cable & Wireless (Ireland) Ltd. seek permission for proposed new ground and first floor offices c490 m.sq. within existing warehouse, alterations to north and west elevations and new ground floor link corridor at their premises at Airton Road, Tallaght, Dublin 24 with elevation to Belgard Road.

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

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

06 DEC 91

14. Please state the extent to which the Draft Building Regulations have been taken in account in your proposal:
AS FAR AS POSSIBLE

15. List of documents enclosed with application. SEE LETTER OF APPLICATION

857.50 9/12
N54038

16. Gross floor space of proposed development (See back) 490 Sq. m.
No of dwellings proposed (if any) NONE Class(es) of Development PLANNING CLASS 4
Fee Payable £ 857.50 Basis of Calculation £1.75/M² X 490 M = £857.50
If a reduced fee is tendered details of previous relevant payment should be given

Signature of Applicant (or his Agent) Adam Hefferman Date 6-12-91

FOR OFFICE USE ONLY

Application Type P
Register Reference 91A/1934
Amount Received £
Receipt No
Date

2-16.0
21-8

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 m² (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 m² (min. £70.00)
D	Agricultural Buildings/Structures	£1.00 per m² 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 correct application fee.

PAID BY
CASH
CHEQUE
M.O.
P.O.

Nº 54038

£857.50

Received this 9th day of .... 19..

from Cable & Wireless (Ire.) Ltd.

Airton Rd.,

Tallaght

the sum of eight hundred and fifty seven Pounds

fifty Pence, being fee for

planning application at Airton Rd.

Nodlaig Doane Cashier

S. CAREY
Principal Officer

Integrated Development Services Ltd.

Property Acquisition and Development Consultants.
146 Lower Drumcondra Road, Dublin 9, Ireland. Telephone: (01) 370936, 379362, 360033. Fax: (01) 369303.

Principal Officer,
Dublin County Council,
Planning Department,
Lower Abbey St.,
Dublin, 2.

4th December, 1991.

RE; PROPOSED NEW GROUND AND FIRST FLOOR OFFICES C. 490M² WITHIN EXISTING WAREHOUSE, ALTERATIONS TO NORTH & WEST ELEVATIONS AND NEW GROUND FLOOR LINK CORRIDOR FOR CABLE & WIRELESS (IRELAND) LTD. AT THEIR PREMISES AT AIRTON ROAD, TALLAGHT, DUBLIN, 24 WITH ELEVATION TO BELGARD ROAD.

Dear Sir,

We have been instructed by Cable & Wireless (Ireland) Ltd. to apply for planning permission regarding the above.

We are not applying for Building Bye Law Approval at this time. However a Building Bye Law Application with detailed constructional and engineering drawings together with specifications etc. will be lodged with your department in the near future. The Structural Engineers are John Moylan & Associates, 79 Merrion Square, Dublin, 2.

DUBLIN COUNT
Planning Dept. Re
APPLICATION
06 DEC 19
REG No. 9111/934

In support of our application please find enclosed;

1 No. Copy;

- Completed application form.
- Newspaper Advertisement Irish Press 5/12/91.
- Clients cheque in the amount of £857.50 (planning fee only).

4 No. Copies;

Drawing No. 9111091/1 ; Site Location Map.

Drawing No. 9111091/2 ; Ground Floor Plan.

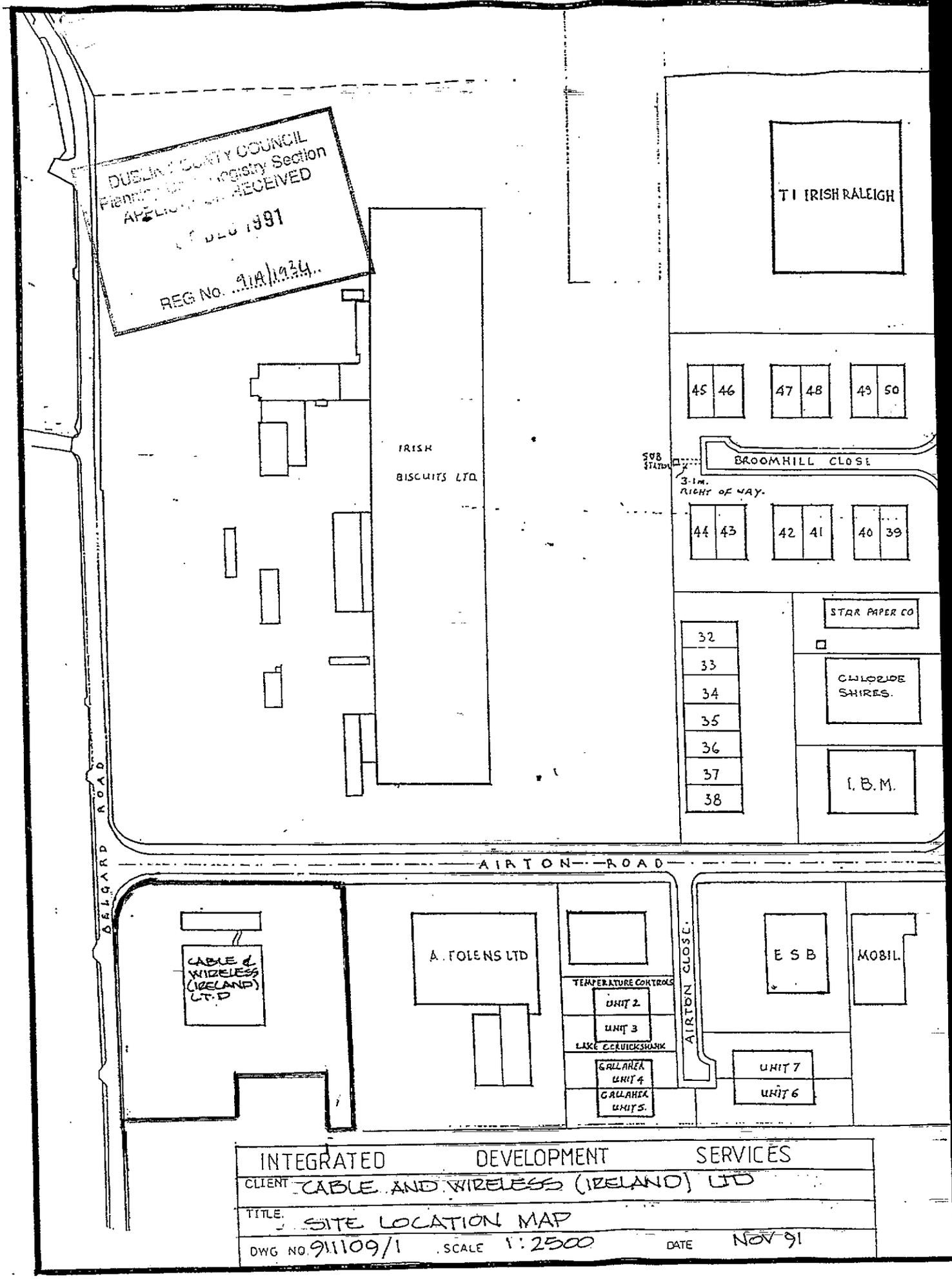
Drawing No. 9111091/3 ; First Floor Plan and Section A-A.

Drawing No. 9111091/4 ; Elevations and Section through link corridor.

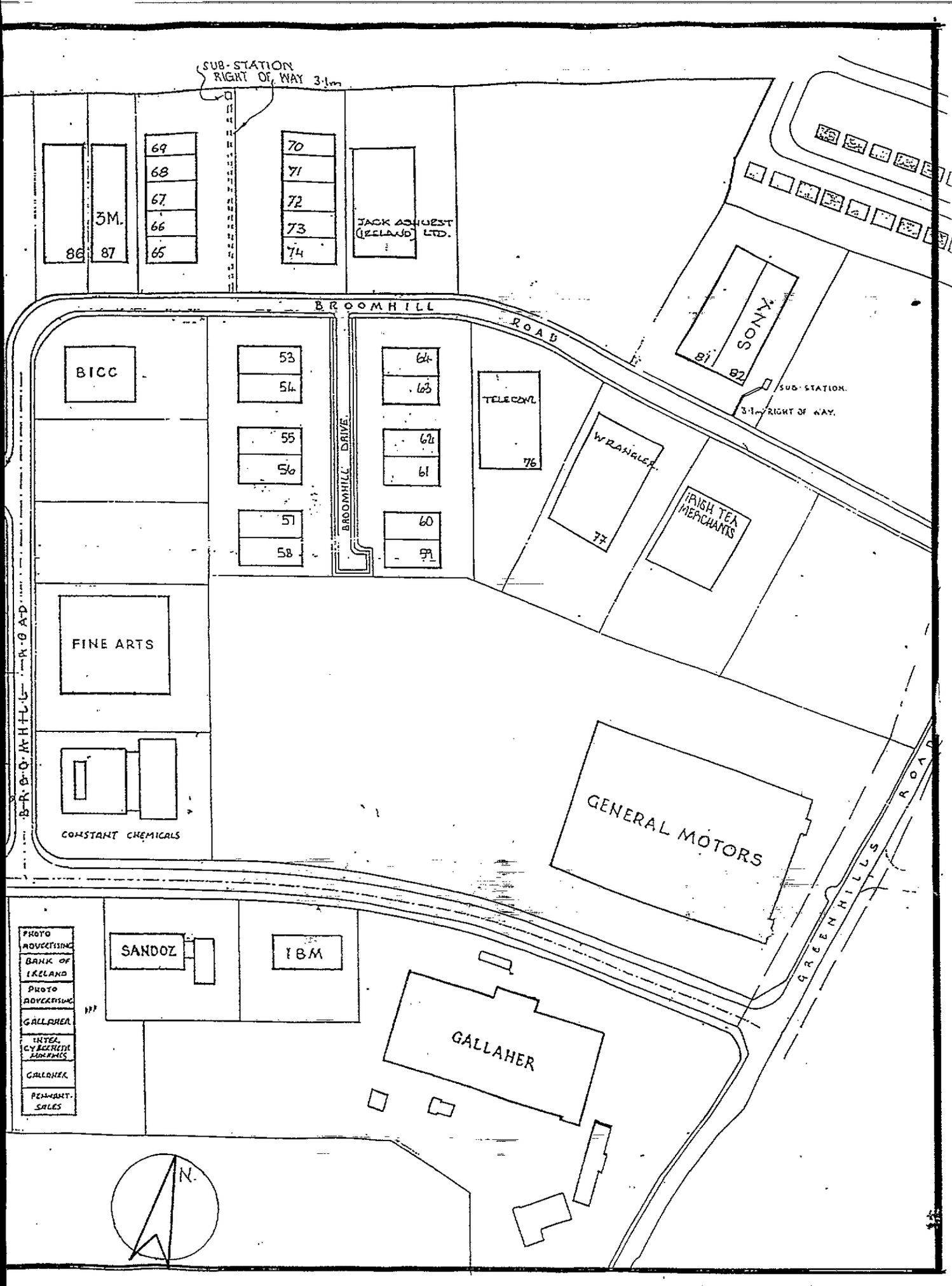
We trust the above to be in order. However should you have any queries please contact us immediately.

