BYE LAW APPLICATION FEES

REF. NO.: 91A/283 CERTIFICATE NO.:

PROPOSAL: Change of use from res. to offices

LOCATION: Orlagh Grove Tholarstown Rd.

APPLICANT: Gannon Homes 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	Dwelling (Houses/Flats)	@ £55					
B	Domestic Ext. (Improvement/ Alts.)	@ £30					
C	Building for office or other comm. purpose	@ £3.50 per M^2 or £70					
D	Building or other structure for purposes of agriculture	@ £1.00 per M^2 in excess of 300 M^2 Min. £70		£70 9/4/91 N39223			
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	£70	- £70			

Column 1 Certified: Signed: Grade: Date:

Column 1 Endorsed: Signed: Grade: Date:

Columns 2,3,4,5,6 & 7 Certified: Signed: M. De Grade: IV Date: 2/5/91

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

Objection to 91A/0283 not 89A/236 as confirmed by telephone call on 8/4/91 by Ms. O' Brien.

Orlagh Grove Residents Association

Recd 3/4

MW

91A/0283 (144)

8 Orlagh Crescent,
Scholarstown Rd.,
Dublin 16

2-4-'91

The Principal Officer,
Dublin County Council,
Planning Dept.,
Block 2, Irish Life Centre,
Lr. Abbey St.,
Dublin 1.

Re: Proposed alteration of plans approved under Reg. ref. 89A 236 from 4 1st floor flats to 4 1st floor offices.

Dear Sir/Madam,

I am asked by the above association to object on their behalf to the above proposals. We object for the following reasons:

1 Inappropriate

The proposed development is not keeping with the zoning of the area as residential. It

Orlagh Grove Residents Association

would not provide a useful service to the area in which it is sited.

2 Traffic / Parking

The proposed development would generate extra traffic while failing to provide the appropriate parking facilities.

3 Privacy

The provision of a first floor business premises on this site would interfere with the privacy of the nearby homes.

4 Security

The proposed offices, being unoccupied at night would pose a security threat to the neighbourhood.

We will be happy ~~the~~ to clarify our objections to this development if necessary and hope you will consider our concerns when making your decision.

Yours faithfully,
Laura O'Brien.

REF.: 91A/0283 CERTIFICATE NO: 24453

PROPOSAL: Change use from Residential

LOCATION: Bilash Grove, Schaeffer Road

APPLICANT: Cannon Homes Ltd

1	2	3	4	5	6	7
DWELLINGS/AREA LENGTH/STRUCT	RATE	AMT. OF FEE REQ.	AMOUNT LODGED	BALANCE DUE	BALANCE DUE	DATE/ RECEIPT NO
Dwellings	@£32					
	@£16					
	@50p per M² in excess of 300M² Min.£40					
metres² 226.0m²	@£1.75 per M² or £40	£ 395.50	£ 395	50p Not Sought		
x .1 hect.	@£25 per .1 hect. or £250					
x .1 hect.	@£15 per .1 hect. or £40					
x .1 hect.	@£25 per .1 hect. or £100					
	@£100					
x metres²	@£1 per M² or £40					
x1 000m²	@£15 per 1,000m² or £40					
x .1 hect.	@£5 per .1 hect. or £40					

Comm 1 Certified: Signed: [signature] Grade: DHE Date: 8/8/91

Comm 1 Endorsed: Signed: _____ Grade: _____ Date: _____

Comms 2,3,4,5,6 & 7 Certified Signed: [signature] Grade: S.O Date: 8/8/91

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

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

ASSESSMENT OF FINANCIAL CONTRIBUTION

REG. REF.: 91A/283

CONT. REG.:

SERVICES INVOLVED: WATER/FOUL SEWER/SURFACE WATER

AREA OF SITE:

FLOOR AREA OF PRESENT PROPOSAL: 2433Ft² J.Y. 8/3/91.

MEASURED BY:

CHECKED BY:

METHOD OF ASSESSMENT:

TOTAL ASSESSMENT

MANAGER'S ORDERED NO: P/ /
DATED

ENTERED IN CONTRIBUTIONS REGISTER:

DEVELOPMENT CONTROL ASSISTANT GRADE

DUBLIN COUNTY COUNCIL

PLANNING DEPARTMENT

Register Reference : 91A/0283 Date Received : 4th March 1991

Applicant : Gannon Homes Ltd. Appl.Type : PERMISSION

Development : Change of use from residential to office use at first floor and alterations to previously approved two storey shops and flat development

LOCATION : Orlagh Estate, Scholarstown Rd. Rathfarnham

O.S.REFS. 22/8,10

AREA REFERENCE SS1603

HISTORY

FEES CERTIFICATE NO.

FEE CLASS

MEASUREMENT FOR FEES

SIGNED ..... DATE .....
SENIOR EXECUTIVE DRAUGHTSMAN

FEE PAID FEE ASSESSED BALANCE DUE

CERTIFIED _____ GRADE _____ DATE _____

REFERENCE To: 91A/0283
AND See also 89A/236

91A/283
234

Minglewood,
5 Orlagh Grove,
Scholarstown Road,
Templeogue,
Dublin 16.

Recd 29/4/91

29.4.91

29 APR 91

Dear Mr Smith,

We are home owners of the above property, which is directly next to Orlagh Grove Shopping Centre now mid-way through construction.

Our Solicitor O'Hagan Ward is lodging a formal objection to planning permission # 91A/0283 which has been applied for, to have the orginally proposed flats on the second floor changed to business premises.

We are writing this letter to stress our dissatisfaction with the proposed plans, as business premises will invariably cause a greater traffic flow in the area and a

greater security risk. The amount of car parking space will be inadequate and will force street-side parking.

As well as this, we are unhappy about the boundary treatment between our house and the shops.

According to the plans there will be a plant border one metre in width, separating our garden wall from the shops. As you will appreciate this border treatment is negligable, and its inadequacy will cause a great deal of privacy loss and an added security risk to us.

Please take these points into consideration and help us to secure our rights to privacy and security.

Thanking you in advance of your help.

Sincerely,

James & Helen Isaacs

COMHAIRLE CHONTAE ATHA CLIATH

Telephone: 724755
Extension: 268/269

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

Our Ref.: 91A/0283

3 May 1991

James & Helen Isaacs,
Minglewood,
5 Orlagh Grove,
Scholarstown Road,
Templeogue,
Dublin 16.

Re: Proposed change of use from residential use to office use of first-floor and subsequent alterations to previously approved two-storey shops and flat development at Orlagh Estate, Scholarstown Road, Rathfarnham, Dublin 16 for Gannon Homes Ltd.

Your letter dated: 29th April, 1991; No: 234

Dear Sir/Madam,

With reference to the above, the applicant withdrew the application on the 1st May, 1991, and particulars of such withdrawal have been entered in the Planning Register. The Register is available for inspection at the Planning Department, Irish Life Centre, Dublin 1, during office hours (9 a.m. to 12.30 p.m. and 2.15 p.m. to 4.30 p.m.). A certified copy of the entry in the Register may be had on payment of £5.00 for each entry.

Yours faithfully,

for Principal Officer.

COMHAIRLE CHONTAE ATHA CLIATH

Telephone: 724755
Extension: 268/269

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

Our Ref.: 91A/0283

3 May 1991

Orlagh Grove Residents Association,
8 Orlagh Crescent,
Scholarstown Road,
Dublin 16

Re: Proposed change of use from residential use to office use of first-floor and subsequent alterations to previously approved two-storey shops and flat development at Orlagh Estate, Scholarstown Road, Rathfarnham, Dublin 16 for Gannon Homes Ltd.

Your letter dated: 29th April, 1991; No: 144

Dear Sir/Madam,

With reference to the above, the applicant withdrew the application on the 1st May, 1991, and particulars of such withdrawal have been entered in the Planning Register. The Register is available for inspection at the Planning Department, Irish Life Centre, Dublin 1, during office hours (9 a.m. to 12.30 p.m. and 2.15 p.m. to 4.30 p.m.). A certified copy of the entry in the Register may be had on payment of £5.00 for each entry.

Yours faithfully,

L-D

for Principal Officer.

Objection to 91A/0283 not 89A/236.
as confirmed by telephone call on
8/4/91 by Ms O'Beau.

Laura O'Brien,
8 Orlagh Crescent,
Scholarstown Road,
Dublin 16.

RF/LD

5/4/91

RE: Development at Scholarstown Road, Scholarstown

Dear Sir,

I refer to your letter received in this Department on 3rd April, 1991 regarding the above and wish to inform you that a Decision to Grant Permission was made on this application on 10th April, 1990. An Appeal against this Decision was lodged on 21st June, 1990 and no decision was made to date.

Yours faithfully

for PRINCIPAL OFFICER

Orlagh Grove Residents Association

Rec'd
3/4

MW

8 Orlagh Crescent,
Scholarstown Rd.,
Dublin 16

2-4-'91

The Principal Officer,
Dublin County Council,
Planning Dept.,
Block 2, Irish Life Centre,
Lr. Abbey St.,
Dublin 1.

Re: Proposed alteration of plans approved under Reg. ref. 89A/236 from 4 1st floor flats to 4 1st floor offices.

Dear Sir/Madam,

I am asked by the above association to object on their behalf to the above proposals. We object for the following reasons:

1 Inappropriate

The proposed development is not keeping with the zoning of the area as residential. It

would not provide a useful service to the area in which it is sited.

2 Traffic / Parking

The proposed development would generate extra traffic while failing to provide the appropriate parking facilities.

3 Privacy

The provision of a first floor business premises on this site would interfere with the privacy of the nearby Homes.

4 Security

The proposed offices, being unoccupied at night would pose a security threat to the neighbourhood.

We will be happy ~~to~~ to clarify our objections to this development if necessary and hope you will consider our concerns when making your decision.

Yours faithfully,
Laura O'Brien.

Hugh J. O'Hagan Ward & Co.
SOLICITORS
Commissioners for Oaths
Incorporating
RYAN WALLACE CRIVON

Norman Gruson, B.A., LL.B.,
~~Louis Goldberg, B.A., LL.B.,~~
Quentin Crivon.
Paul A. Ferris, B.A., LL.B.,

Michael G. Cosgrove, B.C.L., A.I.T.I.,
John Brannigan, B.C.L.

DDE Box No. 15

94 Lr. Baggot St.
Dublin 2.

Telephone: 764496/7/8
686832
767621
Telefax: 682317

PLEASE QUOTE OUR REFERENCE

Our Ref: NG/MM

Your Ref: 91A/283 (243)

Date: 30th April, 1991

A. Smith, Esq,
Principal Officer,
Registry Section
Planning Department,
Irish Life Mall,
BLOCK 2
Talbot Street
DUBLIN, I.

02 MAY 91

RE: Ref: 91A/0283
Register Ref: No. 91A/236
Proposed Conversion of Residential Flats at Orlagh Grove, Scholarstown Road Business Premises

Dear Sir,

We act on behalf of Mr. and Mrs. James Isaacs of Minglewood, 5 Orlagh Grove, Scholarstown Road, Templeogue, Dublin 16 who have requested us to lodge a formal objection to the application of the Developers, Messrs. Gannon Homes, for change of user in the construction from flats to business premises. Inter alia, the following are our clients' reasons for objecting:-

1) The change will engender the free flow of traffic into the Estate and causing safety problems to children and residents and will take up additional car space and car parking around the shop development and cause hazardous off street parking

2) Security problems will also be increased both during the day and night and particularly with unoccupied business premises and because of the proximity of their dwelling to the development will put same directly in line for possible break insand burglaries

3) There are no precise conditions in relation to boundary treatment either in the Gannon Homes Site Plan, (reference 89A/236 Conroy Kelly Architects Drawing 8831,020I January 1990) or in the Bord Pleanala Appeal Decision (reference PL6/5/82396 - Schedule 2 No. 6) and certain requirements under these Plans have not as yet been complied with despite the fact that construction is well under way

4) Because of the additional business and the fact that people will be seeking access to the area would engender the possibility of loiterers using the area and additional problems relating to the disposal of litter and dirt which will accummulate as a result thereof. This will have a deleterious effect on the value of their property, causing them great concern

It is hoped that the Council will reject the proposed alteration herein. If, however, they should decide to grant the application we would require

that same be granted with the provision that the developers provide a much more suitable and adequate boundary with proper screening and fencing. Between their 29 inch high front garden wall and the eleven car parking spaces curb line there is provision for no more than a forty inch wide shrubbery plantation which is grossly inadequate and seriously infringes our clients' rights to privacy.

We would be obliged if you would take our clients objections and the points raised in connection therewith into consideration. We understand that the Knocklyon Community Council and the Orlagh Grove Residents Committee and Mr. John Hannon, County Counciller, have made representations in the matter and are favourable to support our clients' objections. We would be grateful if you would keep us advised of developments herein.

Yours faithfully,

HUGH J. O'HAGAN WARD & CO.

Order No. P/1874/91

COMHAIRLE CHONTAE ÁTHA CLIATH

Record of Executive Business and Manager's Orders

Proposed change of use from residential use to office use of first-floor and subsequent alterations to previously approved two-storey shops and flat development at Orlagh Estate, Scholarstown Road, Rathfarnham, Dublin 16 for Gannon Homes Ltd.

Conroy Crowe Kelly,
26 Kingram Place,
Dublin 2.

Reg. Ref. 91A/0283
Appl. Rec'd: 04.03.91
Withdraw. Let. Recd. 01.05.91

Report dated 1 May 1991.

On 4 March, 1991, Conroy Crowe Kelly submitted an application for change of use from residential use to office use of first-floor and subsequent alterations to previously approved two-storey shops and flat development at Orlagh Estate, Scholarstown Road, Rathfarnham, Dublin 16 on behalf of Gannon Homes Ltd.

By letter dated 1 May, 1991 the applicant withdrew the application.

I recommend that no further consideration be given to this application in view of the withdrawal.

Endorsed:- _____
for Principal Officer

For Dublin Planning Officer

Order:- NOTED.

Dated: 2 May, 1991.

K. O'Sullivan
Assistant City & County Manager

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

FILE DISCUSSED AT COUNCIL/COMMITTEE MEETING

FILE REF: 91A283

MEETING	COMMENTS	NOTED IN DEV. CONTROL	NOTED BY
BELGARD H+P 23/4/91	Cllr Hannon Rec. Refusal Totally inappropriate in Residential area. Prev. applic was bad but this proposal even worse. Additional traffic No need for offices in this location.		

19/6/96
10/4

Hugh J. O'Hagan Ward & Co.
SOLICITORS
Commissioners for Oaths
Incorporating
RYAN WALLACE CRIVON
DDE Box No. 15

Norman Gruson, B.A., LL.B.,
~~Louis Goldberg, B.A., LL.B.,~~
Quentin Crivon.
Paul A. Ferris, B.A., LL.B.,

Michael G. Cosgrove, B.C.L., A.I.T.I.,
John Brannigan, B.C.L.

94 Lr. Baggot Street
Dublin 2.

Telephone: 764496/7/8
686832
767621
Telefax: 682317

PLEASE QUOTE OUR REFERENCE

Our Ref: NG/CB

Your Ref: 91A/0283
Register Ref No. 91A/236
No. 10 91A/915

Date: 13th August 1991

13 AUG 91

A. Smith Esq.,
Principal Officer,
Registry Section,
Planning Department,
Irish Life Mall,
Block 2,
Talbot Street,
Dublin 1.

RE: Proposed Conversion of Residential Flats at Orlagh Grove, Scholarstown Road to Business Premises.

Dear Sir,

We refer to a communication of the 30th of April last when we had been discussing the question of provision of a suitable and adequate boundary wall with proper screening and fencing for our clients, Mr. & Mrs. James Isaacs.

The Developers have apparently agreed to the provision of a boundary wall. It is felt that this will not be adequate enough to provide the necessary screening as it is felt that at least one block extra in height on the back wall would be required and it is also felt that more adequate and wider plantation bordering on this wall should be provided to give the additional privacy necessary. Further it is felt that the entrance/exit to the Shopping Precinct be situated further away from our clients' premises as it is felt that the disturbance and interference which may ensue because of the proximity to same will have a deleterious effect to our clients' premises and also on our clients.

We would be grateful if you would take these matters into consideration in when a decision on the Planning is arrived at and if any further information is required our clients will be pleased to furnish same to you.

Yours faithfully,

HUGH J. O' HAGAN WARD & CO.

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

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

Hugh J. O'Hagan Ward & Co.,
94 Lr. Baggot St,
Dublin 2.

Our Ref. RF/LD

Your Ref.

Date 16th August 1991

REG. REF. 91A/0283

RE. Development at Orlagh Grove, Scholarstown Road

Dear Sir/Madam,

I refer to your letter received in this Department on 13th August 1991 regarding the above and wish to inform you that this application was withdrawn on 4th March 1991

Yours faithfully

for PRINCIPAL OFFICER

RECEIPT CODE

COMHAIRLE CHONTAE ÁTHA CLIATH

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

PAID BY —

CASH /

CHEQUE ◆

M.O.

B.L.

I.T.

BYE LAW APPLICATION.

REC. No. N 39223

Balance

£ 7:20

Received this 9th day of May 1991

from Cannon Homes Ltd,

58 Amiens Street,

D.1

the sum of seventy

Pounds

Pence, being Balance

of fee on 91A/283

Noeleen Deane Cashier

S. CAREY Principal Officer

CONROY CROWE KELLY
ARCHITECTS
20 KINGRAM PLACE, FITZWILLIAM SQUARE, DUBLIN 2 613990 613991 Fax 765715

BARRY CONROY Dip. Arch
MICHAEL CROWE B.Arch
DANIEL KELLY B Arch

Our Ref: 9002 DK/AK.

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

8th May, 1991.

RE: REGISTER REF: 91A/0283
NEIGHBOURHOOD SHOPPING CENTRE AT ORLAGH ESTATE SCHOLARSTOWN ROAD, DUBLIN 16 FOR GANNON HOMES LTD.,

Dear Sirs,

We refer to your letter of 2nd of May, 1991 requesting an additional fee of £70. We now enclose cheque for £70.

Yours faithfully,

Daniel Kelly

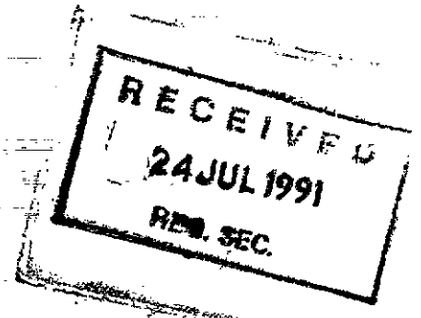
Daniel Kelly.

CONROY CROWE KELLY ARCHITECTS.

09. MAY 91

C O N R O Y C R O W E K E L L Y
A R C H I T E C T S
26 KINGRAM PLACE, FITZWILLIAM SQUARE, DUBLIN 2 613990 613991 Fax 765715

BARRY CONROY Dip Arch
MICHAEL CROWE B.Arch
DANIEL KELLY B.Arch



Our Ref: 9002 DK/AK.

Dublin County Council,
Building Control Section,
Block 2,
Irish Life Centre,
Lower Abbey Street,
Dublin 1.

ATTENTION: MR. EUGENE MC DONAGH

91A/283 &
91A/915
1.6.0
A.I. for BBL

16th July, 1991.

RE: SHOPS AT ORLAGH ESTATE, SCHOLARSTOWN ROAD:
CHANGE OF USE OF FIRST FLOOR; BUILDING BYE LAW APPLICATION.

ADDITIONAL INFORMATION 91A/283 AND 91A/0915.

Dear Sirs,

We refer to your letter of the 19th of June, 1991 requesting additional information and time extension at the above.

Planning Register Reference: 91A/283 which relates to the change of use as described above has been withdrawn and a revised Planning Application has been made. The new Register Reference is 91A/0915. This revised application changes the proposed first floor layout from four offices as indicated in the previous application to one office and a group surgery practice. The group practice will comprise three surgery units with communal reception, toilets, waiting etc. The total surgery area will be divided from the office area by a 215mm solid block wall which wil be carried up to the underside of the roof covering and firestopped in the normal way.

We feel that this arrangement will overcome the problems referred to in your letter with regard to the separation of units in different ownership.

We enclose for your attention copies of the following drawings which indicate the revised layouts:

9002 D 110 (D)
9002 D 112
9002 D 105 (D)

We trust the above proposed amendments will be to your approval.

Yours faithfully,

Daniel Kelly

Daniel Kelly.

CONROY CROWE KELLY ARCHITECTS

Encs.

24/7

Conroy Crowe Kelly,
26, Kingram Place,
Dublin 2.

Reg. Ref. 91A-0283

2 May 1991

Re: Proposed change of use from residential use to office use of first-floor and subsequent alterations to previously approved two-storey shops and flat development at Orlagh Estate, Scholarstown Road, Rathfarnham, Dublin 16 for Gannon Homes Ltd.

Dear Sir/Madam,

I refer to your letter of 1st May, 1991, and note that you have withdrawn the above planning application, which was lodged in this Department on 4th March, 1991.

Yours faithfully,

for Principal Officer.

98-0501 12

CONROY CROWE KELLY

26 KINGRAM PLACE, FITZWILLIAM SQUARE, DUBLIN 2 613990 613991 Fax 765715

FAX TRANSMISSION FRONT SHEET.

DATE : 1 May '91 NUMBER OF PAGES : 2 INCLUDING FRONT SHEET.

FAX : 724896 TO : Dublin County Council

FOR THE ATTENTION OF : Rose Kenny.

OUR FAX : 01 765715 FROM : Daniel Kelly.

JOB NO : REFERENCE : 91A/0283

MESSAGE :

C O N R O Y C R O W E K E L L Y
A R C H I T E C T S
26 KINGRAM PLACE, FITZWILLIAM SQUARE, DUBLIN 2 613990 613991 Fax 765715

Our Ref: 9002 DK/AK.

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

ATTENTION: MS. ROSE KENNY.

1st May, 1991.

RE: CHANGE OF USE FROM RESIDENTIAL TO OFFICE USE AT FIRST FLOOR AND ALTERATIONS TO PREVIOUSLY APPROVED TWO STOREY SHOPS AND FLAT DEVELOPMENT AT ORLAGH ESTATE, SCHOLARSTOWN ROAD, RATHFARNHAM, DUBLIN 16.
APPLICANT: GANNON HOMES LTD., REGISTER REF: 91A/0283.

Dear Sirs,

We refer to our Planning Application for the above development.

We now wish to withdraw this application as and from today's date (1st May 1991).

Yours faithfully,

Daniel Kelly

Daniel Kelly.

CONROY CROWE KELLY ARCHITECTS.

cc Gannon Homes Ltd.

CONROY CROWE KELLY
ARCHITECTS
26 KINGRAM PLACE, FITZWILLIAM SQUARE, DUBLIN 2 613990 613991 Fax 765715

BARRY CONROY Dip Arch
MICHAEL CROWE B.Arch
DANIEL KELLY B.Arch

1874

Our Ref: 9002 DK/AK.

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

ATTENTION: MS. ROSE KENNY.

1st May, 1991.

RE: CHANGE OF USE FROM RESIDENTIAL TO OFFICE USE AT FIRST FLOOR AND ALTERATIONS TO PREVIOUSLY APPROVED TWO STOREY SHOPS AND FLAT DEVELOPMENT AT ORLAGH ESTATE, SCHOLARSTOWN ROAD, RATHFARNHAM, DUBLIN 16.
APPLICANT: GANNON HOMES LTD., REGISTER REF: 91A/0283.

Dear Sirs,

We refer to our Planning Application for the above development.

We now wish to withdraw this application as and from today's date (1st May 1991).

Yours faithfully,

Daniel Kelly

Daniel Kelly.

CONROY CROWE KELLY ARCHITECTS.

cc Gannon Homes Ltd.

1/5/91

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

2nd May, 1991

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

LOCATION: Orlagh Grove, Scholarstown Road

PROPOSED DEVELOPMENT: Change of use from residential to offices

APPLICANT: Gannon Homes Ltd.

PLANNING REG.REF.: 91A/283

DATE OF RECEIPT OF SUBMISSION: 11th April, 1991

A Chara,

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

Building Bye-Law Approval

Mise, le meas

A. Smith

PRINCIPAL OFFICER

Conroy Crowe Kelly,
26 Kingram Place,
Dublin 2.

C O N R O Y C R O W E K E L L Y
ARCHITECTS
26 KINGRAM PLACE, FITZWILLIAM SQUARE, DUBLIN 2. 613990 613991 Fax 765715

MARK CONROY Dip AA.R.
MICHAEL CROWE B.Arch
DANIEL KELLY B.Arch

Our Ref: 9002 DK/AK.

Dublin County Council,
Planning Department,
Building Control Section,
Liffey House,
24-28 Tara Street,
Dublin 2.

BYE LAW APPLICATION.
REC No. NIL

9th April, 1991.

RE: BYE LAW APPLICATION FOR SHOPS AT ORLAGH GROVE, SCHOLARSTOWN ROAD, DUBLIN 16.

REGISTER REF: 89A/236
SUBSEQUENT APPLICATION FOR CHANGE OF USE: 91A/0283.

Dear Sirs,

We refer to our application for Building Bye Law Approval on the 22nd of February, 1991.

A subsequent Planning Application has been made for this development. This new application is for change of use of the first floor area from residential to office use. This has resulted in some alterations to the building.

We now enclose ammended documentation covering these alterations and for addition to the Building Bye Law file.

The information included (in duplicate) is as follows:

11/4

Architects drawings:

9002 D 100 Rev. B
9002 D 103 Rev. C
9002 D 104 Rev. A
9002 D 105 Rev. A
9002 D 107

1.10.1.2
BBL

Architects Specification.

91A/0283
1.10.1.2
BBL

to be taken as BBL app under 91A/0283 for P Corry
VM 29/4/91

Cont'd/.....

Consulting Engineers documentation:

Engineers Certificate.

Drawings:

E223/01 Rev. C
E223/02 Rev. C
E223/03 Rev. A
E223/04 Rev. A
E223/06 Rev. B

Structural Calculations.

Structural Specification.

We trust the above is to your satisfaction and we await your favourable decision in the matter.

Yours faithfully,

Daniel Kelly

Daniel Kelly.

CONROY CROWE KELLY ARCHITECTS.

Encs.

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 II,
Irish Life Centre,
Lower Abbey Street,
Dublin 1.

Your Ref.

Our Ref. E-223/JM

9th April 1991

Re: Proposed Shop Units at Scholarstown Road, Rathfarnham
For Gannon Homes Ltd.

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.

SPECIFICATION

of

WORK TO BE DONE

and

MATERIALS TO BE USED

for

SHOPS AND OFFICES AT
SCHOLARSTOWN ROAD,
RATHFARNHAM,
DUBLIN 16.

MARCH, 1991.

CONROY CROWE KELLY ARCHITECTS.
26, KINGRAM PLACE,
FITZWILLIAM SQUARE,
DUBLIN 2.

EMPLOYERS SIGNATURE:

_____

CONTRACTORS SIGNATURE:

_____

CONTENTS:

Item

PRELIMINARIES PARTICULARS

a. NAME, NATURE and LOCATION of PROJECT:

Shops and offices at Scholarstown Road, Rathfarnham, Dublin 16/

b. GENERAL DESCRIPTION OF THE WORKS:

Two storey shop and office development.

c. NAME OF PARTIES NAMED IN THE CONTRACT:

Employer: Gannon Homes Ltd.

Item

PRELIMINARY PARTICULARS (contd.)

a. NAMES OF CONSULTANTS:

Architects: Conroy Crowe Kelly,
26 Kingram Place,
Fitzwilliam Sq.,
Dublin 2.

Engineers: John Moylan and Associates.

b. DESCRIPTION OF SITE:

Existing undeveloped piece of land set in a housing development.

c. EXISTING SERVICES:

Electricity/water/telephone.

d. Contractor deemed to have visited the site.

The Contractor shall be deemed to have visited the site before submitting his tender, and to have satisfied himself as to the means of communication, access to the site and all conditions under which the works will be carried out, together with conditions affecting the supply of labour and materials and all other matters which may affect his tneder.

No claims based on the lack of any such knowledge will be entertained.

a. Contract Drawings:

The Contract drawings are listed in the Appendix.

b. General:

The tender is to remain open for acceptance for a period of three months from the date of submission, If the tender is not accepted within this period and the Employer subsequently decides to accept it, he will invite the Contractor to confirm his tender before acceptance.

The Contractor is reminded that a List of Basic Prices of Materials (together with any supporting documents requested) and the Schedule of Rates must be submitted with the tender or should supporting details not be submitted on request the Contractor will be required to extend the period during which his tender remains open for acceptance to allow for any delay so caused.

The Employer does not bind himself to accept the lowest or any tender, and no payment or allowance will be made in respect of any tender.

PRELIMINARY PARTICULARS (contd.)

a. Items of Specification not priced:

Where any item or items in this Specification is/are not priced by the Contractor, the cost of complying with or of carrying out the work described in such item or items shall be deemed to be included elsewhere in the tender. In this respect the Contractor is reminded that any unauthorised alterations to the Specification will be disregarded.

b. Correction of errors:

In the event of obvious errors in pricing or errors in arithmetic being found in the priced Specification for the lowest tender, the Contractor will be notified and given the opportunity of confirming or withdrawing his offer in accordance with the "Code of Practice for Single Stage Selective Tendering" issued November 1980.

CONTRACT

c. Form and Type of Contract:

The form of agreement and conditions will be the Agreement and Conditions of Contract for Building Work incorporating Supplement Issue No. 1 (where quantities do not form part of the Contract) published in 1988 as agreed between the Royal Institute of the Architects of Ireland, the Construction Industry Federation and the Royal Institution of Chartered Surveyors.

The prices in this Specification will be deemed to cover the cost of complying with the Clauses contained in the Agreement and conditions of Contract as set out below unless prices are set against the individual Clauses below:-

Clause Nr 1 Definitions.

Clause Nr 2 Scope of Contract and Architect's Instructions.

Clause Nr 3 Bill of Quantities Schedule of Rates.

Clause Nr 4 Cost adjustments arising from legislative enactments.

Clause Nr 5. Contractor to provide everything necessary.

CONTRACT (contd.)

Clause Nr 6	Local and other Authorities' notices and fees.
Clause Nr 7	Setting our of Works.
Clause Nr 8	Materials and workmanship to conform to description.
Clause Nr 9	Work to be opened up.
Clause Nr 10	Foreman.
Clause Nr 11	Access for Architect to Works.
Clause Nr 12	Clerk of Works.
Clause Nr 13	Ascertainment of prices for variations.
Clause Nr 14	Omissions.
Clause Nr 15	Assignment or sub-letting.
Clause Nr 16	Nominated Sub-Contractors.
Clause Nr 17	Nominated Suppliers.
Clause Nr 18.	Provisional Sums.
Clause Nr 19	Prime Cost Sums.
Clause Nr 20	Artists and Tradesmen.
Clause Nr 21	Liability for damage to persons and property Public Liability and Employers Liability Insurance by the Contractor.
Clause Nr 22	All Risks Insurance by the Contractor.
Clause Nr 23	Contractor's Insurance Policies and exclusions.
Clause Nr 24	Loss or damage to the Works and Ancillary Items due to excluded risks.
Clause Nr 25	Loss or damage to the Works due to Contractor's design.
Clause Nr 26	Responsibility for existing structures.
Clause Nr 27	War damage.

CONTRACT (contd.)

Form and Type of Contract (contd.)

Clause Nr 28	Date for possession, practical completion and final completion.
Clause Nr 29	Non-completion.
Clause Nr 30	Delay and extension of time.
Clause Nr 31	Defects liability.
Clause Nr 32	Partial possession.
Clause Nr 33	Determination of Contract by Employer.
Clause Nr 34	Determination of Contract by Contractor.
Clause Nr 35	Certificates and payments.
Clause Nr 36	Deleted. Does not apply.
Clause Nr 37	Collateral Agreements.
Clause Nr 38	Arbitration.

a. Appendix to the Conditions of Contract:

The appendix to the Conditions of Contract shall be completed as follows:-

	Clause
Percentage for Professional Fees	22 (b) 17%
Minimum sum for Public Liability Insurance	23 (e) (ii) £1,000,000
Period for Practical Completion	To be agreed.