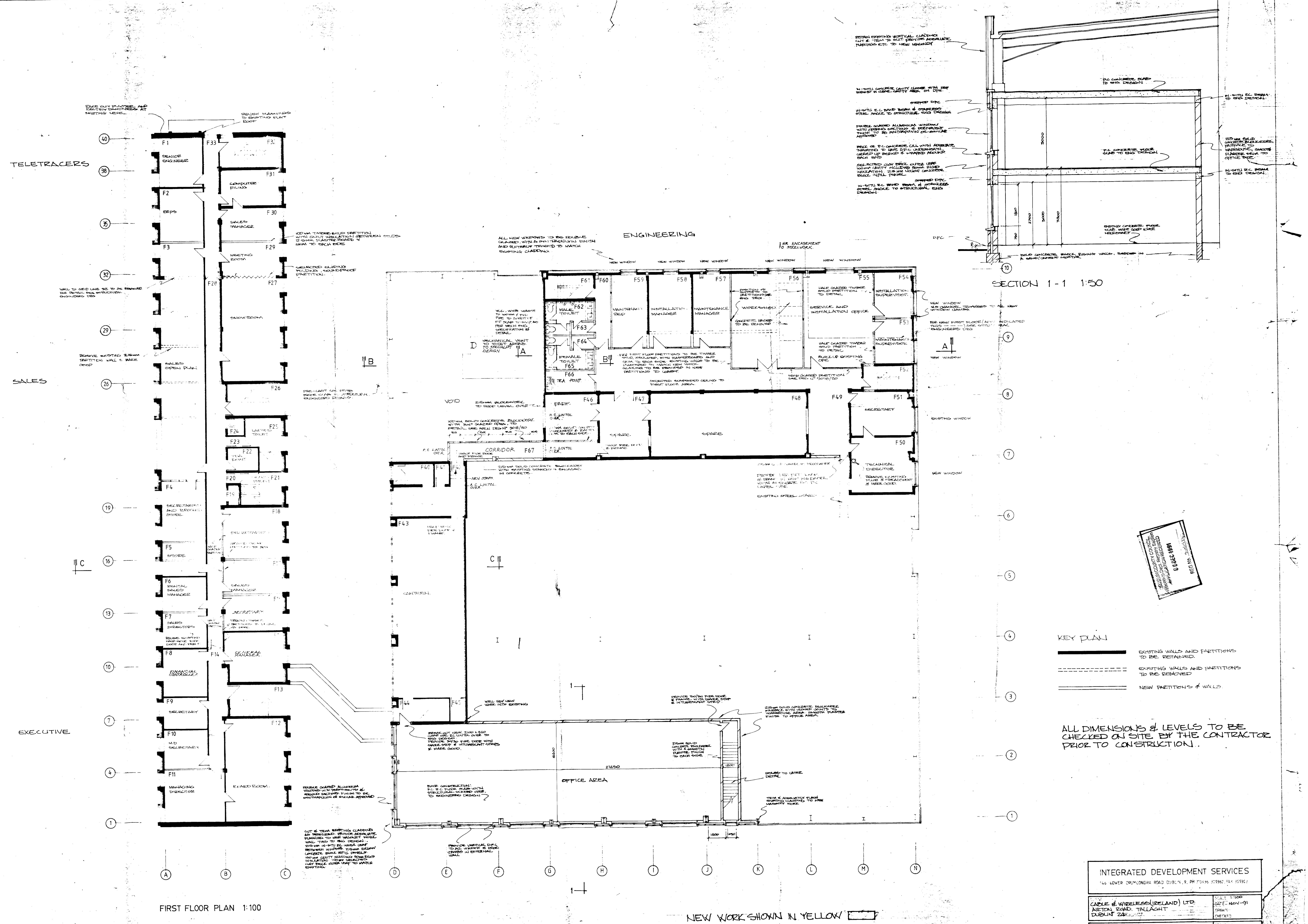
Yours faithfully,

ADAM HEFFERNAN
for INTEGRATED DEVELOPMENT SERVICES.
ENCLS.



INTEGRATED DEVELOPMENT SERVICES	
CLIENT	CABLE AND WIRELESS (IRELAND) LTD
TITLE.	SITE LOCATION MAP
DWG NO. 911109/1	SCALE 1:2500 DATE NOV 91


SUB-STATION
RIGHT OF WAY 3.1m
3M.
86
87
69
68
67
66
65
70
71
72
73
74
JACK ASHURST (IRELAND) LTD.
BROOMHILL ROAD
SONY
81
82
SUB-STATION.
3.1m RIGHT OF WAY.
BICC
53
54
55
56
57
58
BROOMHILL DRIVE
64
63
62
61
60
59
TELECOM
76
W. RANGLER
77
IRISH TEA MERCHANTS
FINE ARTS
CONSTANT CHEMICALS
GENERAL MOTORS
GREENHILLS ROAD
PHOTO ADVERTISING
BANK OF IRELAND
PHOTO ADVERTISING
GALLAHER
INTERNATIONAL CYBERNETIC EXHIBITIONS
GALLAHER
PERMANENT SALES
SANDOZ
IBM
GALLAHER
N.



KEY PLAN

EXISTING WALLS AND PARTITIONS TO BE RETAINED.

EXISTING WALLS AND PARTITIONS TO BE REMOVED

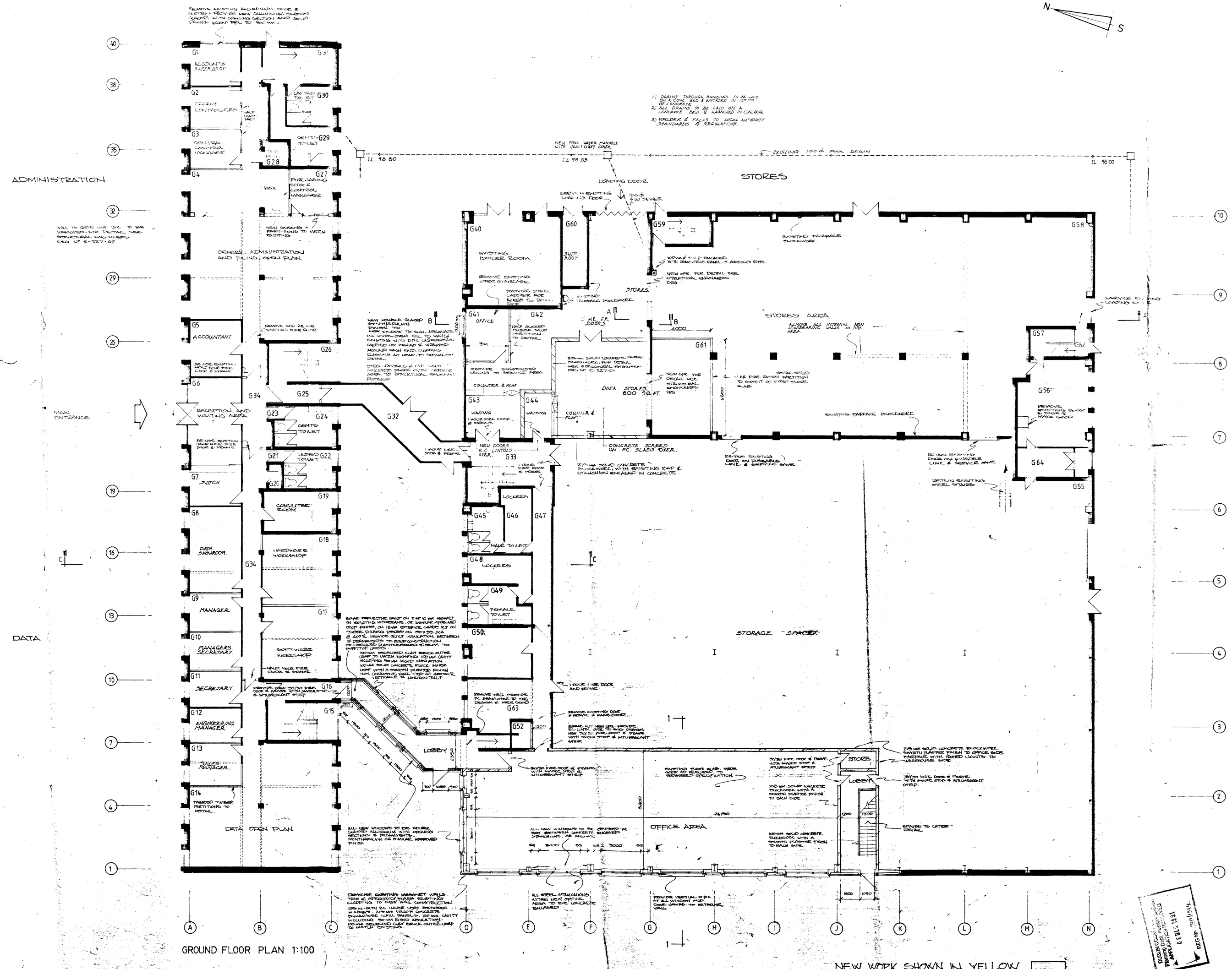
NEW PARTITIONS & WALLS

ALL DIMENSIONS & LEVELS TO BE CHECKED ON SITE BY THE CONTRACTOR PRIOR TO CONSTRUCTION.

NEW WORK SHOWN IN YELLOW

INTEGRATED DEVELOPMENT SERVICES
146 LOWER DRUMCONDRA ROAD DUBLIN, 9. PH 379936 379362. FAX 369303

CLIENT: CABLE & WIRELESS (IRELAND) LTD. AIRTON ROAD. TALLAGHT DUBLIN 24	SCALE 1:100 DATE NOV-91 DRAWN CHECKED
TITLE: NEW LINK BLOCK, AND OFFICES IN EXISTING WAREHOUSE AT AIRTON ROAD PREMISES	DRAWING NO. 911109/3



GROUND FLOOR PLAN 1:100

NOTES:

1. APPROXIMATELY 30% OF OFFICE AREA WINDOW BOARDS TO BE REPLACED.
2. WINDOW BOARDS IN OFFICE AREAS WHICH DO NOT HAVE ALLUMINIUM VENT OVER RADIATORS TO HAVE SUCH VENTS INSTALLED.
3. DEFECTIVE PLASTER AT WINDOW REVEALS TO BE REMOVED AND MADE GOOD
4. NEW WINDOWS AT FIRST FLOOR TO GRID LINES 10 AND N TO BE SUITABLY WEATHERED AND TRIMMED TO MATCH CLADDING.
5. DISHED AREA FOR FLOOR OPES IN FIRST FLOOR AREA GRID LINES G7-G10 TO N7 TO N10 TO BE SCABBLED AND RELEVELLED TO ENGINEERS DESIGN SUITABLE FOR CARPET OR VINYL FLOOR FINISH.
6. CONCRETE BASES ON FIRST FLOOR, GRID LINES L9 AND L10 TO BE REMOVED AND FLOOR SURFACE MADE GOOD TO RECEIVE FLOOR FINISH.
7. GENERALLY NEW PARTITIONS TO CORRIDOR AREAS WILL BE HALF GLAZED
8. NEW AND EXISTING PARTITIONS TO CORRIDOR AREAS TO BE TREATED WITH 'HAMRON' FIRE RETARDING PAINT (TO BOTH SIDES.) OR SIMILAR APPROVED. TO PROVIDE A 1/2 HOUR FIRE RATING WITH A CLASS 'O' SPREAD OF FLAME. OR EQUAL APPROVED.

KEY PLAN

▬	EXISTING WALLS AND PARTITIONS TO BE RETAINED.
═ ═ ═	EXISTING WALLS AND PARTITIONS TO BE REMOVED
═	NEW PARTITION. WALLS.

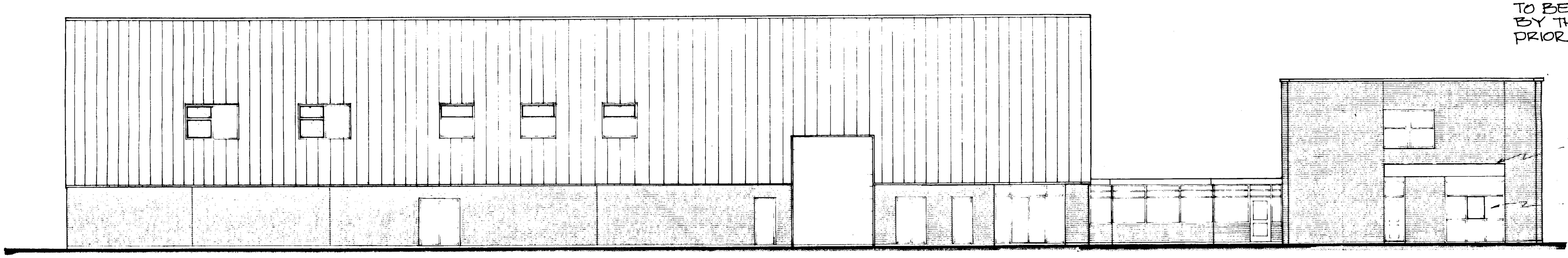
ALL DIMENSIONS & LEVELS TO BE CHECKED ON SITE BY THE CONTRACTOR PRIOR TO CONSTRUCTION.

INTEGRATED DEVELOPMENT SERVICES
146 LOWER DRUMCONDRA ROAD DUBLIN 9 PH 370936 379362 FAX 369303

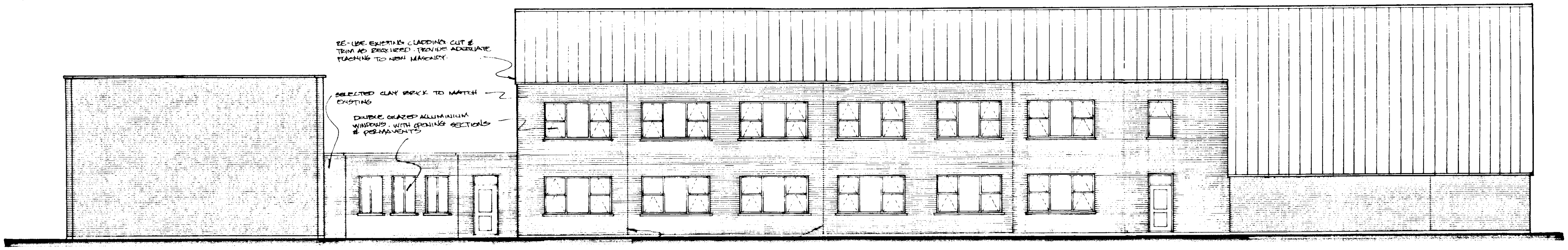
CLIENT CABLE & WIRELESS (IRELAND) LTD AIRTON ROAD TALLAGHT DUBLIN 24	SCALE 1:100 DATE NOV -91 DRAWN CHECKED
TITLE NEW LINK BLOCK & OFFICES IN EXISTING WAREHOUSE AT AIRTON ROAD PREMISES	DRAWING No 911109/2

Notes

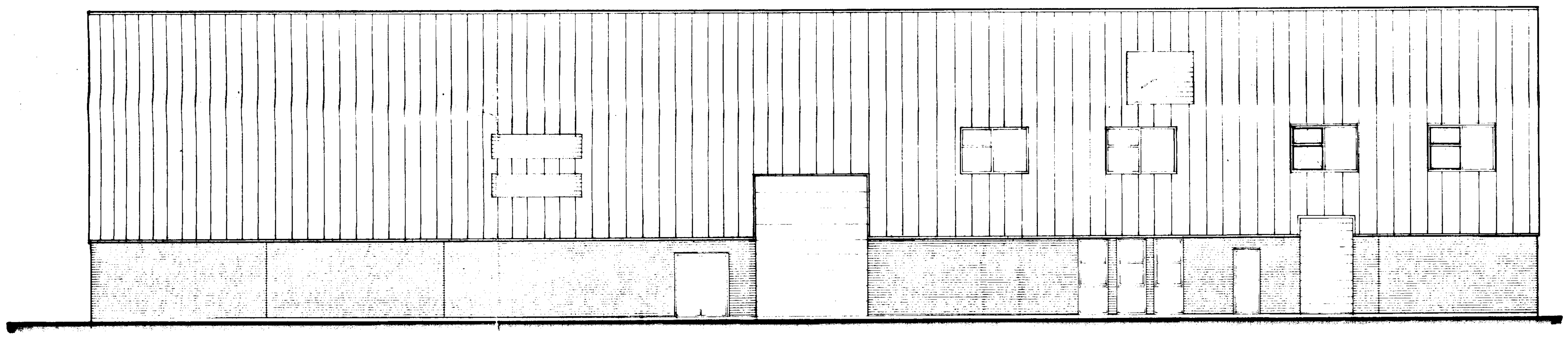
ALL DIMENSIONS & LEVELS TO BE CHECKED ON SITE BY THE CONTRACTOR PRIOR TO CONSTRUCTION.