Appendix to the Conditions of Contract (contd.)

Liquidated and Ascertained Damages	29 (a) At the rate of IR£300. per week
Defects Liability Period	31 and 35 (h) 12 months
Period of Interim Certificates	35 (a) monthly
Time for issue of Certificates	35 (a) 5 working days
Time for honouring Certificate	35 (a) 10 working days
Percentage of Certified Value Retained	35 (d) 6%
Period of Final Measurement	35 (g) (iii) 12 months

a. Possession of the Site:

To be agreed.

b. Limitation of working space:

The Contractor is to remain within the areas designated to him. In no way is he to interfere with adjoining areas.

c. Working Hours:

As agreed at initial site meeting. Management is always to be informed in advance of overtime or week-end work.

a. Special obligations imposed by the Employer:

The Contractor must give five working days notice in writing to the Architect in advance of any stage of the works where he does not consider that the premises may not be properly secured at night from outside entry.

The Contractor, when working in occupied premises out of normal working hours, is to clear away all rubbish, clean all of such premises and leave clean and ready for occupation during normal working hours.

b. Advertisements:

The Contractor shall neither display, nor permit others to display, any advertisements on or about the site without the written authority of the Architect. Any advertisements displayed without such authority are to be promptly removed. The Contractor shall, however, permit the display of such advertisements as may be authorised and shall provide all facilities therefor.

c. Signboard: (If required)

1) The Contractor is to obtain all necessary consents from the Local Authority.

2) The proposed siting is approved by the Architect.

3) The signboard is to show the name of the Employer, the title of the Works and the name and address of the Contractor.

4) the Contractor is to have manufactured at his own expense, and to the Architect's design, all the consultants nameboards and affix same to the signboard.

5) At the completion of the Works the Contractor is to dismantle and remove the signboard and return the nameboards to the Architect etc.

6) Only the names and addresses of Sub-Contractors and Suppliers are to be shown.

CONTRACT (contd.)

a. Maintenance of existing services:

The existing live drainage system, gas, electricity, telephone and water services on and over the site shall be fully maintained during the progress of the Works and the Contractor shall take all necessary steps to prevent any interruption to the services and shall provide any temporary support before any excavation and demolition operations are commenced.

b. Protection of existing buildings and features:

All existing buildings and features (e.g. roads, kerbs, footpaths, car parks etc.) within the area of the site shall be carefully protected from damage during the progress of the Works. Allow for covering up, protecting, any inconvenience in working around, and for reinstatement of any damage. The Contractor shall provide hoarding if deemed necessary at street level, and protective sheeting to front elevation, and use vertical rubbish chutes, to ensure that there is no risk to the passing public.

c. Programme of Works:

The Contractor is to submit for the Architect's information and approval, a comprehensive timed schedule for the complete Contract within seven days of receiving the order to proceed with the Works. The Schedule is to be for the full contract period as inserted in the Appendix to the Conditions of Contract.

d. Site Meetings:

These will be called, if appropriate, by the Contractor in arrangement with the Architect as and when required and the Contractor will be responsible for inviting the various Sub-Contractor to attend.

e. Records of Services:

On completion of the Works the Contractor, in conjunction with Sub-Contractors when appropriate, is to prepare and deposit with the Architect two sets of drawings showing all services, as installed and is to include here for all costs in connection with preparation of these drawings.

The Contractor shall supply to the Architect two copies of maintenance manuals of all equipment installed.

a. Inspection of Work Executed:

The Architect or his representative may, at his discretion give notice to the Contractor that he requires to inspect any part of the Works previous to its being covered or hidden. In this case the Contractor is to give reasonable notice in writing to the Architect before covering or hiding such work. In default of this requirement, the Contractor will be responsible for uncovering the work and carrying out all subsequent making good at his own expense whether the work was found to be satisfactory or otherwise.

b. Access to work for measurement:

The Contractor is to afford the Architect all facilities to enable him to measure the Works, and in addition is to give him reasonable written notice of the covering up or hiding of any work which differs from that described in the Specification. Should the Contractor fail to provide such facilities or to give such notice, he shall accept the Architect's assessment of thw work affected or alternatively shall uncover the work to enable measurement to be made and shall subsequently reinstate and make good all at his own expense.

c. Overtime and bonus payments:

No extra payment will be allowed for overtime. The Contractor is to allow in his tender for all necessary expenses, bonuses and additional payment as no extra payment for these items will be allowed.

d. Car Parking for Workpeople:

Workpeople to use designated car-park on site.

e. Use of permanent heating system:

There is no permanent heating system.

a. Security of Drawings:

The Contractor must provide locked accommodation in which all plans and specifications are to be placed when the site is not occupied by the Contractor. Such documents must be returned to the Architect on completion of the Works.

b. Watching and Security:

The Contractor is to provide any watching either day or night required for the execution of the job or for any protection of his plant or materials etc.

c. Nuisance:

The Contractor shall take all precautions to prevent a nuisance of cause inconvenience to the Employer, the occupants or adjoining property or the general public.

On alteration contracts the Contractor is to provide silencers on compressors and engine exhausts, mufflers on drills and electric suppressors to all plant and vehicles to avoid interference to radion and television reception.

Radio receivers are not to be used on site at any time.

In the case of alterations contracts, smoking on site will not be permitted by the workmen in the employ of the Contractor, Sub-Contractors or others engaged in works of site.

d. Trespass:

The Contractor shall keep all workmen and other persons in his employ within the area of building operations and shall prevent trespass by such persons on to adjoining property or on to those parts of the site and premised that are not currently affected by the works.

e. Builder's Work Details:

Allow for obtaining, checking and submitting for approval all Sub-Contractors' and Suppliers' builder's work details including shop drawings.

WORKS BY NOMINATED SUB-CONTRACTORS.

a. Nominated Sub-Contractors:

Works required to be executed by Nominated Sub-Contractors are given as P.C. sums.

Nominated sub-Contractors will be required to sign a Form of Collateral warranty.

The Contractor will be responsible for the supervision and administration of all Nominated Sub-Contractors in accordance with the Conditions of Contract and will be required to arrange an acceptable programme with each Nominated Sub-Contractor and to obtain details of builder's work and attendance required. Attention should be given to obtaining particulars of positions of chases, holes, mortices etc. to avoid unnecessary cutting away.

The Contractor is to afford all facilities to prospective Nominated Sub-Contractors during their tender period to enable them to familiarise themselves with the Works and the Contractor's programme as far as it affects the Sub-Contract Works.

b. Attendance on Nominated Sub-Contractors.

Following each P.C. sum for work to be executed by a Nominated Sub-Contractor provision is made for pricing 'general attendance' and where appropriate 'other attendance'.

The term 'general attendance' shall be deemed to include the use of the Contractors' temporary roads, pavings and paths, standing scaffolding, standing power operated hoisting plant, the provision oof temporary lighting and water supplies, clearing away rubbish, provision of space for the Sub-Contractors own offices and for the storage of his plant and materials and the use of messrooms, sanitary accommodation and welfare facilities.

the term 'other attendance' shall include all items not described under 'general attendance' and these are individually described after each P.C. Sum where appropriate.

GOODS AND MATERIALS FROM NOMINATED SUPPLIERS.

a. Nominated Suppliers:

Goods and materials required to be obtained from Nominated Suppliers are given as P.C. Sums.

The term 'Fix' or 'Place in position' shall be deemed to include unloading, storing, unpacking, returning packing materials to the Nominated Supplier, carriage paid and obtaining credits therefore, removing from store, sorting, assembling and fitting together, hoisting and getting into position and otherwise preparing and fixing complete and any necessary testing.

WORKS BY OTHERS DIRECTLY ENGAGED BY THE EMPLOYER.

b. The Contractor will be required to fix the items of equipment or goods described in this Specification as supplied by the Employer free of charge to the Contractor, and no profit or discount will be allowed on their value.

The word 'Fix' or 'Place in position' in this context shall have the same meaning as described for Nominated Suppliers.

c. Works carried out by others directly engaged by the Employer:

'General attendance' and 'other attendance' described as being required in connection with works to be carried out by others directly engaged by the Employer will be in accordance with that described for Nominated Sub-Contractors.

d. GENERAL FACILITIES AND OBLIGATIONS:

Allow for providing all necessary facilities for the carrying out of the works and for meeting all obligations consequent upon the carrying out of the works arising from the following:-

a) Providing plant, tools and vehicles.

b) Providing scaffolding.

c) Providing site administration and security.

d) Providing transport for workpeople.

e) Protecting the works from inclement weather.

f) Providing water for the works. Water will be made free of charge by the Employer.

g) Providing lighting and power for the works. Current will be made available free of charge by the Employer from the existing distribution boards.

h) Providing temporary roads, hardstandings, crossings and similar items.

j) Providing temporary accommodation for the use of the Contractor.

k) Providing temporary telephones for the use of the Contractor.

l) Traffic regulations.

m) Safety, health and welfare.

n) Disbursements arising from the employment of workpeople.

p) Maintenance of public and private roads.

q) Removing rubbish, protective casings and coverings and cleaning the works on completion.

r) Drying the works.

s) Providing temporary fencing, hoardings, screens, fans, planked footways, guardrails, gantries and similar items.

t) Control of noise, pollution and all other statutory obligations.

H 31 WINDOWS

H31:A PRODUCTS:

A260 WINDOWS:

Description: Rectangular top hung casement (outward opening) and fixed windows. All windows must comply with the following British and Irish Standards.
BS 1474 : 1972
BS 4873 : 1972
BS 4315 : 1968 (Part 1)
BS 6262 : 1982
BS DD4 : 1971 (Parts A & B)
BS 6375 : 1983 (Part 1)
IS 513 : 1980
IS 514 : 1980
IS 588 : 1982

Location : As indicated on the drawings
Frame : Approved Hardwood.
Exposure grade : Severe
Finish : Sadolin stain.
Glazing : All windows to be double glazed. Thickness of glass to be det ermined by manufacturer in accordance with BS 6262 and approved by Architect. Windows generaly to be double glaxed clear float glass (R22) and stained glass.
Windows with cills lower than 800mm above finished floor level to be glazed with clear laminated glass (R22). Method of fixing strictly to manufacturer's details (R22).

H31 WINDOWS (contd.)

A260 Construction: All corners of windows and frames to be mitred and reinforced. All critical joints to be fire-sealed with a suitable non-hardening material.

Ironmongery: Matching ironmongery to be supplied and fitted by the window manufacturer; hinges, folding openers (2 per opening light - max. opening 160mm) with linking tubes, sliding stays or equal and approved to allow variable opening. All to Architect's approval.

Accessories: Coupling mullions, corner coupling posts, cover strips, condensation channels, cills, mastic beading, mastic pointing, fixing cleats and all other fixings, weatherstrips and all additional items to suit Architect's details and window manufacturer's requirements.

Ventilation: Some windows are to be fitted with permanent window ventilators. They are to be fitted with flyscreens and cord controls to allow variable ventilation, and should form an integral part of the head member of the window.

Notes: Folding openers and sliding stays are to be fixed in such a manner that they cannot be removed using a standard type screwdriver or similar implement (e.g. one-way screws, anti-theft screws, pop rivets or equal and approved). Fixings to the blockwork behind the s.w. framing at the head, cill and jambs will also be permitted.

H31:X ANCILLARY PRODUCTS

X110 FASTENINGS to be supplied by, or types recommended by manufacturer of component being fixed.

X210 NAILS: TO BS 1202

X410 WOOD SCREWS: to BS 1210: for fixing external doors and windows. Non-ferrous types.

X420 PLASTIC CAPS: Screw cover caps and sockets. Manufacturer: to the Architects approval.

X450 PLUGS: either
Hardwood blocks or battens for casting in, or traditional hardwood plugs, shaped to twist and grip when driven or Proprietary fibre or plastic plugs or other approved type.

X510 SELF TAPPING SCREWS to BS 4174.

X610 BOLTS, SCREWS AND NUTS: to BS 4190.

H31:X ANCILLARY PRODUCTS (contd.)

X620 EXPANDING BOLTS and nuts;
Manufacturer: to the Architects approval.

X830 LUGS: for windows.
Type: as recommended by the Manufacturer.
Material: Galvanised mild steel or aluminium.

Y210 BITUMEN SOLUTION: for cold application to BS 3416 Type 1.

Y410 BEDDING COMPOUND for windows;
Manufacturer to the Architects approval.

Y420 POINTING MATERIALS for windows;
Backing strip: a type recommended by sealant manufacturer.
Sealant Manufacturer: to the Architects approval.

H31:1 GENERALLY

1212 The window manufacturer is to certify that the windows are capable of meeting the following standards;
1. I.S. 513 1980 - Air permeability test
2. I.S. 588: 1982 - Watertightness test under static pressure
3. I.S. 519: 1980 - Wind resistance tests.
The tests will be assessed with regard to requirements of B.S. 6375: Part 1: 1983, Performance of Windows - Classifications for Weathertightness.

1251 SAMPLES: immediately after acceptance of tender submit samples of all types of: window, glass, glazing beads, glazing gaskets, cills, hinges, folding openers, stays, locks, weatherstops, condensation channels, patent glazing bard, glazing wings, door thresholds.

Obtain approval of appearance and other relevant characteristics before proceeding with manufacture or delivery.

1301 EXPOSURE GRADES: Provide evidence that windows comply with specified exposure grades of B.S. Draft for Development and when tested to B.S. 4315: Part 1.

H31 WINDOWS (contd.)

H31:1 GENERALLY (contd).

1102 CO-ORDINATION: the window sub-contractor must:
1. Liaise with the Architect, Main Contractor, sub-Contractors and others as necessary to help ensure co-ordination of the work with related building elements and services.
2. Provide fabrication/installation drawings and other information showing complete details of the work.
3. Submit sufficient copies of drawings, etc., including 4 copies for the Architect and Consultants, to main Contractor within 1 week of being awarded the contract, who will check them and submit to the Architect for comment.
4. Make any necessary amendments in accordance with any comments of the Architect and without delay. Re-submit unless it is confirmed that this is not necessary.
5. Submit sufficient copies of final version of drawings, etc., including 4 copies for the Architect and Consultants, to Main Contractor for distribution to all affected parties.

1201 DRAWINGS: must be submitted at least 2 weeks before starting fabrication, showing: elevations; large scale sections; proposed methods of fixing.

1211 SAMPLE DRAWINGS AND SAMPLE SECTIONS: Window tenderers are to submit sample sections of a 45 deg. corner (not less than 200mm in each direction) of a bay window.

H31 2 FIXING

2051 PROTECTION: Components are to be protected against distortion and damage during transit, handling, storage and fixing and are to be kept clean and dry before fixing. Surfaces visible in finished work will not be accepted if damaged or marked. All components to be fully protected by polythene or similar wrapping until fixing. Frame sections in addition to be protected with adhesive tape. All tape and other coverings to be removed on completion.

2101 STORAGE: do not deliver to site any components which cannot be immediately unloaded into suitable conditions of storage. Unload, handle and store components to manufacturer's recommendations.

H31:2 FIXING (contd.)

2201 CORROSION PROTECTION: before fixing apply two coats of bitumen solution, or a mastic impregnated tape to all fixed metal surfaces of components in contact with masonry.

2301 PREPARED OPENINGS: ensure that dpcs are positioned correctly in relation to frames and prevent displacement during fixing operations.

2302 PREPARED OPENINGS: pack between frame and reveal to give even joints of specified width. Position packing where fixing, tighten frame against structure.

2304 PREPARED OPENINGS: bed windows and door frames in bedding compound leaving no gaps.

2351 FIXING: position components accurately, plumb, level and aligned as necessary. Fix strictly according to manufacturer's recommendations, to prevent pulling away and other movement during use and ensuring compliance with design and performance requirements.