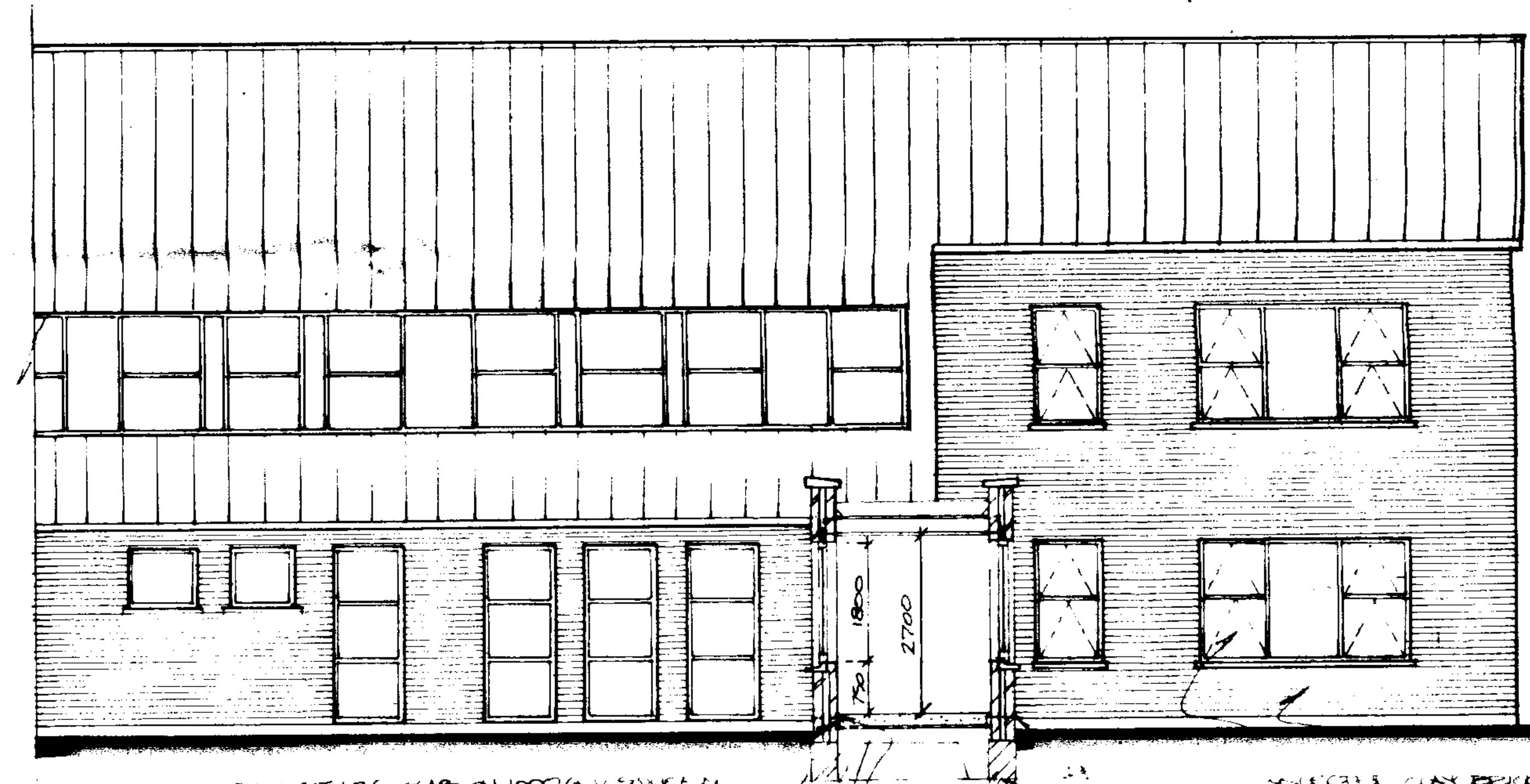
EAST ELEVATION



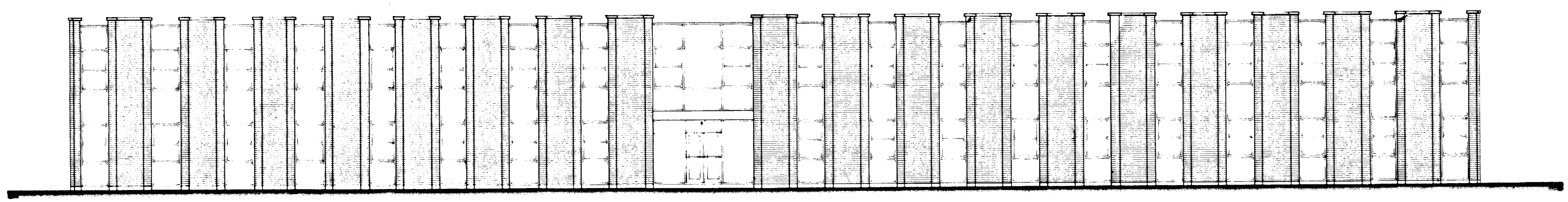
ELEVATION TO BELGARD ROAD



SOUTH ELEVATION



NORTH ELEVATION THRU LINK



ELEVATION TO AIRTON ROAD

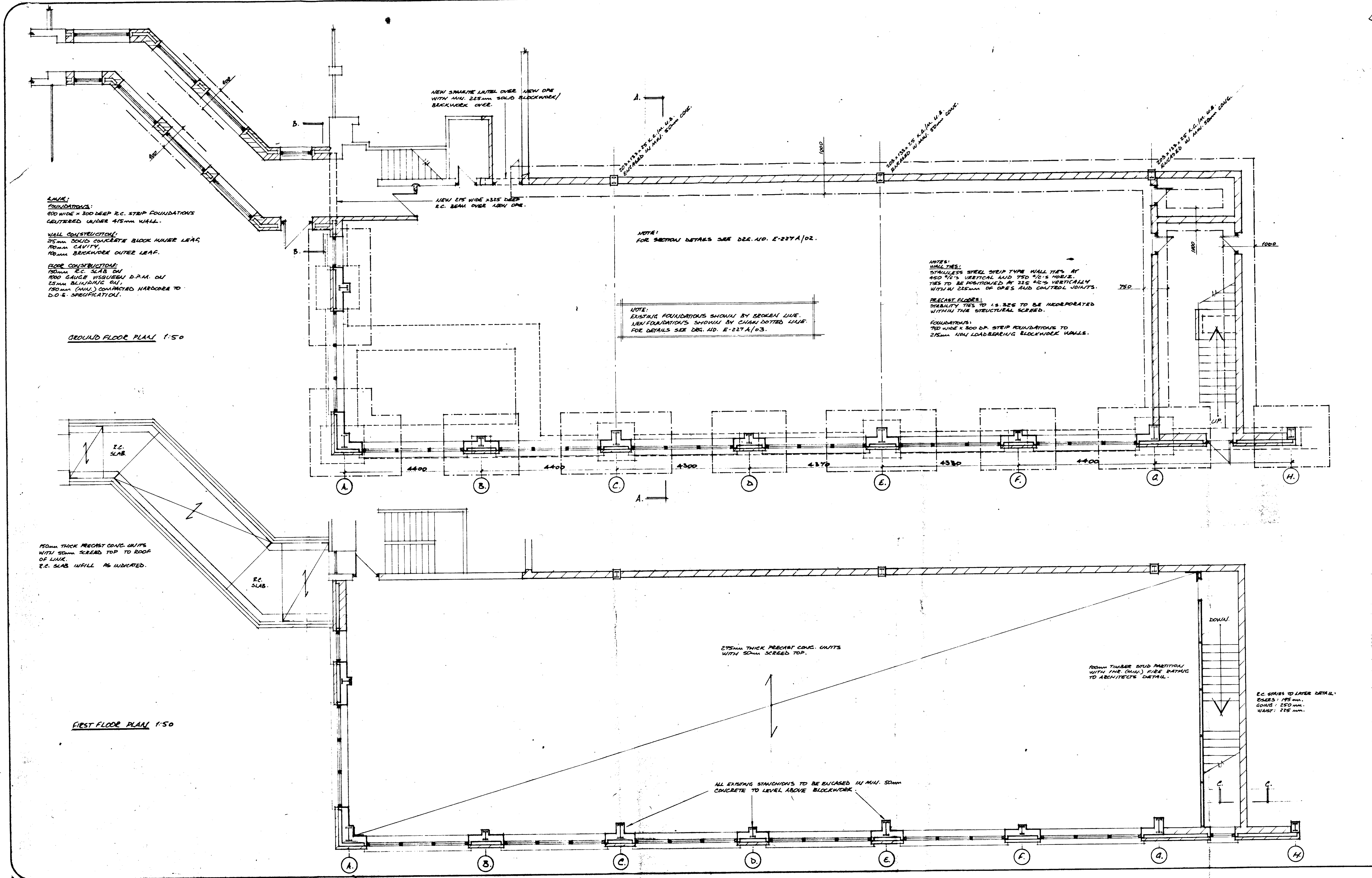
NEW WORK SHOWN IN YELLOW

No	Revision	Date

Integrated Development Services
146 LOWER DRUMCONDRA ROAD DUBLIN 9
TEL 01 370936/379362

Client CABLE & WIRELESS (IRELAND) LTD AIRTON ROAD, TALLAGHT. DUBLIN 24	Scale 1:100 Date NOV-91 Drawn Checked
Title NEW LINK BLOCK, AND OFFICES IN WAREHOUSE AT AIRTON ROAD PREMISES	Drawing No 911109 /4

NOTES:
1. DO NOT SCALE. USE FIGURED DIMENSIONS ONLY.
2. THIS DRAWING TO BE READ IN CONJUNCTION WITH ALL OTHER RELEVANT ARCHITECTURAL AND ENGINEERING DRAWINGS.
3. CONCRETE TO BE GRADE 35N/20.



LINK:
FOUNDATIONS:
900 WIDE × 300 DEEP R.C. STRIP FOUNDATIONS CENTERED UNDER 415mm WALL.
WALL CONSTRUCTION:
215mm SOLID CONCRETE BLOCK INNER LEAF,
100mm CAVITY,
100mm BRICKWORK OUTER LEAF.
FLOOR CONSTRUCTION:
150mm R.C. SLAB ON
1000 GAUGE VISQUEEN D.P.M. ON
25mm BLINDING ON,
150mm (MIN.) COMPACTED HARDCORE TO D.O.E. SPECIFICATION.
GROUND FLOOR PLAN 1:50
NOTE:
FOR SECTION DETAILS SEE DRG. NO. E-227A/02.
NOTE:
EXISTING FOUNDATIONS SHOWN BY BROKEN LINE.
NEW FOUNDATIONS SHOWN BY CHAIN DOTTED LINE.
FOR DETAILS SEE DRG. NO. E-227A/03.
NOTES:
WALL TIES:
STAINLESS STEEL STRIP TYPE WALL TIES AT 450 c/c's VERTICAL AND 750 c/c's HORIZ.
TIES TO BE POSITIONED AT 225 c/c's VERTICALLY WITHIN 225mm OF OPES AND CONTROL JOINTS.
PRECAST FLOORS:
STABILITY TIES TO I.S. 325 TO BE INCORPORATED WITHIN THE STRUCTURAL SCREED.
FOUNDATIONS:
750 WIDE × 300 DP. STRIP FOUNDATIONS TO 215mm NON LOADBEARING BLOCKWORK WALLS.
4400
4300
4370
4380
750
1000
A.
B.
C.
D.
E.
F.
G.
H.
UP.
150mm THICK PRECAST CONC. UNITS WITH 50mm SCREED TOP TO ROOF OF LINK.
R.C. SLAB INFILL AS INDICATED.
R.C. SLAB.
275mm THICK PRECAST CONC. UNITS WITH 50mm SCREED TOP.
ALL EXISTING STANCHIONS TO BE ENCASED IN MIN. 50mm CONCRETE TO LEVEL ABOVE BLOCKWORK.
DOWN.
FIRST FLOOR PLAN 1:50

FOR
BUILDING BYE LAW APPROVAL
NOT FOR CONSTRUCTION

REV.	DATE	AMENDMENT	DRN	CHK
B	19.12.91	REVISED AND UPDATED. B.B.L. ISSUE.		
A.	9.12.91	REVISED AND REDRAWN.		

JOHN MOYLAN & ASSOCIATES
CONSULTING ENGINEERS,
79, MERRION SQUARE, DUBLIN 2
TEL. NO. 615337/612475. FAX NO. 610255

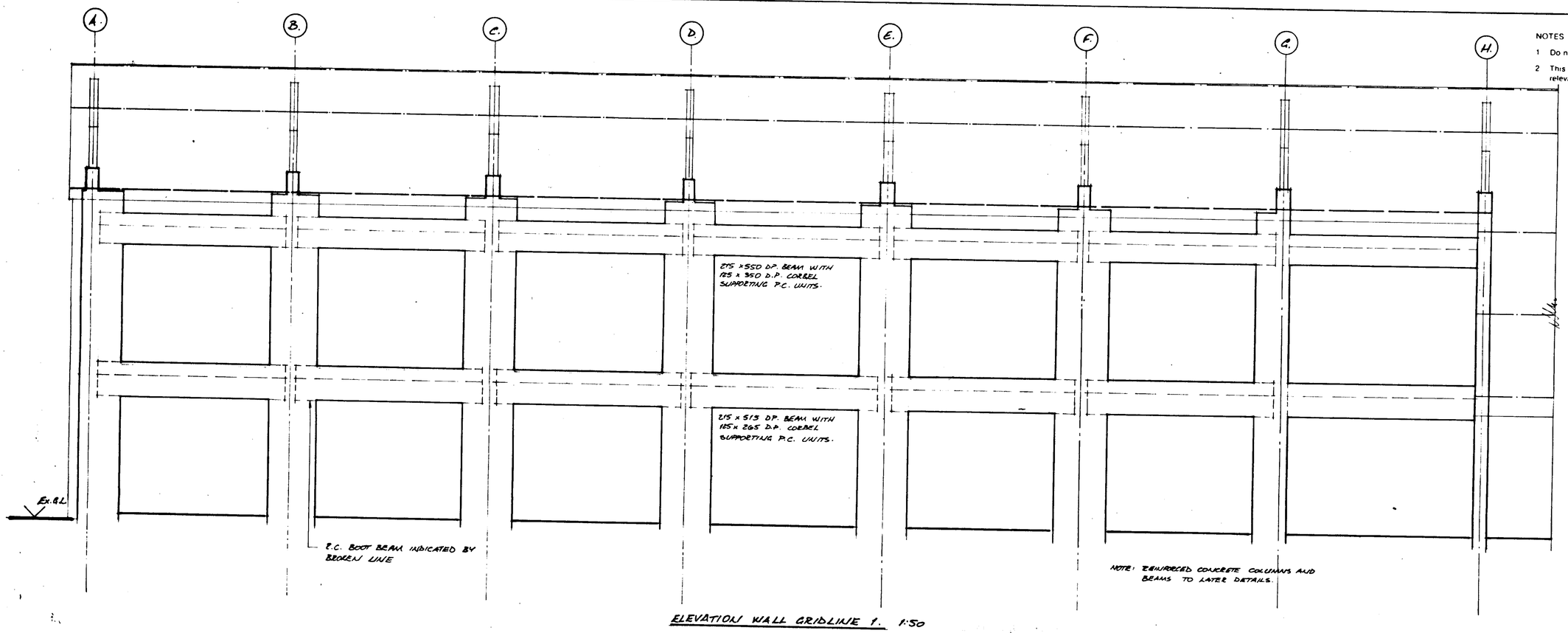
CLIENT CABLE AND WIRELESS:
ARCHITECT INTEGRATED DEVELOPMENT SERVICES.

PROJECT
PROPOSED INTERNAL OFFICES AND LINK, CABLE AND WIRELESS, AIRTON ROAD, TALLAGHT.

TITLE
STRUCTURAL GENERAL ARRANGEMENT DETAILS. PLANS.

SCALE 1:50.		JOB NO. E-227A	DRG. NO. 01
DRWN	CHECKED	DATE NOVEMBER '91.	REVISION B.

JDH 13997

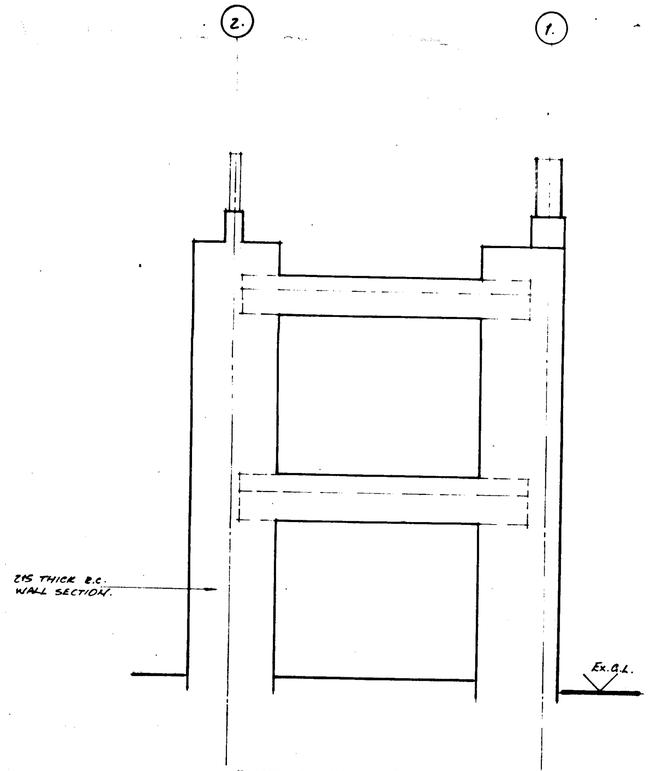


ELEVATION WALL GRIDLINE 1. 1:50

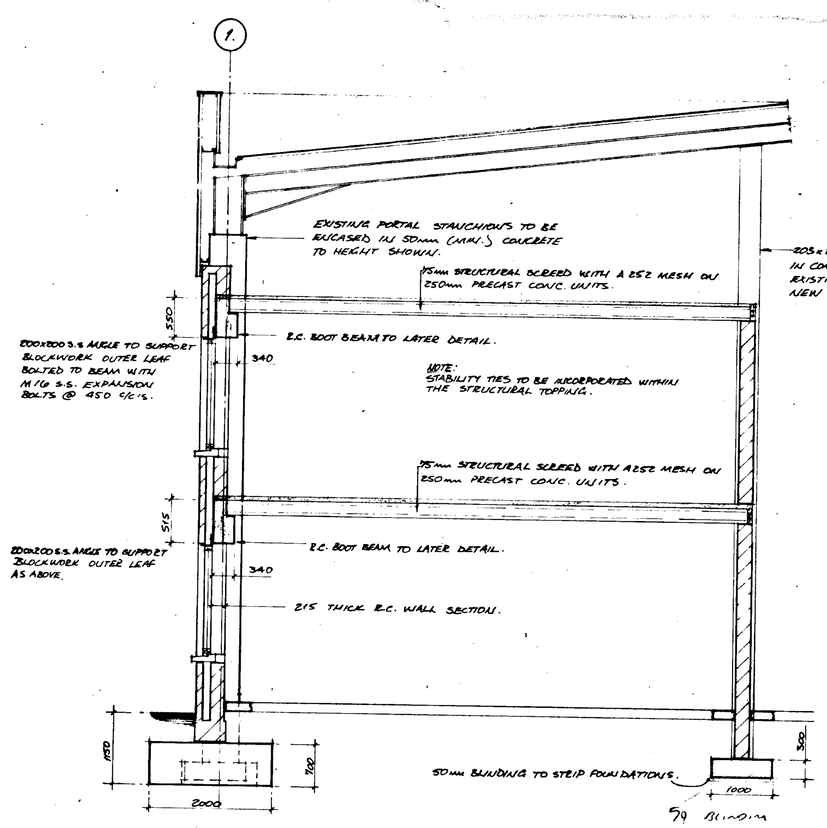
NOTES

1 Do not scale. Use figured dimensions only.

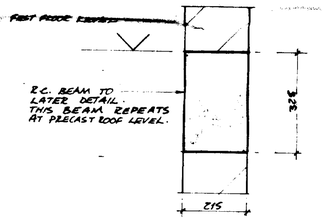
2 This drawing to be read in conjunction with all other relevant architectural and engineering drawings.



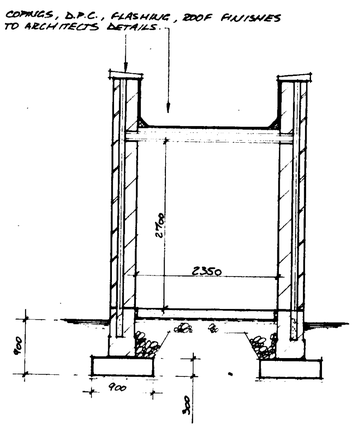
ELEVATION WALL GRIDLINE A. 1:50.



SECTION A-A. 1:50



SECTION C-C. 1:10.



SECTION B-B. 1:50.

NOTE:
FOR LOCATION OF SECTIONS SEE DRG. NO. E-227 A/01

REV	DATE	AMENDMENT	DRN	CHK
B.	19.12.91	REVISED AND UPDATED. B.B.L. ISSUE.	ML.	
A.	4.12.91	PROPOSED LAYOUT ALTERED.	ML.	

JOHN MOYLAN & ASSOCIATES
CONSULTING ENGINEERS,
79, MERRION SQUARE, DUBLIN 2
TEL. NO. 615337/612475 FAX NO. 610255

CLIENT CABLE AND WIRELESS.

ARCHITECT INTEGRATED DEVELOPMENT SERVICES.

PROJECT
PROPOSED INTERNAL OFFICES AND LINK, CABLE AND WIRELESS, AIRTON ROAD, TALLAGHT.

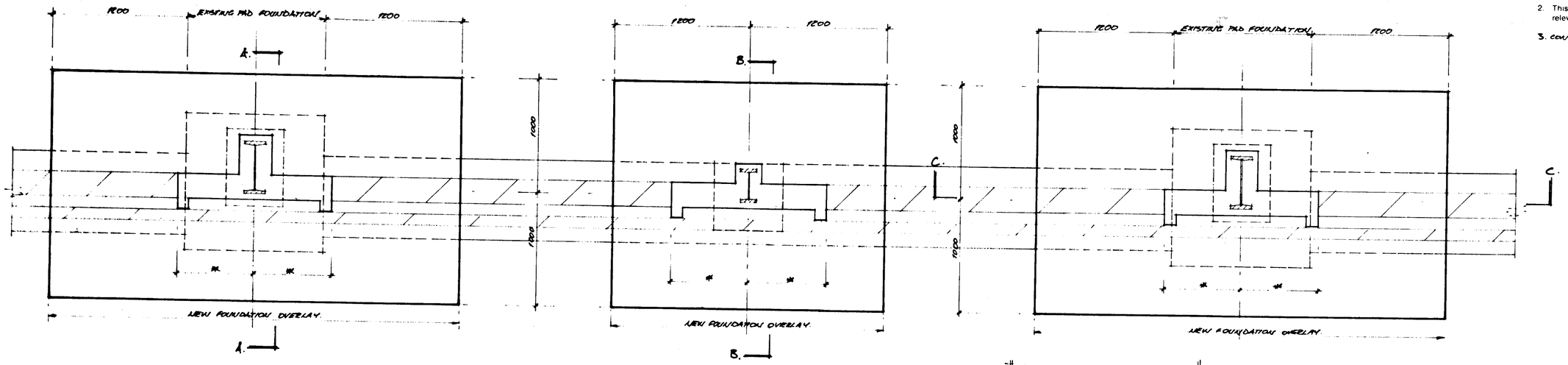
TITLE
STRUCTURAL GENERAL ARRANGEMENT DETAILS. ELEVATIONS AND SECTIONS.

SCALE	JOB NO	DRG. NO.
1:50	E-227A	02.

DRWN	CHECKED	DATE	REVISION
ML.		NOVEMBER '91.	B.

JDH 13099

JDH 14781



NOTE:
NEW FOUNDATION OVERLAY TO BE DOWELLED INTO EXISTING FOUNDATIONS TO LATER DETAIL.