2401 DISTORTION:
1. Do not distort components when driving wedges or other packing, or when tightening fixings.
2. Ensure adequate clearances for opening parts. If necessary adjust packing and fixing to eliminate binding.
3. Do not cut plane or sand components to remedy distortion

2451 LOADING: do not use railings or balustrades as strutting or supports after fixing.

H31:3 SUNDRY WORK

3101 IRONMONGERY: assemble and fix carefully and accurately using fastenings with matching finish. Prevent damage to ironmongery and adjacent surfaces. At completion check, adjust and lubricate as necessary to ensure correct functioning.

3151 POINTING: insert backing strip in all joints to be pointed with sealant, unless shown otherwise. Do not leave gaps and do not reduce depth of recess for sealant to less than depth recommended by manufacturer.

H31/3 SUNDRY WORK (contd.)

3152 POINTING:

1. Ensure joints are dry and free from frost, dust and grease. Mask adjacent surfaces which would be impossible to clean if smeared with sealant.
2. Prepare joint and apply sealant to manufacturer's recommendations forming an approved profile.
3. Remove excess sealant and leave clean.

H33 PURPOSE MADE JOINERY

To be read in conjunction with Preliminaries and general Conditions.

SCHEDULE OF TYPES OF JOINERY

H33/1 External timber windows, doors and frames
H33/2 Timber Skirtings
H33/3 Timber ducts, framing and panelling.

SCHEDULE OF TYPES OF JOINERY

H33/1	Component:	External timber windows, doors and frames.
	Drawing:	See Architects drawings.
	Timber:	Species: Hardwood (approved by Architect). Exposed surface class 1s Preservative treatment as clause A310
	Finish	Sadolin stain.
	Special features:	1. Iroko glazing beads
	Special fixing:	Screwed and pelleted.
	Component:	Glazed screens.
	Drawing:	See Architects drawings.
	Timber:	Species: Hardwood (approved by Architect) Exposed surface surface class 1s. Preservative treatment as clause A310.
	To finish:	to receive spray paint.
	Special Features:	Laminated wired clear glass.
H33/2	Component:	Skirtings.
	Drawing:	See Architects drawings.
	Timber<	Species: softwood (as approved by architect) Exposed surface class 1s. Preservative treatment as clause A310.
	Finish	Spray paint.
H33/3	Component:	Ducts, panelling and framing.
	Drawing:	See Architects drawings.
	Boards/Sheets:	Melamine faced plywood, post-formed curved edges.
	Special fixing:	As the Integrated Plumbing Sustem.

H33 Purpose Made Joinery (Continued)

H33A MATERIALS/PRODUCTS

TIMBER/BOARDS/SHEETS

A210 TIMBER: to BS 1186: Part 1, Appendix A. When not specifically stated, species to be selected from appropriate Appendix of the BS, on condition of Clause A211. Exposed surfaces of timber to be Class 15 (or Douglas Fir selected). Pith shall not be permitted on the external faces of external joinery.

A211 TIMBER: to be sound, well conditioned, properly seasoned, to suit the particular use, and free from defects, or combinations of defects rendering it unsuitable for the purpose intended. Species stated in BS 1186, that are unsuitable for particular uses shall not be employed for that particular use.

A212 TIMBER DIMENSIONS: to comply to BS 4471, Parts 1 and 2 for sawn timber.

A213 JOINERY SOFTWOOD: shall be subject to the following conditions:
1. Timber to be free from pin holes.
2. Timber to be kilned so as to avoid "case hardening and consignment brittleness".
3. End grain to be sealed to exclude moisture.

A310 PRESERVATIVE TREATMENT:
Performance category 'B' to BS 5589, Table 2 or equivalent for species not listed in the table. Preservative: CCA to BS 4072 applied after machining Application: vacuum pressure period of 90 minutes, or to the Architects approval. Provide a _____ certificate of assurance that treatment has been carried out for each component and attach a 'treatment' sticker to each unit. Treatment is to be carried out by an approved supplier.

A410 PLYWOOD: clear finish or paint/exterior work.
Bonding: WBP (Marine Quality to BS 1088).
Source and grade: Finish - S/BB, or to Bs 1455.
Face ply species: Birch or other hardwood to Architects approval.
Manufacturer: to the approval of the Architect.

A420 PLYWOOD
Bonding: MR clear finish/interior work
Source and grade: finsh - B/BB.
Face ply species: Birch.

A430 BLOCKWOOD: to BS 3444.
Bonding: BR.
Grade: 2/2
Type: solid, smooth faced, from an approved manufacturer.
Facing: laminated plastic sheet with balancing veneer on reverse side (where shown on drawings).

A510 WOOD CHIPBOARD: to BS 5669, Standard type 1.
Surface finish: high impact melamine spray.
Use: cupboard doors etc. (but excluded for worktop use).

A620 LAMINATED PLASTICS SHEET: to BS 3794.
Type: colours to BS 4800, velour finish.
Thickness: 1.3 or 1.0.
Manufacturer: to the Architects approval.
Features: post forming to Architects details.

A840 TIMBER PANELLED DOORS: to BS 459: Part 1, but with dimensions and tolerances to BS 4787: Part 1.
Timber species: softwood to BS 1186
Preservative treatment: Stain (H).
Moisture content at time of delivery: 17% -+ 2.
Adhesive: WBP.
Glazing details: see drawings and Section R22.
Drawing: See Architects drawings.

H33:X ACCESSORIES/FASTENINGS/ADHESIVES/SEALANTS

X210 NAILS: to BS 1202
1. Oval lost head: steel
2. Panel Pins: steel
3. Panel Pins: aluminium
4. Annular ringer shank: aluminium.

X410 WOOD SCREWS: to BS 1210
1. Slotted countersunk: stainless steel
2. Slotted raised countersunk: steel
3. Slotted countersunk: steel
4. C.P. Dome headed.
5. 10 and 12 gauge: cadmium plated steel screws.

X420 BOLTS: generally cut square, large washers and nuts, all to the architect's approval.

X450 PLUGS: either:
1. Hardwood blocks or battens for casting in, or
2. Traditional hardwood plugs, shaped to twist and grip when driven, or
3. Proprietary fibre or plastic plugs or other approved type.

X510 SCREW CUPS: brass to BS 1494: Part 2

X620 EXPANDING BOLTS: 10mm diameter x 150mm long.
Manufacturer: to the architect's approval.

X850 DOWELS: mild steel 10mm diameter x 125mm long, galvanized to Bs 729 after fabrication.

X860 CRAMPS: mild steel 250mm girth x 25mm x 3mm. Turned up at one end and drilled twice for 3mm screws. Fish-tailed at the other end. Galvanized to BS 729 after fabrication. Fix with 10 gauge cadmium plated steel screws.

Y210 ADHESIVE for external joinery with clear stain finish: to BS 1204, type WBP. Close contact type.

T250 ADHESIVE for all internal joinery. Manufacturer to the architect's approval.

Y410 BEDDING COMPOUND for components: see section Y12.

Y420 POINTING MATERIALS for external doors and screens:
Backing strip: a type recommended by sealant manufacturer. Also see section Y12. Sealant Manufacturer: to the architect's approval.

WORKMANSHIP

GENERALLY

1041 INSPECTION: facilities are to be provided for the architect to inspect all work in progress in shops and on the site.

1101 CO-ORDINATION: the joinery sub-contractor must liaise with the architect, main contractor and others and provide details of the work as necessary to help ensure co-ordination with related building elements and services.

1201 CONTROL SAMPLES: after finalisation of all details, prepare one of each of the following as part of the quantity required for the project, incorporate into the finished work and obtain approval of appearance before proceeding with manufacture of the remaining quantity:
1. Window frames
2. Doors
3. Cupboards and fittings.

1251 PRESERVATIVE TREATMENT: liberally apply the preservatilve to all new surfaces exposed by minor cutting.

1301 MOISTURE CONTENT of external purpose made joinery to be 17% +- 2 at time of manufacture and fixing.

1302 MOISTURE CONTENT of internal purpose made joinery to be 12-18%+- 2 at time of manufacture and fixing.

1303 MOISTURE CONTENT: test timber immediately before manufacture using an electrical moisture meter to manufacturer's recommendations. Test 5% but not less than 10 lengths of each cross-section in the centre of the length. 90% of values obtained to be within the specified range. Provide records of all tests.

1304 MOISTURE CONTENT: during delivery, storage fixing and thereafter to practical completion, maintain conditions of temperature and humidity to suit specified moisture content.

1305 SHRINKAGE: do not allow shrinkage in any part or any direction, of joinery jointing or fixing, to impair the strength and appearance of finshed work, or cause damage to contiguous materials of structures.

H33:2 MACHINING AND ASSEMBLING

2051 QUALITY OF WORK:
1. Make purpose made joinery as specified in this section and to BS 1186: Part 2.
2. Form sections out of the solid when not specified otherwise Carefully machine timber to accurate lengths and profiles, free from twist and bowing. After machining defects.
3. Assemle with tight, close fitting joints, to produce rigid components free from distortion and within specified tolerances.

H33 Purpose Made Joinery (Continued)

2061 FABRICATION: perform all necessary mortising tenoning, grooving, matching, tonging, housing, rebating and other work for correct jointing. Provide all metal plates, screws, nails and other fixings necessary, or ordered by the architect for the proper execution of the works.

2101 DIMENSIONS of timber cross-sections, unless otherwise stated, are basic (nominal) sawn sizes. Reduction to finished sizes to be to BS 4471: Parts 1 and 2 for softwood and BS 5450 for hardwood. Deviation from the stated sizes will not be permitted.

2151 SITE DIMENSIONS must be taken before starting to make all purpose made joinery.

2301 LAMINATED PLASTICS: when not otherwise specified apply to back face a sheet of similar material and thickness to face sheet. Condition material before fixing and stick in accordance with manufacturer's recommendations. Bond in presses whenever possible. Otherwise use contact adhesives. Chamfer edges at all external angles. Chamfer edges at all external angles.

2351 SURFACE FINISH: sand all joinery to give smooth, flat surface suitable to receive specified finish. Arrisses to be as detailed.

2401 SEAL exposed end grains of clear/stained joinery with sealer before general sealer or primer is applied.

2451 PRIMING/SEALING: all joinery which is to be clear finished or painted to be sealed or knotted and primer as specified in section V52f, before leaving the joiner's shop.

H33:3 FIXING

3051 PROTECTION:
1. Prevent damage to and distoration of joinery during transit, handling, storage and fixing.
2. Keep joinery clean and dry. Prevent marking of surfaces which will be visible in completed work.
3. Provide protection as necessary and remove on completion.

3101 STORAGE: do not deliver to site any joinery which cannot be immediately unloaded into suitable conditions of storage. Stack joinery on bearers on level dry floors under cover. When stacking, stagger components or seperate with spacers to prevent damage by and to projecting ironmongery, beads etc.

3151 PRIMING/SEALING: before fixing ensure that backs and ends of sections and bottom edges of doors are primed or sealed as specified.

H33 Purpose Made Joinery (Continued)

3201 BUILDING IN of purpose made joinery will not be permitted.

3251 PREPARED OPENINGS: pack between frames and reveals to give even joints of specified width. Position packing where fixings tighten frame against structure. Use hardwood packs.

3301 FIXING: position joinery accurately, plumb, level, and aligned as necessary. Fix securely to prevent pulling away, deflection, or other movement during use.

3321 FIXING-IN-JOINERY: do not secure fixed-in joinery until all floor, wall and ceiling surfaces have been formed or constructed, unless otherwise specified.

H33:3 Fixing

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3321 FIXING -JOINERY: do not secure fixed-joinery until all floor, wall and ceiling surfaces have been formed or constructed, unless otherwise specified.

3351 DISTORTION:
1. Do not distort joinery when driving wedges or other packing, or when tightening fixings.
2. Ensure adequate clearances for opening parts. If necessary adjust packing and fixings to eliminate binding.
3. Do not cut, plane or sand joinery to remedy distortion.

3401 TIMBER FRAMES: when not specified otherwise, to be fixed at 600mm maximum centres with at least one fixing 150mm from each end of jambs and one adjacent to each hanging point of doors/opening lights.

3431 DOORS: frame together without nails or other metal fixings, with no individual frame member less than 32mm nominal width. All facings shall be perfectly flat, free from core patterning.

3441 DOORS HARDWARE: providing all blocking pieces and additional infill members or rails, for hardware, door closers and kicking plates.

3451 DOOR FRAMES: fix to concrete floors with dowels inserted not less than 75mm into bottom of posts witha tight push fit and bedded in mortar.

3501 FIRE RESISTING FRAMES: completely fill gap between frame and wall with intumescent mastic.

3551 LOOSE THRESHOLDS: fix 150mm from each end and at 600mm maximum centres.

3601 TRIMS, wherever possible, to be in unjointed lengths between angles or ends of runs. Where running joints are unavoidable obtain approval of location and method of jointing. Mitre angle joints unless otherwise specified.

3651 LOOSE THRESHOLDS: fix 150mm from each end and at 600mm maximum centres.

3601 TRIMS, wherever possible, to be in unjointed lengths between angles or ends of runs. Where running joints are unavoidable obtain approval of location and method of jointing. Mitre angle joints unless otherwise specified.

3651 NAILING: punch nail heads below surfaces which will be visible in the completed work.

3701 SCREWING:
1 1. All screws to have clearance holes. Screws of 3mm diameter or more and all screws into hardwood to have pilot holes.
2. Countersink screw heads not less than 2mm below timber surfaces which will be visible in completed work.

3751 PELLETING: countersink screw heads 6mm below timber surfaces which are to be clear finished. Glue in grain matched pellets not less than 6mm thick and cut from matching timber. Finish off flush with face.

H33:4 SUNDRY WORK

4101 IRONMONGERY: assemble and fix carefully and accurately using fastenings with matching finish supplied byironmongery manufacturer. Prevent damage to ironmongery and adjacent surfaces. At completion check, adjust and lubricate as necessary to ensure correct functioning.

4151 BACKING STRIPS: insert in all joints to be pointed with sealant, unless show otherwise. Do not leave gaps and do not reduce depth of recess for sealant to less than depth recommended by manufacturer.

H33:4
4201 POINTING:
1. Ensure joints are dry and free from frost, dust and grease. Mask adjacent surfaces which would be impossible to clean if smeared with sealant.
2. Prepare joint and apply sealant to manufacturer's recommendations forming an approved profile.
3. Remove excess sealant and leave clean.

4251 CAPILLARITY: take reasonable measures to prevent capillary penetration of water into joints and open connections of external joinery and in all other positions where joinery works may be exposed to water.

4261 WEATHERING: ensure all weathered surfaces, throatings, grooves, joints, open connections, etc., are properly executed, and are weather resisting.

4271 CLEAN UP: on completion of fixed-in and site assembled joinery works ensure all surfaces of work and local area are scrubbed and cleaned down, leaving in good order to the approval of the architect.

L23 PLASTICS/FELT SHEET ROOF COVERINGS.

To be read in conjunction with Preliminaries and General Conditions.

SCHEDULE OF TYPES OF COVERING.

L23/1	Location:	Flat roof.
	Base:	Concrete/screed
	Type of Roof:	Trocal Sheet.
	Underlayer:	Approved vapour check.
	Insulation:	50mm polyurethane (shelter)
	Interlayer:	Glass fibre fleece.
	Top layer:	Roofing sheet Type S.
	Special Instructions:	Roof to be laid by specialist sub contractor and strictly to Trocals specification.

WORKMANSHIP

GENERALLY/PREPARATION

1301 QUALITY OF WORK: handle, store and lay sheets and ancillary materials neatly to manufacturer's recommendations to make the whole sound and weathertight at the earliest opportunity before Practical completion. Repair any defects as quickly as practicable to minimise damage and nuisance.

2071 SUITABILITY OF BASE: before laying coverings ensure that roof is to correct falls and all preliminary work including formation of grooves, provision of battens and fillets and fixing of roof outlets to correct levels is complete. Base for sheeting must be clean and dry. Sub-contractor must comfirm to Main Contractor and SO his agreement that the base is suitable.

2271 JOINTS IN BASE: cover with 150mm wide felt strip bonded at edges only.

2451 VAPOUR BARRIER: lay as specified with additional perimeter margin not less than 225mm wide. Wrap over edge of insulation and stick down with continous strip of self-adhesive tape.

2651 MOISTURE-ABSORBENT MATERIALS: lay sheets to cover dry-laid moisture-absorbent base or insulation on the same day as t he base or insulation is laid. Seal exposed edges of base or insulation at the end of each day's work or at the first sigh of rain.

LAYING SHEETS/ACCESSORIES/FINISHES

3221 PARTIAL BONDING of ordinary felt, when specified, means spot, strip or frame bond with hot bonding compound. Fully bond perimeter of roof for a width of 450mm leaving 150mm wide ventilating channels at 1500 centres.

3222 PARTIAL BONDING of venting base layer, when specified means leave central area loose for later bonding by application of compound for subsequent layer of felt. Fully bond perimeter for a width of 450mm leaving 150mm wide ventilation channels at 1500mm centres.

3271 NAILING, when specified, means fix to timber boarded base at 50mm centres at edges and laps and at 150mm staggered centres over area of sheet.

3321 BITUMEN FELT: lay sheets in the direction of the roof slope with 50mm side and 75mm end laps, all fully sealed. Break bond between layers.

3421 INTERNAL ANGLES which have no fillet to be reinforced with 100mm wide strip of felt, fully bonded.

3451 EAVES: form drip to eaves with 200mm wide strip of felt, nail one edge at 150mm centres. fold to form welt 50mm deep and seal with bonding compound. Fully bond remainder of felt to top layer of roofing.

3554 FLASHINGS: tuck top edge into chase not less than 25mm deep, secure with lead wedges at 600mm centres and fully bond to felt upstand.

5351 BALLAST: spread evenly to a depth of 50mm as soon as it has been laid.

5451 BONDED CHIPPINGS FINISH:

1. Apply as soon as the roof is clear of other sub-trades.
2. Apply bitumen dressing compound and immediately dress with chippings closely bedded at the rate of 16kg/ Meter Sq.
3. Remove loose chippings.

P31 PLASTERED/RENDERED/ROUGHCAST/ COATINGS

To be read in conjunction with Preliminaries and General Conditions.

TYPES OF PLASTERED/RENDERED/ROUGHCAST COATINGS.

P31:1 Use/Location: Externally
Background & Preparation P31:3: blockwork..
Scud: 1:2 (cement/sand)
Undercoat: Cement: Sand: 15mm thick.
Proportions: 1:4
Thickness: 15mm thick.
Finish: Smooth Wood trowelled coat. 10mm thick.
Proportion: As undercoat.
Features: Contraction joints at centres as shown on drawings

P31:2 Use/location: All internal areas requiring new plaster finish.
Background and preparation. Concrete/concrete blocks.
Undercoat: Lightweight browning plaster, Y705/Y710 or bonding coat, Y720.
Thickness: 11mm (excluding dubbing out)
Final coat: Lightweight finish coat, as recommended by Gypsum Industries (Internally finish smooth).
Beads/mouldings/accessories: Angle beads and stop beads where shown on drwings. Mouldings as shown on the drawings. (East elevation).

P31 Plastered/Rendered/Roughcast/ coatings (cont/d).

P31:A General

A005 The dates and amendments of B.S. and I.S. documents referred to in this section are those relevant from the following:

BS 12: Part 2: 1971 + amendment AMD 2195
BS 146: Part 2: 1973
BS 882: 1201: Part 2: 1973 + amendment AMD 1780
BS 890: 1972
BS 1191: Part 1: 1973
BS 1191: Part 2: 1973
BS 1198: 1199 and 1200: 1976
BS 1202: Part 2: 1974
BS 1369: 1947 + amendment PD 1198
BS 1494: Part 2: 1967
BS 1521: 1972
BS 3148: 1959 + amendment PD 6266
BS 3416: 1975
BS 4027: Part 2: 1972
BS 4721: 1971
BS 4887: 1973
BS 5224: 1976
BS 5270: 1976
IS 1 : 1963 (under revision)

P31:H BEADS/MOULDINGS

H210 ANGLE BEADS: Manufacturer: to Architect's approval
H220 STOP BEADS: Manufacturer: to Architect's approval

P31:J LATHING/SCRIM

J410 STEEL MESH STRIP: to BS 1369.
Type: plain expanded.
Weight: not less than 1.2 kg/sq m.
Width: 100mm.
Finish: Black bitumen

J450 JUTE SCRIM: 90mm wide.

P31:X COMPONENTS/ACCESSORIES

X410 CLOUT NAILS: galvanised steel to BS 1202: Part 1, Table 3.

X610 TYING WIRE: 1.2mm diameter (18swg) annealed iron wire, galvanised to BS 443

P31:Y MIXES/COATINGS/ADMIXTURES

Y010 ENSURE that supplies of materials are sufficient to give consistent and uniform colour to surface finishes which are not to be painted. Prevent contamination and store separate from other materials.

Y020 STORE cement, lime and gypsum plaster separately by different types, off the ground, in a dry well ventilated space.

Y040 DO NOT USE gypsum plaster after three months from date-of manufacturer unless tested and found in good condition.

Y105 ADMIXTURES: do not use admixtures, other than water-retaining agents without prior approval. Do not use admixtures of any type with proprietary mixes.

Y110 CALCIUM CHLORIDE: do not use.

Y140 WATER: mains supply kept free from impurities.

Y170 LIME AND SAND MIX (coarse stuff): any one of the following:
1. Ready-mixed to BS 4721.
2. Prepared by thoroughly mixing lime putty with sand.
3. Prepared by thoroughly mixing hydrated lime powder to BS 890 with sand first in the dry state and then with water. Keep at least 16 hours before use of if to be used without delay, increase quantity of lime powder by up to 50%

Y310 BLACK TAR-BASED PAINT: to BS 3416, Type 1.

Y405 CEMENT: LIME: SAND MIX: Cement to be ordinary or rapid hardening Portland cement to BS 12: Part 2, or Portland blast furnace cement to BS 146: Part 2, or Portland blast furnace cement to BS 146: Part 2, sand to BS 1199, Table 1. Lime and sand mix (coarse stuff) to Y170.

Y705 PREMIXED lightweight browning plaster: normal or high suction to BS 1191 Part 2, Type A.1.

Y710 PREMIXED lightweight metal lathing plaster: to BS 1191: Part 2, Type A.2.

Y720 PREMIXED bonding coat plaster: to BS 1191, Part 2, Type A,3.

Y730 PREMIXED lightweight finish plaster: to BS 1191: Part 2, Type B1.

WORKMANSHIP

P31:1 GENERAL

1051 MANUFACTURER'S RECOMMENDATIONS: to be strictly followed for all products and materials.

1201 CONTROL SAMPLE: complete 1 metre sq. of the finished work in approved location and obtain approval of appearance before proceeding.

1251 DO NOT BEGIN coating work until:
1. Openings, chases, or other spertures required for services are formed.
2. Fixings for pipes, fixing pads and plugs have been fixed.
3. Making good has been completed.

1301 SCAFFOLDING: use independent scaffolding to avoid putlog holes and other breaks in surfaces to be coated.

1351 PROTECT all existing work and approaches, with boards, dust sheets, etc. All droppings on to finished work to be cleaned off immediately.

1401 CONTAMINATION: avoid comtamination of one type of material by another and by any set material.

1451 DO NOT USE mixes after initial set has taken place. Retampering or reconstruction of mixes will not be permitted.

1551 DRYING OUT: prevent excessively rapid or localised drying out.

1601 MAKE GOOD: defective or damaged coatings before starting decoration.

P31:2 PREPARING MIXES

2101 GAUGE BOXES: measure constituents by volume, using clean gauge boxes made to sizes to suit volumes required. Overfill gauge boxes and strike off excess material with a straight edge.

2251 MECHANICAL MIXERS

1. Do not use for premixed plasters unless recommended by manufacturer.
2. Do not use mortar-mill type for mixing gypsum plasters.
3. Do not allow batches to remain in mixer longer than 3 minutes.

2301 WASH OUT mixer four times daily if in continuous use, and after each batch if mixer is used intermittently, or if a different constituent is used.

P31:3 PREPARING BACKGROUNDS

3051 ACCEPTANCE OF BACKGROUND: before applying coatings ensure that backgrounds are:

1. Adequately true and level to achieve specified tolerances.
2. Adequately fixed.
3. Free from contamination loose areas.
4. Adequately prepared to give a good bond.

3101 GENERALLY:

1. Cut off projections.
2. Remove efflorescence, laitance, dirt and other loose material by thoroughly dry brushing.
3. Remove all traces of mould oil, paint, grease, dirt and other materials incompatible with coating by scrubbing with water containing detergent and washing off with plenty of clean water. Allow to dry before applying coatings.

3151 PREVIOUSLY PAINTED CONCRETE/BRICK/BLOCK/STONE SURFACES: wash down with detergent solution to remove grease and dirt. Carefully scrape back loose and defective material to a firm edge. Rinse with clean water and allow to dry.

3201 EXISTING RENDER: the extent to which existing coatings are renewed must be agreed with the Archtect before the work is started. Remove existing finishes in ways which will minimise the amount of removal and renewal.

3251 REPAIRING EXISTING RENDER/STUCCO:

1. Cut out all loose, soft, friable, badly cracked or otherwise damaged areas to form rectangular patches with straight horizontal and vertical edges.
2. Cut out cracks to a width of not less than 75mm.
3. Undercut all edges.
4. Wash and brush exposed backgrounds to remove dust and loose material.

3301 REPAIRING EXISTING PLASTER: remove plaster which is loose, soft, friable, badly cracked or affected by efflorescence. Thoroughly dry brush exposed background to remove dust, loose material and efflorescence.

3351 FUNGICIDE: treat organic growths with fungicide to manufacturer's recommendations and brush off.

3451 RIGID BOARD BACKINGS: apply coatings as soon as possible after fixing.

P31:4 KEYING/BONDING TREATMENTS

4051 ALTERNATIVES: methods other than those specified may be submitted for approval.

4101 RAKING OUT FOR KEY: rake out soft joints in old brickwork to a depth of not less than 13mm.

4201 HACKING FOR KEY: roughen any existing render thoroughly and evenly to a depth of 3mm by hacking, brush hammering or abrasive blasting. Clean surfaces by washing and brushing.

4451 ADJUST SUCTION: of porous or very dry masonry backgrounds by wetting immediately before applying coatings.

4501 SMOOTH SURFACES: where no keying mix or bonding agent is specified, wet smooth surfaces immediately before plastering.

P31: BEADS/JOINTS/FEATURES

5051 BEADS: fix plumb, square and true to line and level.

5052 BEADS: fix to solid backgrounds with plaster dabs on each side at not more than 600mm centres.

5101 METAL BEADS/LATHING: protect cut edges with black tarbased paint.

5201 SCRIM: where specified bed 90m wide jute scrim centrally over joints in neat plaster similar to first coat. Do not lap ends. Press well in, trowel flat and smooth and allow to dry before applying coating.

5551 SERVICE CHASES: cover with steel mesh strip fixed on each side with plaster dabs at not more than 600mm centres.

5601 CONDUITS: bedded in undercoat to be covered with 90mm wide jute scrim bedded in finishing coat mix, pressed flat and trowelled in. Do not lap ends of scrim.

5652 ARRISES: soften down square arrisses in smooth finish by rubbing over with back of trowel when finishing.

P31:6 APPLYING PLASTER

6051 ACCURACY: finish surfaces to a true plane to correct line and level with all angles and corners to a right angle unless otherwise specified, and with walls and reveals plumb and square.

6052 ACCURACY OF PLASTER 13mm thick or more: maximum permissible gap between an 1800mm straight edge and any point on the surface to be 3mm.

6101 DUBBING OUT: if necessary to correct inaccuracies, dub out in thickness of not more th 10mm in same mix as first coat. Allow each coat to set before the next is applied. Cross scratch surface of each dubbing out coat immediately after set.

6102 DUBBING OUT will not be permitted on smooth dense concrete.

6201 UNDERCOATS GENERALLY: apply each coat firmly to achieve good adhesion, and in one continuous operation between angles joints. Rule to an even surface and cross scratch each coat to provide a key for the next hand-applied coat.

6251 LIGHTWEIGHT CEMENT BACKING PLASTER: apply a tight coat to adjust suction (incorporating approved bonding agent for low suction backgrounds), and apply floating coat without delay,

6401 GYPSUM AND LIGHTWEIGHT PLASTERS: apply final coat as soon as undercoat has set is firmly bonded to background and has developed reasonable suction.

6801 SMOOTH PLASTER FINISH: trowel or float to produce a tight, matt, smooth surface with no hollows, abrupt changes of level or trowel marks. Do not use water brush and avoid excessive trowelling and over polishing.

R73 PLASTERBOARD LININGS

To be read in conjunction with Preliminaries and General Conditions.

TYPES OF PLASTERBOARD LININGS/PARTITIONS.

R73:1	Use/Location	New full height partitions.
	Framing:	70mm steel studs by Gypsum Industries(Stamped Gyproc) at 600mm c/s. Use alternatively when directed, 100 x 50mm or 75x38mm softwood studs, pressure impregnated with preservative at 600mm c/s.
	Plasterboard:	12.7mm Gypsum wallboard or 15mm Gypsum Fireline board (for 1 hour fire resistance) as indicated on our drawings.
	Fixing Recommendation:	Strictly follow manufacturer's directions.
	Joint Treatments:	Taped and filled.
	Finish:	Selected paper finish to give class 0 surface spread of flame as defined by BS 476 or emulsion paint.

R73:2 Fire resistant partitions: Half and one hour resistance as required on the drawings.

The Contractor is responsible for complying with and obtaining Certification to BS 476 pt. 8 with regard to the new fire resisting partitions, from Gypsum Industries and furnishing same to the Architects.

The contractor must comply with all detail requirements as required by Gypsum Industries and the Architect in the construction of the partitions.

PRODUCTS

R73:H SECTIONS:

H301 TIMBER: 100mm x 50mm or 75 x 38, (as shown on drawings) studs at 600 c/s, sole plates framing at door heads and jambs and fixing.

R73 PLASTERBOARD LININGS (contd.)

SECTIONS (contd.)

H302 STEEL STUDS: 70mm steel studs at 600mm c/s. All studs to be Gypsum Industries products and to be stamped 'Gyproc'

R73 RIGID SHEETS

R610 GYPSUM WALLBOARD: to BS 1230
Finish: hardwall skim as recommended by manufacturer.
Edges: tapered edges
Thickness 12.7mm

R611 COLD ROLLED STEEL SECTIONS TO BS 2994 1976

Hot-dip zinc coating or iron zinc alloy to BS 2989 1982.

R73:X ACCESSORIES

X220 ACCESSORIES for wallboard as recommended by plasterboard manufacturer, including angle and stop beads.

X221 Screws:

Gyproc drywall screws self-drilling self tapping with counter sunk Philips heads, 32mm long for first layer of 12.7mm board or 19mm plank and 36mm long for the second layer of 12.7mm board over 12.7mm board.

X222 NAILS:

Galvanised nails, type length and centres as recommended by the manufacturer.

Screws fixed to studs and channels at 300mm c/s.
Nails fixed at 150mm c/s/

Gyproc fixing channel:

Used for medium to heavy weight fixtures to the face of partitions and to provide end support to the plasterboards where the partition height exceeds the length of board being used.

PLASTERBOARD LININGS (contd.)

Jointing:

Gyproc hand jointing or Ames mechanical jointing systems are used in conjunction with Gyproc drywall angle bead or Gyproc corner tape.

Gyproc edge bead:

A perforated galvanised channel section to protect and give a featured edge to plasterboard.

Gyproc acoustical sealant:

To seal any possible airpaths at the perimeter of partitions or walls especially at the base and door frames.

Gyproc control joint:

A zinc alloy section installed in the partition to allow for movement within the run of the partition.

Glass fibre mat:

Gyplas 1200 or mineral fibre mats not less than 11kg/m cubed.

Timber sole plate:

Prepared width timber 38mm thick x width of floor channel.