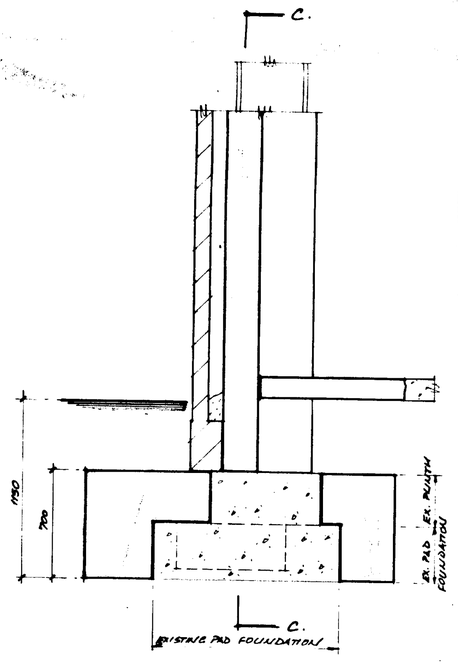
TYPICAL TWO BAY PLAN. 1:20.

NOTE:
* THIS DIMENSION TO BE CONFIRMED ON SITE.

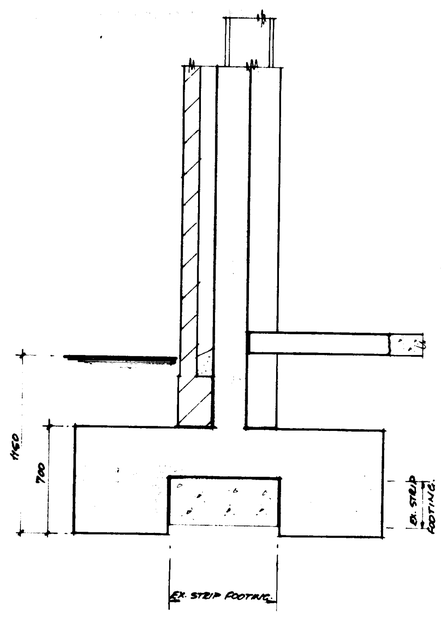
NOTE:
EXTENT AND FORMATION LEVEL OF EXISTING FOUNDATIONS TO BE CONFIRMED BY OPENING UP WORKS.

NOTES

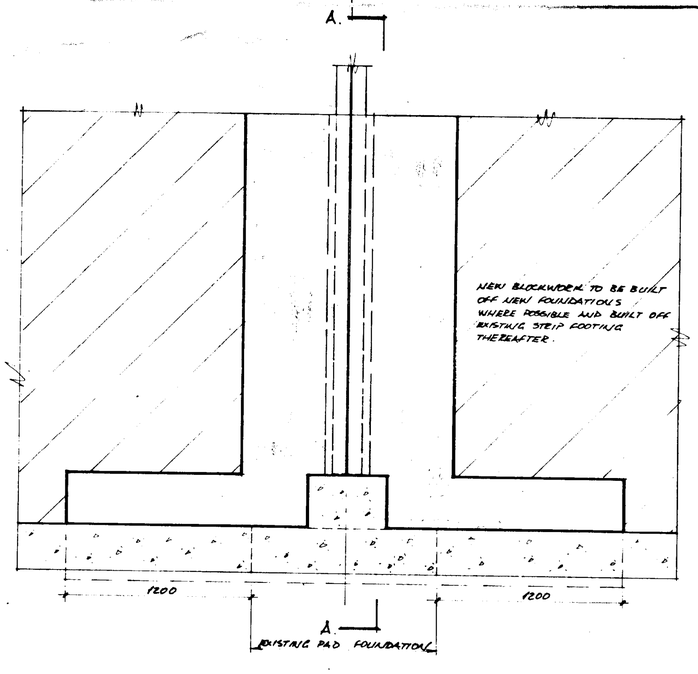
1. Do not scale. Use figured dimensions only.
2. This drawing to be read in conjunction with all other relevant architectural and engineering drawings.
3. CONCRETE TO BE GRADE 35/20.



SECTION A-A. 1:20.



SECTION B-B. 1:20.



SECTION C-C. 1:20.

FOR
BUILDING BYE LAW APPROVAL
NOT FOR CONSTRUCTION

REV.	DATE	AMENDMENT	DRN	CHK

JOHN MOYLAN & ASSOCIATES
CONSULTING ENGINEERS.
79. MERRION SQUARE. DUBLIN 2
TEL. NO. 615337/612475. FAX NO. 610255

CLIENT CABLE AND WIRELESS.

ARCHITECT INTEGRATED DEVELOPMENT SERVICES.

PROJECT
PROPOSED INTERNAL OFFICES AND LINK, CABLE AND WIRELESS, AIRTON ROAD, TALLAGHT.

TITLE
STRUCTURAL GENERAL ARRANGEMENT DETAILS. FOUNDATIONS.

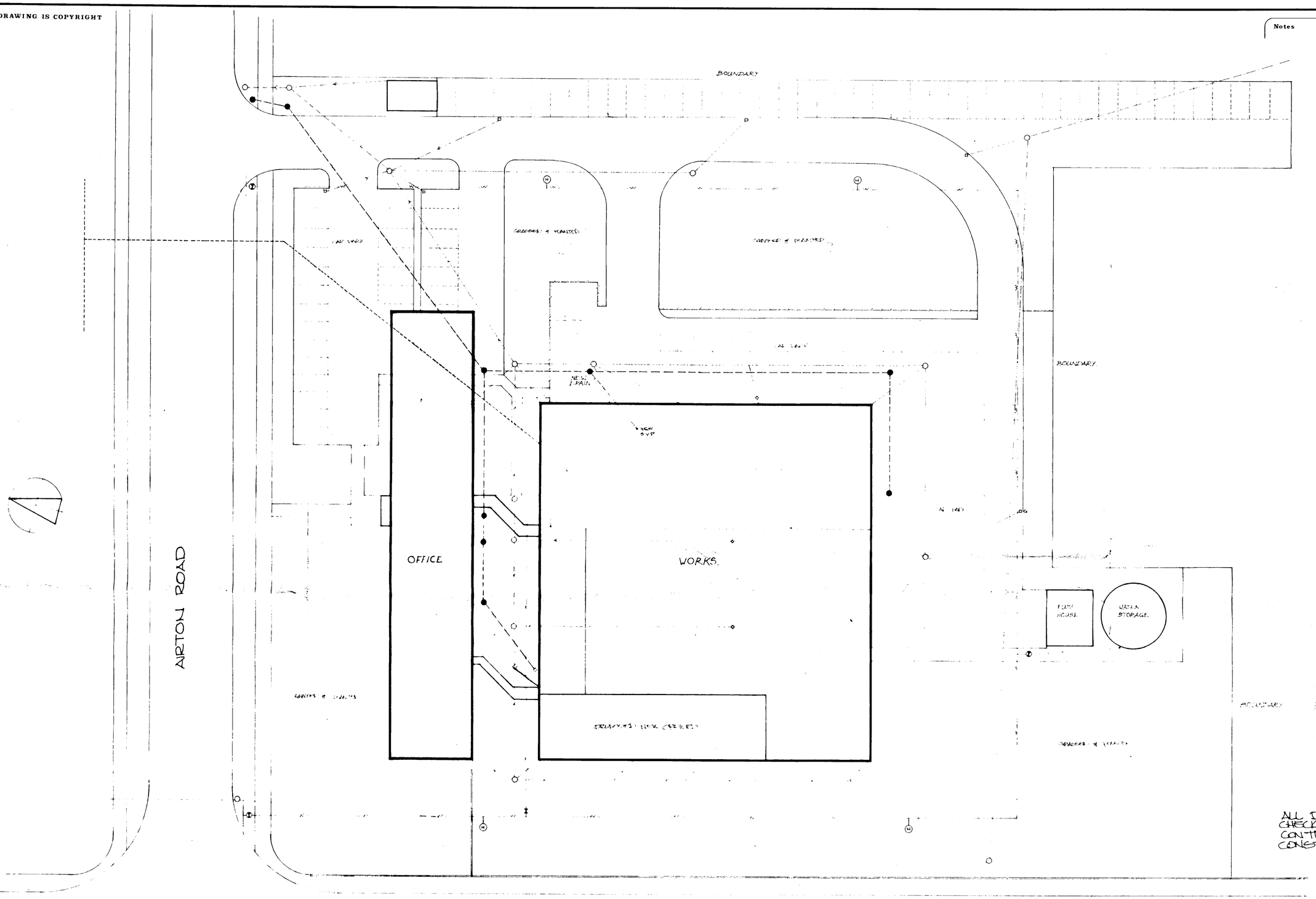
SCALE	JOB NO.	DRG. NO.
1:20.	E-227 A.	03.

DRWN	CHECKED	DATE	REVISION
M.		DECEMBER '91.	

JDH 13997

JDH 14781

Notes



DUBLIN COUNTY COUNCIL
Planning Dept. Register Section
APPLICATION
20 DEC 1991
No. 91A/1934

ALL DRAINS TO BE CHECKED ON SITE BY CONTRACTOR PRIOR TO CONSTRUCTION

EXISTING SURFACE WATER DRAIN
EXISTING FOUL DRAIN
NEW SURFACE WATER DRAIN
EXISTING WATERMAIN
NEW WORK

SITE PLAN 1:250

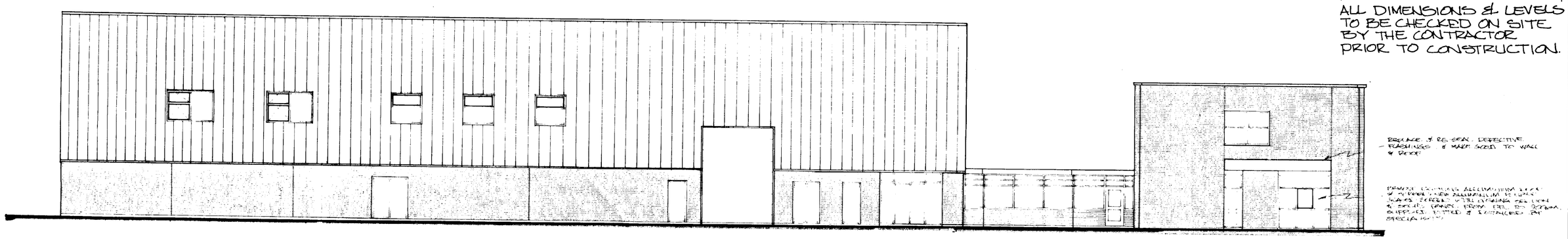
No	Revision	Date

Integrated Development Services
146 LOWER DRUMCONDRA ROAD DUBLIN 9
TEL 01 370936/379362