X240 FIXING BY PLASTER DABS R 73/8

Pads:	Bitumen impregnated, perforated fibreboard pads, 75 x 50mm
Primer:	PRA primer solution.
Bonding Plaster:	lightweight bonding plaster.
Adhesive:	gypsum based general purpose and adhesive
Nails:	double headed, lengths 25, 42 and 50mm. re-usable.

PLASTERBOARD LININGS (contd.)

Jointing:

Gyproc hand jointing or Ames mechanical jointing systems are used in conjunction with Gyproc drywall angle bead or Gyproc corner tape.

Gyproc edge bead:

A perforated galvanised channel section to protect and give a featured edge to plasterboard.

Gyproc acoustical sealant:

To seal any possible airpaths at the perimeter of partitions or walls especially at the base and door frames.

Gyproc control joint:

A zinc alloy section installed in the partition to allow for movement within the run of the partition.

Glass fibre mat:

Gyplas 1200 or mineral fibre mats not less than 11kg/m cubed.

Timber sole plate:

Prepared width timber 38mm thick x width of floor channel.

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Bonding Plaster:	lightweight bonding plaster.
Adhesive:	gypsum based general purpose and adhesive
Nails:	double headed, lengths 25, 42 and 50mm. re-usable.

CONTROL JOINTS:

Control joints may be required to relieve stresses induced by expansion and contraction of the partition or wall, and external stresses resulting from movement in the surrounding structure, where large expanses of partition or walls are specified. It is recommended that they coincide with movement joints within the surrounding structure and/or at not more than 10m centres. See typical Gypsum detail.

FIXTURES:

Lightweight fixtures can be made directly to the partitions. Medium to heavy weight fixtures can be made to Gyproc Fixing channel or timber noggings. Heavy fixtures should be made to timber or metal framing and the extra supports are installed at the frame erection stage.

SERVICES:

Services should be installed as work progresses. The installation of electrical services should be carried out in accordance with the recommendations of the Institution of electrical Engineers.

Cables should be protected by conduit, or other suitable precautions taken to prevent abrasion when they pass through the metal frame. Horizontal runs of conduit and other services are accommodated by passing them through the cut-outs in the webs of the studs. Switch boxes or socket outlets can be supported on brackets formed from timber noggins or cut and bent channels which are fixed horizontally between the studs.

Care should be taken to ensure that fire resistances and sound insulation performance are not impaired by the incorporation of services.

MAXIMUM HEIGHTS:

The criteria to determine the maximum heights for the partitions were those used by Governmental Departments for partitions in public buildings. Designers may wish to increase the rigidity of specific partitions when they are to be used at or near their maximum heights. For recommendations of the most appropriate method please contact Gypsum Industries.

R73 PLASTERBOARD LININGS (including metal stud partition) contd.

FRAMING;

The perimeter framing (channels to floor and head, studs to abutments) is securely fixed with a row of fixings at 600mm maximum centres. Jumbo studs and channel require two rows of staggered fixings. Studs are then placed into the floor and ceiling channels and turned into position. The studs should be cut to allow the maximum possible entry into the head channel. For stability it is important that studs are cut to a neat fit, ensuring that the entry is not less than 19mm with standard channel, 35mm with deep flange, channel.

Studs are directly fixed to the channel when the stud is adjacent to door openings or when deep flange channel is used for partitions in excess of 4200mm high.

R73:3 FIXING WALLBOARD TO FRAMED BACKGROUNDS

3051 SUPPORTS: ensure provision of supports for all board edged.

3151 WALLS: fix wallboard vertically.

3152 WALLS: fix boards so that joints do not occur directly above or below window/door jambs.

3201 UNBOUND EDGES: (cut ends) to be staggered in alternative courses, unless otherwise specified.

3251 FIXING: working from centre of board fix each board to each support at not more than 150mm centres.

3301 DIRECT DECORATION: fix boards so that:
1. Paper covered edges are lightly butted.
2. Cut edges occur at internal angles.
3. cut edges occuring at external angles are masked by paper covered edges.
4. Cut edges meeting in the same place have a 3mm gap between.

R73: JOINTING DRY LINING FOR DIRECT DECORATION

5151 TAPERED EDGE BOARDS: may be finished by either:
1. the manual methods specified in the following clauses, or
2. suitable mechanical methods. (do not mechanically joint external angles)

R73 PLASTERBOARD LININGS (including metal stud partitions) contd.

R73:5 JOINTING DRY LINING FOR DIRECT DECORATION (contd.)

5201 PREPARATION OF TAPERED EDGE BOARDS:
1. Check that all boards are securely fixed in the correct position.
2. Drive home any protruding nail or screw heads.
3. Lightly sand cut edges to remove paper burns.
4. Seal cut edges with brush coat of PVA primer.
5. Completely fill all gaps between boards more than 3mm wide with joint filler and allow to set.

5231 JOINTS IN STRAIGHT RUNS of tapered edge boards:
1. Apply continuous thin band of joint filler to whole of trough.
2. Press single length of joint tape into filler. Ensure tape is firmly bedded and free from trapped air.
3. Immediately after fixing tape apply layer of filler and bring flush to face of board. Remove surplus filler before it stiffens taking care not to disturb main joint filling.
4. When filler has set fill any depressions with filler, allow to set and cut back any projections.
5. Apply a 200 - 250mm wide band of joint finish and feather out edges.
6. When first coat of finish has dried apply second coat as in sub-item 5.

5301 INTERNAL ANGLES to tapered edge boards: before filling joints at junctions of boards to plastered surface apply a narrow band of PVA primer to plaster.

5351 CUT EDGED AND INTERNAL ANGLES to tapered edged boards: finish joints between cut edges and tapered edged and all edges at internal angles as follows:
1. Apply thin layers of joint finish to both sides of joint and press in single length of joint tape, folded at angles. Ensure tape is firmly bedded and free from trapped air.
2. Immediately after fixing tape apply this 150mm wide band of joint finish centred on joint, feather out edges.
3. When first coat of finish has dried apply second coat 200 - 150mm wide and feather out edges.

R73 PLASTERBOARD LININGS (including metal stud partitions) contd.

R73:5 JOINTING DRY LINING FOR DIRECT DECORATION (contd.)

5451 EXTERNAL ANGLES to tapered edge boards to be finished with angle beads as follows:
1. Apply 25mm wide band of joint filler to both sides of angle.
2. Press angle bead firmly into filler, with wided flange covering joint, so that outer edges are in contact with board surface. Remove surplus filler. If necessary secure angle with double headed nails until filler sets.
3. When filler has set remove any nails, apply further band of filler and feather out edges.
4. When filler has set apply a coat of joint finish to both sides of angle 50mm beyond edges of filler and feather out edges.
5. When first coat of finish has dried apply second coat and feather out edges.

5501 NAIL/SCREW SPOTTING:
1. Fill screw and nail indentations with joint filler and finish flush.
2. When filler has set, apply coat of joint finish.
3. Mechanical methods may be used to plasterboard manufacturer's recommendations.

5551 SLURRY: when final application of finish has dried apply slurry coat of joint finish over entire surface of board to give fine even sponged texture.

ELECTRICAL INSTALLATION:

The installation is to be in accordance with the following standards;

1. The National Rules for Electrical Installations issued by the ETCI.
2. IEE regulations 14th edition.
3. All relevant British and Irish Codes of Practices.
4. The requirements of the ESB.

Th Contractor is deemed to have visited the site and familiarised himself with it, in particular location of existing boards and cables, where supply to new works to be taken from etc.

The contractor shall be responsible for the design and installation of the Electrical installation.

Certification:

All necessary certification as required by the ESB is to be provided by the Contractor.

FIRE ALARM SYSTEM:

A fire alarm system is to be installed to comply with IS 3218 1990. System to be a type L2 system and to incorporate break glass call points. System components to comply with relevant British Standards. Certification required that system complies with above standards.

EMERGENCY LIGHTING:

An emergency lighting system is to be installed to comply with IS 3217 1989. Certification to that effect will be required.

DRAINAGE:

To comply with Dublin County Council Bye Laws. UPVC installation of pipes, AJ's, gulley traps etc. Sizes of pipes to be as indicated on drawings. The drains are to be laid on selected granular material or encased in concrete 150mm thick under slab.
100mm drains shall be laid at falls not less than 1 and 60.
Soil and vent pipes shall be terminated at roof level using a patent vent.

The drainage system shall comply with the following standards:

BS 4514, BS 5154, BS 5255, BS 5572 and BS 5955
All BS to be latest revisions.

Where soil and vent pipes penetrate intermediate concrete floors or other fire protected structure an approved intumescent fire collar is to be fitted to protect the penetration point.

Particular reference is to be made to BS 5572, 1978 code of practice for sanitary type work for the installation of the above ground-drainage system.

The following standards are to be complied with:

BS 1973 : Polythene pipe
BS 2871 : Copper and copper alloy tubes
BS 4514 : Plasticised PVC soil and ventilating pipe.
BS 5254 : Polypropylene waste pipes
BS 5255 : Plastic waste pipes and fittings.
BS 3943 : Plastic waste traps
BS 3380 : Wastes for sanitary appliances

Use anitsyphon traps to all sanitary fittings.

ACCESS FOR MAINTENANCE:

Provide access covers and cleaning areas at bends and in positions that are easily accessible. Location of access points to be agreed with the Architect

INSPECTION AND TESTING OF COMPLETED INSTALLATION:

1. Ensure that pipework is clear of obstructing debris and superfluous matter and that all work which is to be concealed is free from defects before it is finally enclosed.

2. On completion the discharge system is to be meticously inspected to ensure that the recommendations of the code have been observed and that no cement droppings rubble etc. is left in the pipes and that no jointing material to check into the pipe board.

AIR TEST:

An air test should be carried out as described in BS 5572 section 12.3.

FIRE RESISTING DOORSETS TO BS 476 PART 8

Fire resisting doorsets to BS 476 part 8 are to be supplied and installed by one of the following approved firms:

Castlecomer Joinery Ltd., Castlecomer, Co. Kilkenny.

Fireseal Contracts Ltd., Ashgrove Industrial Estate, Kill Avenue, Dun Laoghire.

or other firms previously approved by the Engineer or Architect.

Doors are to be solid core, finished in oak veneer, fitted with intumescent strips/smoke seals, 3 sets of heavy duty stainless steel hinges per leaf, selected lever handles, 1 door closer per leaf, fitted with one Chubb mortice lock and escutcheon to match handle.

Full original stamped reports and Certificates of test as carried out and issued by the Testing Authority are to be supplied to the Engineer or Architect for approval before the doors are ordered. No orders are to be placed until this approval is issued.

Doors to be supplied are to comply with the specifications in the test reports in every detail. The supplier is to confirm that the doors as designed fall within the confines of the Test report especially with regard to size and proportion of glazing and overall dimensions, proportion and area of the doorleaves.

The doorsets are to be supplied fitted with intumescent strips and fully glazed in clear georgian wired glass where required. If intumescent mastic or lacquer or plugs are to be used in the installation of the doors or ironmongery , then material of the approved type and specificaton is to be supplied with the doors and full instructions as to its application is to be supplied as well. All ironmongery, namely, hinges, door closers, locks etc. is to be supplied by the fire door supplier/contractor, and all should be of a type to match the Test report Specification.

Doorsets are to fit tightly in the prepared opes. There are to be no gaps behind frames.

The Main Contractor is to CERTIFY that the doors as supplied and installed are strictly in accordance with the Manufacturer's Specifications/details in every respect.

PLUMBING SYSTEM:

WATER STORAGE:

1. Provide 4 x 200 gallon tanks to serve the four shops.

2. Provide 4 x 80 gallon tanks to serve the four offices. All tanks to be located in theattic.

3. All water supplies to be metred.

Provide water supply to all sanitary fittings or sinks as shown on plan. Each unit to be provided with an instantaneous 2 gallon water heater to serve sinks/wash hand basin.

All water storeage facilities to be fitted with overflows.
All pipes to be concealed.
All pipes in attic to be insulated.
All plumbing layouts/diagrams to be agreed before commencing work.

ROOF COVERINGS:

ROOF TILES.

Type	:	Redland Double Roman Roof Tiles.
Size of Tile	:	420mm x 330mm.
Headlap	:	100mm
Guage	:	320mm
Batten size	:	44 x 35mm min size, pressure preservative treated.
Ridge	:	457mm long, half round, butt jointed.
Fixing	:	Fixed strictly to manufacturer's recommendations. All tiles at perimeters together with every tile in alternate course shall be nailed/clipped. Nail Size: 65mm long 9G/Alloy nails.
Felt	:	Reinforced Bitumen felt type 1F and to comply with I.S. 36. Min horizontal lap to be 150mm.
Flashings	:	No. 3 or No. 4 lead flashings in soakers, covers or as detailed. Treat with patination oil immediately after fixing.

PROPOSED SHOP UNITS

AT

SCHOLARSTOWN ROAD, RATHFARNHAM

CO. DUBLIN

FOR

GANNON HOMES LTD.

OUTLINE STRUCTURAL CALCULATIONS

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

FEBRUARY 1991

CONTRACT: SCHOLARSTOWN ROAD	JOB NO : 6220
CALCULATION INDEX	SHEET NO : 02
DRG NO : / DESIGN :	DATE :

DESIGN INFORMATION

CLIENT	GANNON HOMES
ARCHITECT	CONROY CROWE KELLY
ENGINEER	JOHN MOYCAN & ASSOCIATES
DESIGN CODES	BS 8110, IS 325, IS 193
INTENDED USE OF STRUCTURE	SHOPS AND OFFICES
FIRE RESISTANCE REQUIREMENTS	AS PER ARCHITECTS REQUIREMENTS
GENERAL LOADING CONDITIONS	FLOOR LIVE 5.0 kN/m^2
WIND LOADING CONDITIONS	BASIC WIND SPEED 44 ms^{-1}
EXPOSURE CONDITIONS	EXTERNAL MODERATE INTERNAL MILD
SUBSOIL CONDITIONS	BEARING PRESSURE OF 150 kN/m^2
FOUNDATION TYPE	PAD AND STRIP FOOTINGS
CONCRETE REINFORCEMENT	f_{cu} = 30 N/mm^2 f_y = 460 N/mm^2

CONTRACT: SCHOLARSTOWN ROAD			JOB NO : E223
			SHEET NO : 02
DRG NO :	DESIGN :		DATE :

STRUCTURAL PROPOSAL

THE BASIC STRUCTURAL FORM OF THE PROPOSED DEVELOPMENT CONSISTS OF PREFABRICATED ROOF TRUSSES ON LOAD BEARING BLOCKWORK AT ROOF LEVEL WITH PRECAST FLOOR UNITS AT FIRST FLOOR AND GROUND FLOOR LEVEL AGAIN SUPPORTED ON LOAD BEARING BLOCKWORK. REINFORCED CONCRETE BEAMS AND COLUMNS ARE USED WHERE APPROPRIATE TO FRAME OUT AREAS OF BLOCKWORK OPENED UP FOR SHOP FRONTS AND ACCESS TO AN ENCLOSED SHOPPING AREA IN THE NEWSAGENT / GROCERY UNIT.

A SUSPENDED GROUND FLOOR SLAB HAS BEEN SPECIFIED TO AVOID DEEP FILLING UP TO THE FLOOR LEVEL REQUIRED FOR DRAINAGE / MANHOLE LEVELS.

ALL STRUCTURAL ELEMENTS WILL BE DESIGNED AND DETAILED IN ACCORDANCE WITH THE RELEVANT CODES OF PRACTICE TO ENSURE A ROBUST AND TOTALLY INTEGRATED STRUCTURE.

CONTRACT: Site Units Schoolhouse Road.			JOB NO: F223.
Loadings.			SHEET NO: 03
DRG NO:	DESIGN:		DATE:

Ground Floor.

	kN/m²		kN/m².
Dead.			
250 slab	3.6	200 slab	2.8
75 screed	1.8		1.8
Ceiling screed	0.3		0.3
Total dead	5.7		4.9
Live	5.0		5.0
Total dead + live.	10.7		9.9

For slab design. — Deduct slab self wt.

Applied D+L	7.1		7.1

First Floor

As above but include an additional 0.3 for ceiling & services.

	250 deep kN/m²	200 deep kN/m²
Dead	6.0	5.2
Live	5.0	5.0
Total D+L	11.0	10.2
Applied D+L (Etc. slab self wt)	7.4	7.4

CONTRACT: SHOP UNITS - SCHOLARSTOWN ROAD	JOB NO : E223
LOADING CONTD. + SLAB DESIGN.	SHEET NO: 04
DRG NO : / DESIGN :	DATE :

AT FIRST FLOOR LEVEL —

EXTERNAL WALL AREA

SAY TOTAL LOAD IS AS FOR TYPICAL FLOOR.

PRECAST FLOOR SLAB DESIGN

REFERENCE TO BRETON SPAN LOAD TABLES.

① 250 DEEP SLABS.

MAX SAFE LOAD FOR 9.3 m SPAN — 8.4 kN/m²

MAXIMUM SPAN — 9.45 m

REQUIRED LOAD — 7.4 kN/m²

⇒ 250 DEEP SLAB IS OK.

② 150 DEEP SLABS.

MAX SAFE LOAD FOR 6.0 m SPAN — 6.8 kN/m² WITHOUT SCREED; 9.2 kN/m² WITH 50 STRUCTURAL SCREED

MAXIMUM SPAN — 5.9 m

REQUIRED LOAD — 7.1 kN/m²

⇒ 150 DEEP SLAB IS OK.

③ 200 DEEP SLABS

BY INTERPOLATION FROM 150 - SLABS ABOVE THE 200 DEEP SLAB WILL BE OK.

UNIT DEPTH	STRUCTURAL SCREED DEPTH IN MM	ULTIMATE BENDING MOMENT KNm	ULTIMATE SHEAR KN	SAFE SUPERIMPOSED (SERVICE LOADS) Kn/mm2 (EXCLUDING SELF WEIGHT)														
				SPANS IN METRES														
				3.0	3.5	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
110	--	41.7	85.5	16.8	11.8	8.5	6.3	4.7	3.6									
110	50	67.6	85.5			13.0	9.5	6.5	4.5	2.5								
150	--	76.3	93.2			17.5	13.6	10.7	8.5	6.8	5.5	4.4						
150	50	106.1	93.2				18.5	14.6	11.5	9.2	7.2	5.5	4.0					
200	--	143.9	96.7					17.8	16.0	13.7	11.3	9.5	8.0	6.7	5.7	4.8		
200	50	184.8	96.7							13.4	12.0	11.0	10.0	8.7	7.3	6.0	5.2	4.3

NOTES: 1) Ultimate moment and shear capacities are calculated for a standard unit 1200mm wide.

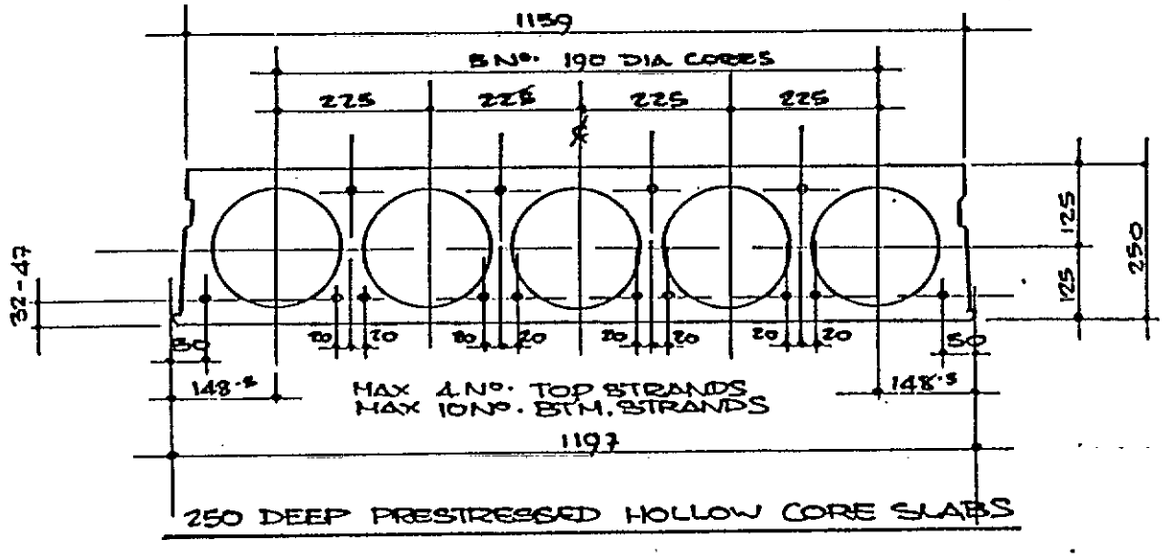
2) When the screed is acting compositely with the precast unit the self weight allowed for in above tables includes the weight of the screed.

PAGE 2N

250mm HOLLOWCORE SLABS

(ALLOWABLE) SUPERIMPOSED SERVICE LOADS (kN/m)

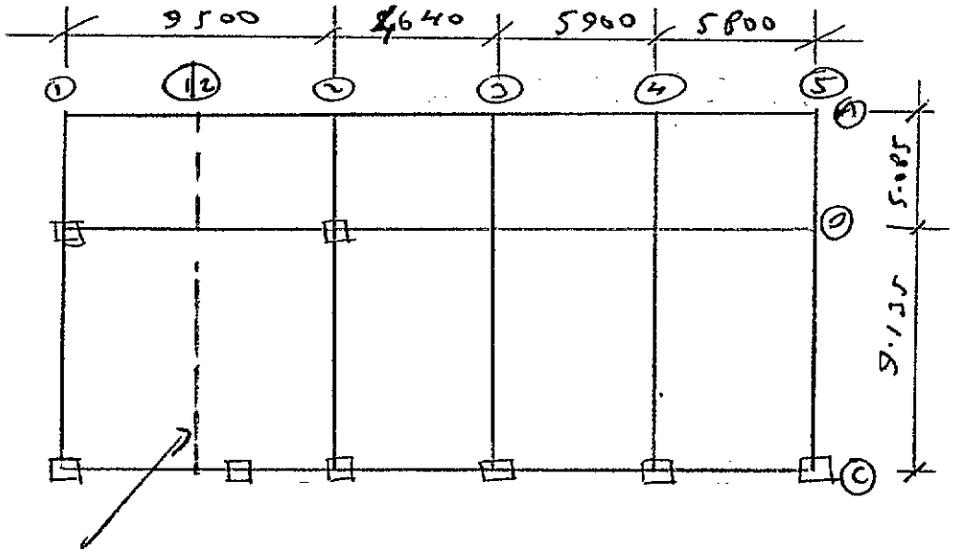
TYPE	EFFECTIVE SPAN ALLOWING FOR S/W 5.22 kN/m²																				
	7.0	7.25	7.5	7.75	8.0	8.25	8.5	8.75	9.0	9.25	9.5	9.75	10.0	10.25	10.5	10.75	11.00	11.25	11.5
	5.4	4.8	4.3	3.9															
	8.0	7.2	6.6	6.0	5.5	5.0	4.5	4.1	3.7										
	10.6	9.7	8.9	8.2	7.5	6.9	6.3	5.9	5.3	4.9	4.5	4.1	3.8						
	12.4	11.4	10.5	9.6	8.9	8.2	7.6	7.0	6.4	6.0	5.5	5.1	4.7	4.3	4.0	3.7			
	14.2	13.1	12.1	11.1	10.3	9.5	8.8	8.1	7.5	7.0	6.5	6.0	5.6	5.2	4.8	4.5	4.1	3.8	3.5
	15.6	13.7	12.8	11.8	11.3	10.5	9.7	9.0	8.4	7.8	7.2	6.7	6.3	5.8	5.4	5.1	4.7	4.4	4.1
	15.4	14.2	13.8	12.9	11.9	11.3	10.5	9.7	9.0	8.4	7.9	7.3	6.8	6.5	6.0	5.6	5.3	4.9	4.6
		15.0	14.3	13.3	12.3	11.2	11.2	10.4	9.6	9.0	8.4	7.9	7.3	6.8	6.5	6.1	5.7	6.4	5.0



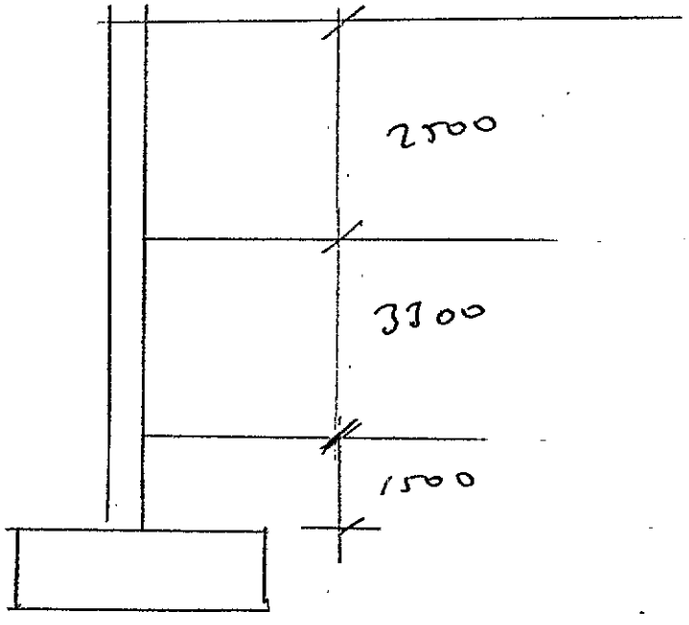
250 DEEP PRESTRESSED HOLLOW CORE SLABS

CONTRACT: SHOP UNITS — SCHOOLANSTOWN ROAD	JOB NO : E223
FOUNDATION DESIGN.	SHEET NO : 07
DRG NO :	DESIGN : P.M.Y.
	DATE : MARCH 91

TYPICAL LAYOUT PLAN.



RETAINING WALL AT FOUNDATION LEVEL FOR SUPPORTING GROUND FLOOR SLAB



CONTRACT: Flat units - Schlanstown Road	JOB NO: 6223
Foundation design	SHEET NO: 09
DRG NO:	DESIGN: P.M.Y. DATE: March 91

Party wall between Grocery and Chemist. - Grid (2)

Wall

Rising wall	$0.325 \times 1.5 \times 20$	9.75
Wall Gr - 1st	$0.35 \times 3.3 \times 20$	23.1

Ground floor load

$\left(\frac{4.75 + 4.64}{2}\right) \times 4.9$ 23.6

Ground floor line
First floor line

$\left(\frac{4.75}{2} + \frac{4.64}{2}\right) \times 5.0 \times$
$\frac{9.5}{2} + \frac{4.64}{2} \times 5.0$ 58.8

1st floor load

$\frac{9.5}{2}$	$\times 6.0$	28.5
$\frac{4.64}{2}$	$\times 5.2$	12.1
		96.5 58.8

Services load + line

155.25

On strip footing 1.0 m
Line bearing pressure = 155 kN/m²
Satisfactory OK.

CONTRACT:			JOB NO : E727
RC HOLANSTOWN ROAD			SHEET NO : 10
DRG NO :	DESIGN :		DATE :

PARTY WALL ON GRID (3)

WALL	$7.3 \times 0.735 \times 20$	34.3	
	$1.5 \times 0.215 \times 20$	6.45	
GR. FL. ROOF	$\left(\frac{5.90 + 4.64}{2}\right) \times 4.9$	25.8	
1ST FL. ROOF	5.27×5.2	27.4	
LINE	$5.27 + 5 \times 2$		52.7
		94	52.7

WALL ON GRID E

GABLE WALL	$0.45 \times 20 \times 1.5$	13.5	
	$0.35 \times 20 \times 7.5$	52.5	
GR FL. FIRST FL. ROOF	$\frac{5.8}{2}(4.9 + 5.2)$	29.3	
LINE	$\frac{5.8}{2} \times 5.0 \times 2$		29
		95.3	
		124.3	

CONTRACT:			JOB NO : E223
			SHEET NO : 11
DRG NO :	DESIGN :		DATE :

LOAD ON GRID (4)

RISING WALL	0.215 + 1.5 + 2 =	6.45	
WALL GR. TO FIRST	7.3 × 0.235 × 2 =	15.51	
GR. FLOOR	5.85 (4.9 + 5.2)	59.1	
FIRST FLOOR	2		
FIRST FLO	5.85 × 5 × 2		58.5
		81.06	
		139.6	KN.

ALL LINE LOADS TO LOAD BEARING WALLS ARE LESS THAN THAT FOR LOAD ON GRID (2) — SEE PAGE 09

⇒ 1.0 WIDE STRIP FOOTING ARE FOR INTERNAL LOAD BEARING WALLS GIVING A BEARING PRESSURE OF 155 kN/m².

FOUNDATION PAD TO COLUMNS.

LINE LOAD ON ~~COLUMNS~~ BEAMS

DEAD. 4N/m

Self wt	0.55 × 0.2 × 24	4.0
SAY 1.0m	WIDTH OF FLOOR	6.1
WALL	2.5 × 4.5	11.25
ROOF	1.0 × 5.5	5.5
		26.85

1 = 1.4 37.6

LIVE.

ROOF	1.0 × 5.5	5.5
SAY 1.0m	WIDTH OF FLOOR	5.0
		10.5
	1 = 1.6	16.8
		37.5
		54.3

TOTAL SERVICE LOAD ON TYPICAL COLUMN.

① $37.5 \times \left(\frac{7}{2} + 2.75\right)$ ~~267.5~~ 183.4N

② $37.5 \times (5.9)$ 221.25 4N

COLUMN self wt $0.3 \times 0.3 \times 24 \times 4$ 8.64

230 4N.

USING 150 ALLOWABLE BEARING PRESSURE

MIN PAD AREA $\frac{230}{150} = 1.53$ $1.25 \times 1.25 =$ 1.5625.

REINFORCED CONCRETE DESIGN.

300 × 300 COLUMN

WITH 1% REINFORCEMENT SAFE LOAD 1213 kN

ESTIMATE OF ULTIMATE LOAD

54.5 × 5.9 + 9 × 1.4 334 kN

⇒ 1.0% IN COLUMN OF

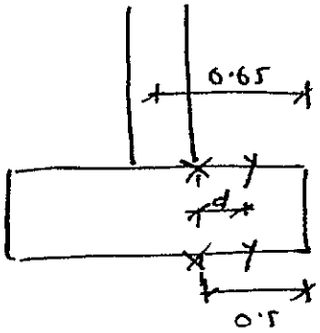
1.0 × 300 × 3 900 mm²

4T20 = 1256

R8 LINKS @ 225 CRS

PAD FOUNDATION

CLT. BEARING PRESSURE. 1.5 × 150 = 225 kN/m²



b = 1000 h = 400

d = 400 − 60 = 340

f_{cu} = 30

B.M $\frac{225 \times 0.5^2}{2}$ = 28.2 kNm

SHEAR 225 (0.5 − 0.25) = 56.25 kN.

$\frac{M}{bd^2 f_{cu}}$ = 0.008 ⇒ J = 0.95 $A_s = \frac{28.2 \times 10^6}{0.87 \times 460 \times 0.95 \times 340}$

= 218 mm²

MIN STEEL $0.13 \times 10 \times 400 = 520 \text{ mm}^2$

USE T12-200 CRS $\equiv 566 \text{ mm}^2$

IN BOTH DIRECTIONS

CHECK SHEAR $V = 56.25$

$N = \frac{V}{bd} = \frac{56.25}{340} = 0.165$

< MIN

⇒ SHEAR N OK.