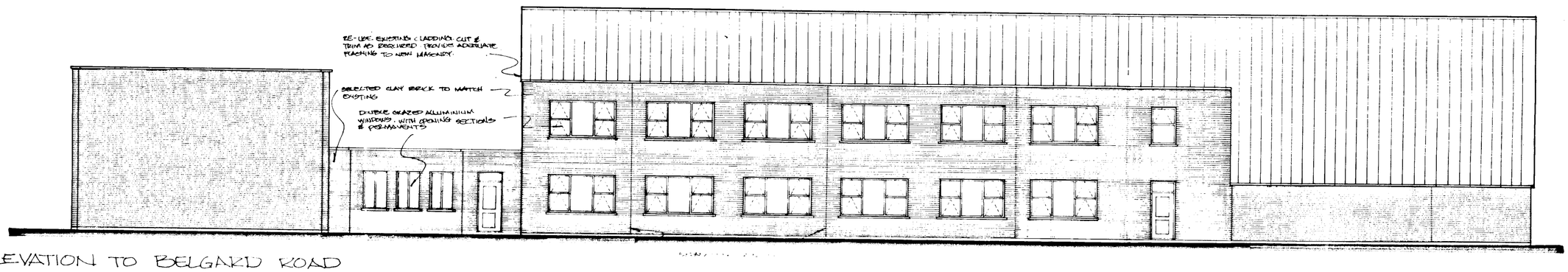
Client: CABLE & WIRELESS (IRL) LTD AIRTON ROAD TALLAGHT	Scale: 1:250 Date: 20/12/91 Drawn Checked
Title: SITE LAYOUT PLAN	Drawing No.: 911109/S

Notes

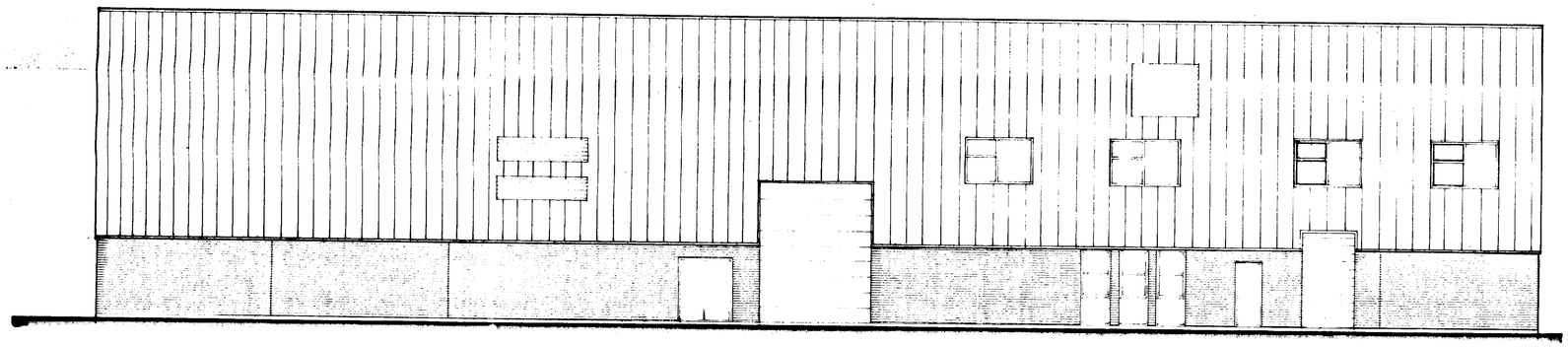
ALL DIMENSIONS & LEVELS TO BE CHECKED ON SITE BY THE CONTRACTOR PRIOR TO CONSTRUCTION.



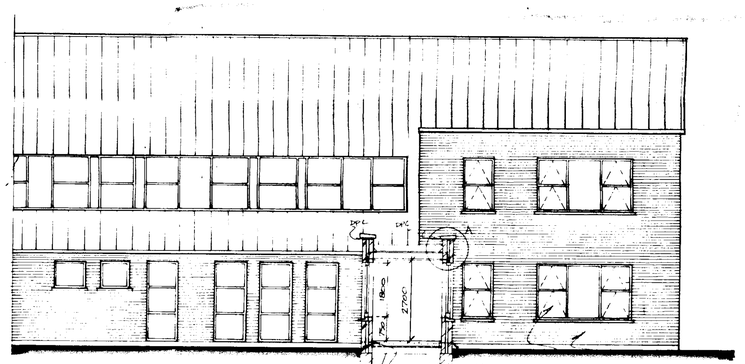
EAST ELEVATION



ELEVATION TO BELGARD ROAD

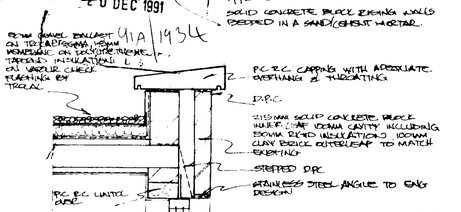


SOUTH ELEVATION

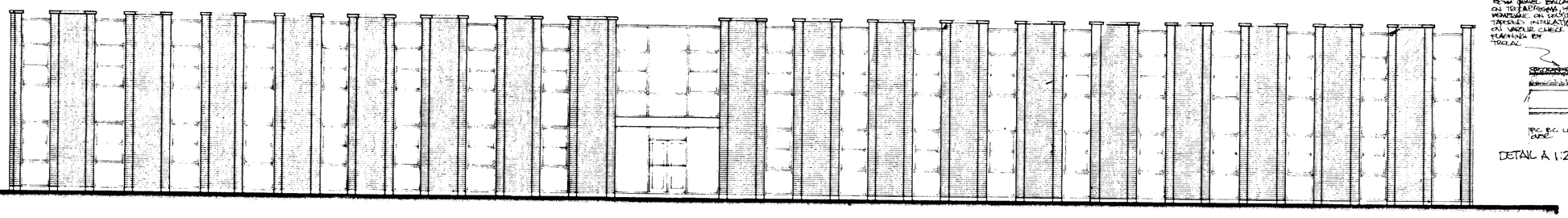


NORTH ELEVATION THRU

DUBLIN COUNTY COUNCIL
Planning Dept. Registry Section
APPLICATION No. 91A/1934
DEC 1991



DETAIL A 1:20



ELEVATION TO AIRTON ROAD

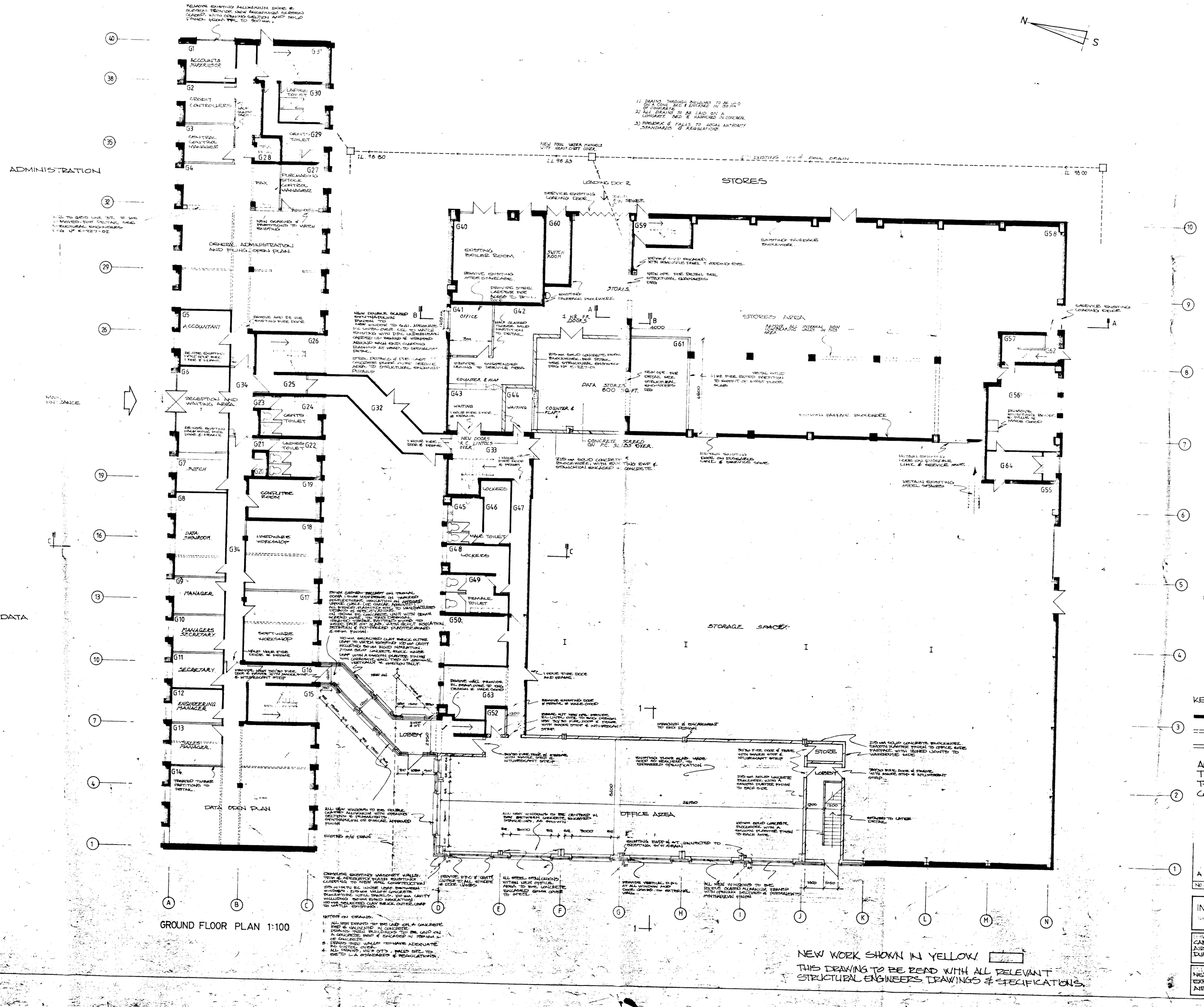
NEW WORK SHOWN IN YELLOW

No	Revision	Date
A	REVISED FOR P.C.C. APPLICATION	20/12/91

Integrated Development Services
146 TOWER DREMCONDRA ROAD DUBLIN 9
TEL 01 370916/379162

Client CABLE & WIRELESS (IRELAND) LTD AIRTON ROAD, TALLAGHT. DUBLIN 24	Scale 1:100 Date NOV-91 Drawn Checked
Title NEW LINK BLOCK, AND OFFICES IN WAREHOUSE AT AIRTON ROAD PREMISES	Drawing No. 911109/4 A


SECTION 1-1 1:50
ENGINEERING
TELETRACERS
SALES
EXECUTIVE
F1
SENIOR ENGINEER
F2
REPS
F3
F4
F5
STORE
F6
DIGITAL SALES MANAGER
F7
SALES DIRECTORS
F8
FINANCIAL CONTROLLER
F9
SECRETARY
F10
M.D SECRETARY
F11
MANAGING DIRECTOR
F12
BOARD ROOM
F13
F14
GENERAL MANAGER
SECRETARY
F26
SHOW ROOM
F27
F28
F29
MEETING ROOM
F30
SALES MANAGER
F31
COMPUTER FILING
F32
F33
SALES OPEN PLAN
F40
F43
CANTEEN
F44
F45
F46
SPARE
F47
F48
SPARE
F49
F50
TECHNICAL DIRECTOR
F51
SECRETARY
F53
F54
INSTALLATION SUPERVISOR
F55
SERVICE AND INSTALLATION OFFICE
F56
WORKSHOP
F57
MAINTENANCE MANAGER
F60
F61
F62
MALE TOILET
F63
F64
F65
FEMALE TOILET
F66
TEA POINT
F67
CORRIDOR
VOID
OFFICE AREA
23450
KEY PLAN
EXISTING WALLS AND PARTITIONS TO BE RETAINED.
EXISTING WALLS AND PARTITIONS TO BE REMOVED
NEW PARTITIONS & WALLS.
ALL DIMENSIONS & LEVELS TO BE CHECKED ON SITE BY THE CONTRACTOR PRIOR TO CONSTRUCTION.
* TO BE CHECKED ON SITE & AGREED WITH ARCHITECT
20 DEC 1991
A
REVISED FOR B.B.L. APPLICATION
20/12/91
NO
REVISION
DATE
INTEGRATED DEVELOPMENT SERVICES
CABLE & WIRELESS (IRELAND) LTD
AIRTON ROAD, TALLAGHT
DUBLIN 24
SCALE 1:100
DATE NOV-91
NEW LINK BLOCK AND OFFICES IN EXISTING WAREHOUSE AT AIRTON ROAD PREMISES
911109/3A
FIRST FLOOR PLAN 1:100
NEW WORK SHOWN IN YELLOW
THIS DRAWING TO BE READ WITH ALL RELEVANT STRUCTURAL ENGINEERS DRAWINGS & SPECIFICATIONS.



GROUND FLOOR PLAN 1:100

NOTES ON DRAINS.

1. ALL NEW DRAINS TO BE LAID ON A CONCRETE BED & HAUNCHED IN CONCRETE.
2. DRAINS THRU BUILDINGS TO BE LAID ON A CONCRETE BED & ENCASED IN 150 MM OF CONCRETE.
3. DRAINS THRU WALLS TO HAVE ADEQUATE RC LINTOL OVER.
4. ALL DRAINS, MH'S GT'S, RWPS ETC TO BE TO L.A STANDARDS & REGULATIONS.

NEW WORK SHOWN IN YELLOW ☐

THIS DRAWING TO BE READ WITH ALL RELEVANT STRUCTURAL ENGINEERS DRAWINGS & SPECIFICATIONS.

NOTES:

1. APPROXIMATELY 30% OF OFFICE AREA WINDOW BOARDS TO BE REPLACED.
2. WINDOW BOARDS IN OFFICE AREAS WHICH DO NOT HAVE ALLUMINIUM VENT OVER RADIATORS TO HAVE SUCH VENTS INSTALLED.
3. DEFECTIVE PLASTER AT WINDOW REVEALS TO BE REMOVED AND MADE GOOD
4. NEW WINDOWS AT FIRST FLOOR TO GRID LINES 10 AND N TO BE SUITABLY WEATHERED AND TRIMMED TO MATCH CLADDING.
5. DISHED AREA FOR FLOOR OPES IN FIRST FLOOR AREA GRID LINES G7 - G10 TO N7 TO N10 TO BE SCABBLED AND RELEVELLED TO ENGINEERS DESIGN SUITABLE FOR CARPET OR VINYL FLOOR FINISH.
6. CONCRETE BASES ON FIRST FLOOR, GRID LINES L9 AND L10 TO BE REMOVED AND FLOOR SURFACE MADE GOOD TO RECEIVE FLOOR FINISH.
7. GENERALLY NEW PARTITIONS TO CORRIDOR AREAS WILL BE HALF GLAZED
8. NEW AND EXISTING PARTITIONS TO CORRIDOR AREAS TO BE TREATED WITH 'HAMRON' FIRE RETARDING PAINT (TO BOTH SIDES.) OR SIMILAR APPROVED. TO PROVIDE A ½ HOUR FIRE RATING WITH A CLASS 'O' SPREAD OF FLAME. OR EQUAL APPROVED.

KEY PLAN

▬	EXISTING WALLS AND PARTITIONS TO BE RETAINED.
╌	EXISTING WALLS AND PARTITIONS TO BE REMOVED
═	NEW PARTITION WALLS.

ALL DIMENSIONS & LEVELS TO BE CHECKED ON SITE BY THE CONTRACTOR PRIOR TO CONSTRUCTION

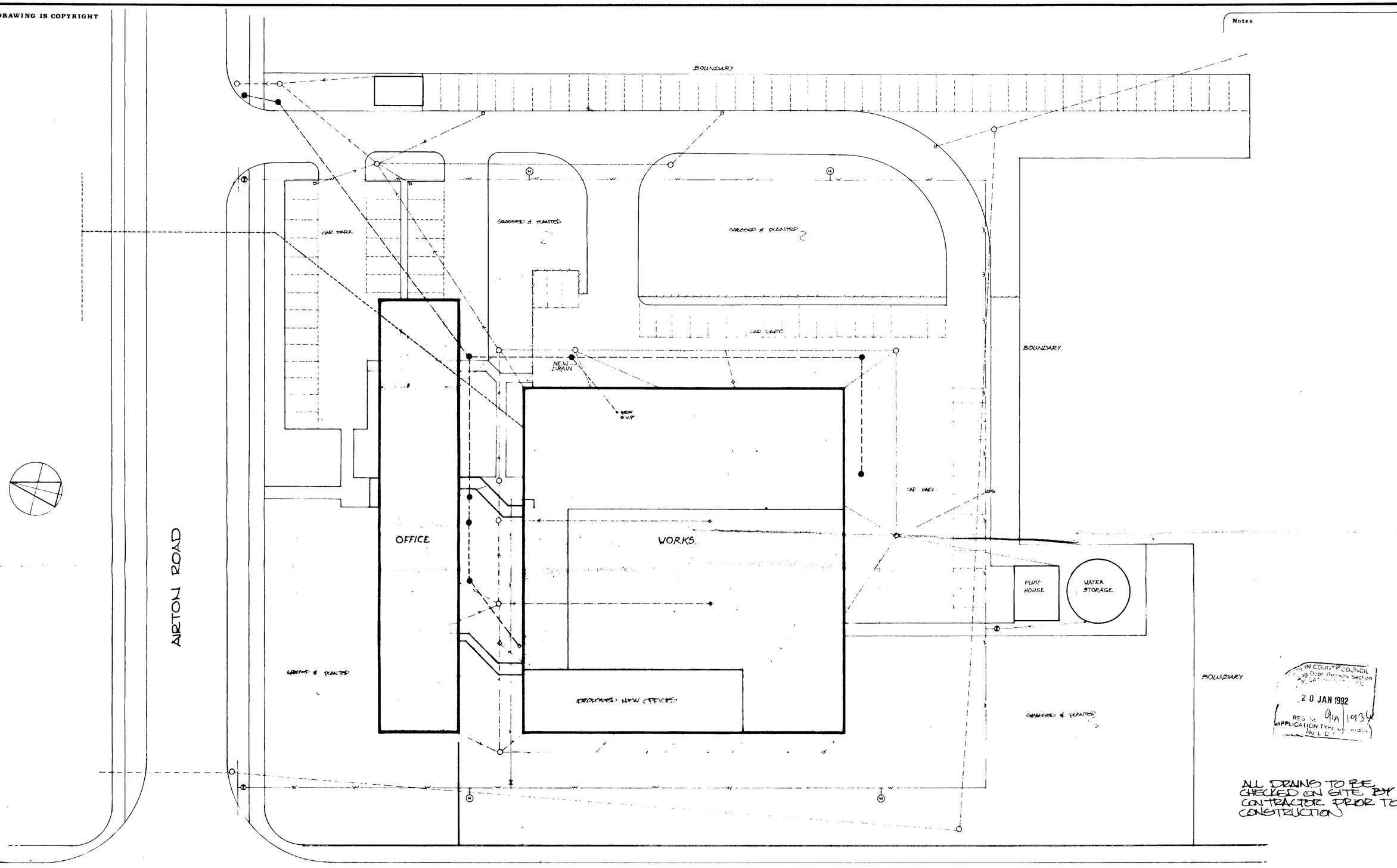
DUBLIN COUNTY COUNCIL
Planning Dept. Registry Section
APPLICATION RECEIVED
20 DEC 1991
REG. No. 91A/1934
APPLICATION TYPE U/P/A/BBL
No. L.D.S

NO.	REVISION	DATE
A	REVISED FOR B.B.L APPLICATION	20/12/91

INTEGRATED DEVELOPMENT SERVICES
146 LOWER DRUMCONDRA ROAD DUBLIN 9 PH 370936 379362 FAX 369303.

CLIENT CABLE & WIRELESS (IRELAND) LTD AIRTON ROAD TALLAGHT DUBLIN 24	SCALE 1:100 DATE NOV -91 DRAWN CHECKED
TITLE NEW LINK BLOCK & OFFICES IN EXISTING WAREHOUSE AT AIRTON ROAD PREMISES	DRAWING No 911109/2 A

Notes



DUBLIN COUNTY COUNCIL
Planning Register Section
20 JAN 1992
REG. No. 91A/1934
APPLICATION TYPE
No. L.D.

ALL DRAING TO BE CHECKED ON SITE BY CONTRACTOR PRIOR TO CONSTRUCTION

EXISTING SURFACE WATER DRAIN
EXISTING FOUL DRAIN
NEW SURFACE WATER DRAIN
EXISTING WATERMAIN
NEW WORK

SITE PLAN 1:250

BELGARD ROAD

No	Revision	Date

Integrated Development Services
146 LOWER DRUMCONDRA ROAD DUBLIN 9
TEL 01 370936/379362

Client: CABLE & WIRELESS (IRL) LTD, ARTON ROAD, TALLAGHT	Scale 1:250 Date 20/12/91 Drawn Checked
Title: SITE LAYOUT PLAN	Drawing No. 911109/5