DESIGN OUTPUT

PAD $1.3 \times 1.3 \times 0.4$

T12-150 IN BOTH DIRECTIONS

4 T20 STARTER BARS
RB LINKS @ 225 CRS

STRIP FOOTINGS A393 MESH

MIN STEEL $0.13 \times 1 \times 310 = 390 \text{ mm}^2$ ⇒ A393 MESH OK

CONTRACT: SCHOLARSTOWN ROAD	JOB NO : E223
TYPICAL BLOCKWORK DESIGN.	SHEET NO : 15
DRG NO : / DESIGN :	DATE :

CORRIDOR LINE WALL ON GRID (2)

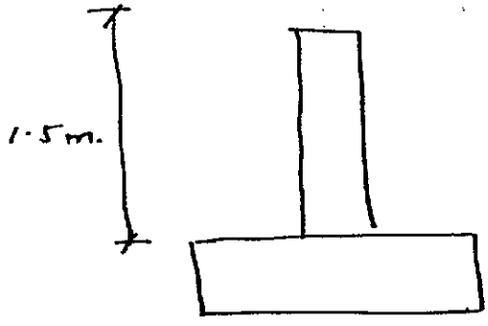
ULTIMATE LINE LOAD 1.4×96.5

1.6×58.8

229.2 kN.

BLOCKWORK DESIGN TO IS 325.

RISING WALL.



FOR DESIGN PURPOSES CHECK CAPACITY OF A 215 WALL.

$\frac{l}{t} = \frac{1500}{215} = 7.0$

ECCENTRICITY = 0.05 t γ_m = 3.1

$\Rightarrow \beta$ = 1.0. f_k = 3.6 — 5 N. BLOCKWORK

ULTIMATE CAPACITY = $\frac{1.0 \times 215 \times 3.6}{3.1}$ = 249.7 kN.

THE ACTUAL WALL THICKNESS ON THIS GRID LINE IN 325 $\Rightarrow$ ~~NOT~~ 5.0 N BLOCKWORK IS OK.

CONTRACT:			JOB NO : F227
TYPICAL SUBSTRUCTURE DESIGN.			SHEET NO : 16
DRG NO :	DESIGN :		DATE :

CHECK WALL CAPACITY FROM GROUND TO FIRST.

$\frac{l}{t} = \frac{3000}{215} = 14.$

$\beta = 0.89.$

$\Rightarrow$ ULTIMATE CAPACITY $= \frac{0.89 \times 215 \times 3.6}{3.1} \Rightarrow$ 222.2 kN

LOAD AT GROUND FLOOR LEVEL

DEAD 96.5
− 23.0
− 9.75
− 63.75 × 1.4

LIVE 50.8
− 23.4
35.3 × 1.6

145.7 kN

< 222.2 $\Rightarrow$ OK

SUBSTRUCTURE IS OK.

CONTRACT: SCHOOLSTOWN ROAD			JOB NO : E223
R.C. DESIGN OF BEAMS.			SHEET NO : 17
DRG NO :	DESIGN :		DATE :

FROM PAGE 12

ULTIMATE UDL ON TYPICAL BEAM — 54.5 kN/m.

TWO BEAM SPANS ARE CONSIDERED.

1) GRID (B) — SPAN 9.5 m — 750 × 300

2) GRID (C) — SPAN 7.0 m — 550 × 300

BEAM (B) BM $\frac{54.5 \times 9.5^2}{8} = 615$ kNm

SHEAR $\frac{54.5 \times 9.5}{2} = 259$ kN

BEAM (C) B.M $\frac{54.5 \times 7^2}{8} = 334$ kNm

SHEAR $54.5 \times \frac{7}{2} \times 1.2 = 229$ kN.

COMPUTER CALCS ON PAGES 18 & 19

CONFIRM THAT ABOVE BEAM SIZES ARE OK

R.C. DESIGN TO B.S. 8110

PROJECT SCHOLARSTOWN ROAD JOB. NO. E223

BEAM/SLAB REF. BEAM ON GRID B

LOCATION		SPAN
M.	Kn	615
b.	mm	300
h.	mm	750
Cover		40
No. of Layers		2
Bar Dia.	mm	32

BENDING DESIGN

d.	642
Fcu.	30
Fy.	460
M/bd2	4.677759
k	0.153925
j	0.777037
Z (J*d)	514.3986
Mu.	615.2945
d1	56
ASc.	0
ASt.	2987.433

DEFLECTION DESIGN

BASIC L/d	20
l.	9500
Min. M.F.	0.717522
Max. Fs.	288
Actual M.F.	0.832371

BENDING/DEFLECTION DESIGN OUTPUT

ASc.	0
ASt. (Bending)	2987.433
ASt. (Deflection)	2987.433
% AS	1.504246

	ASt.	ASc.
Bar Dia.	32	25
Number	4	2
Centres	0	0
ASt. Provided	3216.990	981.7477

AS Prov / AS Req 1.076841 ERR

SHEAR DESIGN

		0 x
V	259	259
v	1.304128	1.304128
ASt. (Support)		
Bar Dia.	32	
Number	2	
Centres	0	
ASt. Provided	1608.495	
%ASt. (Support)	0.809917	
vc	0.626024	
d (shear)	400	
v_(max)	4.381780	

MAX SHEAR STRESS IS NOT EXCEEDED - DESIGN IS O.K

NOMINAL SHEAR LINKS

Fys	460
Asv/Sv (nom.)	0.299850

No.	Dia.	C/C	Asv/Sv
1	10	250	0.628318

V (nom.)	203.7483	
Design U.D.L.	54.5	
x	1.013424	
Asv/sv	0.508324	0.508324

No.	Dia.	C/C	Asv/Sv
1	10	250	0.628318

R.C. DESIGN TO B.S. 8110

PROJECT SCHOLARSTOWN ROAD JOB. NO. E223

BEAM/SLAB REF. BEAM ON GRID C

LOCATION		SPAN
M.	Kn	334
b.	mm	300
h.	mm	550
Cover		40
No. of Layers		1
Bar Dia. mm		32

BENDING DESIGN

d.	494
Fcu.	30
Fy.	460
M/bd2	4.562168
k	0.152072
j	0.784659
Z (J*d)	387.6215
Mu.	342.6265
d1	56
ASc.	0
ASt.	2153.086

DEFLECTION DESIGN

BASIC L/d	20
L	7000
Min. M.F.	0.708502
Max. Fs.	288
Actual M.F.	0.836347

BENDING/DEFLECTION DESIGN OUTPUT

ASc.	0
ASt. (Bending)	2153.086
ASt. (Deflection)	2153.086
% AS	1.452824

	ASt.	ASc.
Bar Dia.	32	25
Number	3	2
Centres	0	0
ASt. Provided	2412.743	981.7477
AS Prov / AS Req	1.120597	ERR

SHEAR DESIGN

V	0	K
v	229	229
ASt. (Support)	1.545209	1.545209
Bar Dia.	32	
Number	2	
Centres	0	
ASt. Provided	1608.495	
%ASt. (Support)	1.085354	
vc	0.690189	
d (shear)	400	
v (max)	4.381780	

MAX SHEAR STRESS IS NOT EXCEEDED - DESIGN IS O.K

NOMINAL SHEAR LINKS

Fys 460

Asv/Sv (nom.) 0.299859

No.	Dia.	C/C	Asv/Sv
1	10	250	0.628318

V (nom.)	161.5660	
Design U.D.L.	54.5	
x	1.237320	
Asv/sv	0.640944	0.640544

No.	Dia.	C/C	Asv/Sv
1	10	150	1.047197

PROPOSED SHOP UNITS

AT

SCHOLARSTOWN ROAD, RATHFARNHAM

CO. DUBLIN

FOR

GANNON HOMES LTD.

CIVIL AND STRUCTURAL SPECIFICATION

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

Tel Nos. (01) 615337/612475
Fax No. (01) 610255

April 1991

C O N T E N T S

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April 1991

C O N T E N T S

PREAMBLE

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
aproved by the Engineer in writing.

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.

3. VARIATIONS.

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

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 classed as defective work.

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.

5. DESIGN

The reinforced concrete works have been designed generally in accordance with the recommendations contained in British Codes of Practice BS 8110. In regard to concrete materials, specification and construction, the Contractor shall comply with the recommendations made in section 6 of BS 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.

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.

1.12. 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.

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.

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 $4^{O}C$ 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

1.0. 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.

1.1. PIPE TYPES

The following pipes and fittings may be used for both foul and surface water sewers and drains:

1. Spigot and socket concrete pipes complying with I.S. 6 or B.S. 556.

2. Asbestos cement pipes complying with B.S. 3656.

3. Unplasticised P.V.C. pipes complying with the "Provisional Specification for Soil and Waste Pipes, Drains, Sewers and Fittings made of hard P.V.C. issued by the Department of Local Government.

4. Clayware pipes and fittings complying with I.S. 106 or B.S. 65 and 540 and clayware fittings complying with B.S. 539.

   Ogee concrete pipes complying with I.S. 6 or B.S. 556 may be used for surface water sewers and drains only.

1.2. TRENCH WIDTH

The width of trenches shall be in accordance with the schedule on Drg. No. E-std-2. Trench width shall be taken as the trench width at the level of the top of the pipe.

1.3 PIPE LAYING

Two types of pipe bed may be used.

1. Concrete bed as shown on Drawing No. E-Std.-2. Where rigid pipes with flexible joints are used with this bed, vertical movement joints in the concrete bed shall be provided at maximum intervals of 5 m and aligned with the face of a pipe socket. The movement joints shall be 12 mm wide and shall be filled with an approved compressible material. Where rigid support is provided for the pipe before completion of the bed, a layer of bituminous roofing felt complying with I.S. 36 Type 1F shall be provided between the support and the pipe.

2. Granular bed as shown on Drawing No. E-Std-2. Granular bedding Type A shall consist of broken stone or gravel.

contd/.....

All material shall pass a 19 mm B.S.test sieve and be retained on a 4.75 mm B.S. test sieve. Granular material Type B shall consist of gravel graded from 9.5 mm to 4.75mm. Other granular materials may be used subject to approval.

Selected fill shall be free from stones greater than 25 mm in size, building rubbish, tree roots, vegetable matter and lumps of clay greater than 75 mm in size and shall be compacted in 100 mm loose layers.

1.4. JOINTING

All pipes except ogee concrete pipes shall have flexible joints. Flexible joints shall be formed by an approved method recommended by the pipe manufacturers. Rubber sealing rings shall comply with B.S. 2494 Part 2. Ogee concrete pipes shall have mortar joints.

1.5. MANHOLE CONSTRUCTION

Manholes shall be constructed of solid concrete blockwork to I.S. 20, Type A, in situ concrete or precast concrete units. The minimum wall thickness for concrete blockwork and in situ concrete shall be 200 mm. for depths up to 3.3m and 300mm for depths between 3.3m and 6m. Precast concrete manhole units shall comply with B.S. 556. Manholes shall be built on a base of concrete, of minimum thickness 150 mm for depths up to 3.3 m and 225mm for depths between 3.3 m and 6 m. Alternatively approved precast concrete bases may be used.

Manhole roofs shall consist of a reinforced concrete cover slab suitably reinforced to carry all probable dead and live loads and shall be of minimum thickness 150mm. Alternatively, a precast concrete slab complying with B.S.556 may be used.

Blockwork manholes shall be scudded and rendered in two coats externally. Where precast concrete units are used they shall be surrounded with concrete to a minimum thickness of 150 mm to within 1 m of ground level.

contd/.....

1.6. MANHOLE DIMENSIONS

Minimum internal dimensions of manholes shall be as shown on Drg. No. E-215-16.

1.7. CHANNELS AND BENCHING FOR MANHOLES

Channels shall consist of pre-formed channels or pipes cut to form channels. At manholes where there is a change in pipe size between the main pipe entering and that leaving the manhole, the connecting channel shall consist of an approved proprietary taper. Where a suitable taper is not available the channel shall be formed in in-situ concrete finished with a 1:2 cement sand mortar.

Benching shall rise vertically from the top edge of the channel to a height not less than that of the soffit of the outlet, be sloped upwards thence to the wall at a gradient of 1 in 6 and finished in a cement mortar.

In the case of branch drains the benching shall be so shaped as to guide the flow of sewage in the desired direction.

Alternatively, precast base units, incorporating channels and benching, may be used subject to approval.

1.8. MANHOLE COVERS AND FRAMES

Manhole covers and frames shall be as approved and, unless specified otherwise, shall comply with B.S. 497 in all but dimensions. The minimum opening dimensions shall be 600mm rectangular or, if circular, 550 mm diameter. The appropriate grade of cover and frame which shall be used in any location is given in Table 1.1.

TABLE 1.1. MANHOLE COVERS AND FRAMES

B.S. 497 GRADE	LOCATION
GRADE A	CARRIAGEWAYS
GRADE B	FOOTPATHS, VERGES, VEHICULAR ACCESSES
GRADE C	SITUATIONS INACCESSIBLE TO WHEELED VEHICLES

1.9 MANHOLE STEP IRONS

Step irons shall be provided in manholes deeper than 1 m.

Blockwork and in-situ concrete manholes shall be provided with step irons in two vertical runs. The vertical runs shall be 300mm apart centre to centre. The step irons shall be at 300mm intervals in each run and the two runs shall be staggered vertically by 150mm. The top rung shall be a maximum of 450 mm from the ground surface and the bottom rung shall be a maximum of 300mm above benching.

Precast concrete units shall have step irons built in as specified in B.S. 556. Step irons shall comply with B.S. 1247. Ladders shall be used instead of step irons for manholes deeper than 4.5m. Ladders shall be of approved type.

1.10. GULLIES

Gullies for the collection of roof water, waste from waste pipes and for the drainage of small paved areas shall be clayware complying with B.S. 539. Other types, including PVC gullies, may be used subject to approval. Rain water downpipes and waste pipes shall either discharge over an open gully fitted with a grating, or be connected to the back inlet of a back inlet gully. The maximum distance from the finished ground surface to the bottom of the gully shall be 600 mm.

Gullies for the drainage of road carriageways and large paved areas shall be precast concrete complying with B.S. 556 or shall consist of a chamber with minimum internal dimensions of 450mm x 300 mm x 750 mm deep constructed of 100mm solid concrete blockwork and having a 150 mm in-situ concrete floor. The outlet from the gully shall be 150 m m diameter set a minimum of 375 m m above the floor of the chamber. Gully gratings for these gullies shall be as approved and, unless specified otherwise, shall comply with B.S. 497 Grade E.

Gullies connected to a drain or sewer carrying foul water shall be trapped.

contd/..

1.11. MORTAR

Mortar for use in jointing of brickwork, blockwork, ogee concrete pipes and precast concrete manhole rings shall have 1:3 cement sand dry volume ratio. The sand shall comply with B.S. 1200 having a grading as given in Table 1.2.

TABLE 1.2. GRADING OF SAND TO B.S. 1200

B.S. SIEVE SIZE	PERCENTAGE PASSING
5mm	100
2.36mm	90-100
1.18mm	70-100
600 um	40-100
300 um	5-70
150 um	0-15

Mortar for use in forming manhole inverts and benching shall have a 1:2 cement sand dry volume ratio. The sand shall comply with B.S. 1199 having a grading as given in Table 1.3.

TABLE 1.3. GRADING OF SAND TO B.S. 1199

B.S. SIEVE SIZE	PERCENTAGE PASSING
5mm	100
2.36 mm	90-100
1.18 mm	70-100
600 um	40-80
300 um	5-40
150 um	0-10

In all mortars, other sands, such as zone 3 sand complying with B.S. 882, may be used subject to approval.

1.12. RENDERING

The materials used for scudding and rendering manhole walls shall have a 1:3 cement sand dry volume ratio and shall incorporate an approved waterproofing agent. The sand shall comply with B.S. 1199 and have a grading as given in Table 1.3.

1.13. TESTING OF SEWERS AND DRAINS

Sewers and drains shall be tested by one or other of the following methods.

1. Water Test: Foul sewers and drains shall be tested for a minimum of 30 minutes under a head of not less than 1m of water over the crown at the high point and not more than 2.5 m of water over the crown at low points of the line under test. The maximum allowable loss of water per hour per 100 lineal metres of pipe shall be as given in Table 1.4

TABLE 1.4. MAXIMUM ALLOWABLE WATER LOSS IN LITRES PER HOUR, PER 100 LINEAL METRES OF PIPE

PIPE DIAMETER (mm)	MAXIMUM ALLOWABLE LOSS (l/h)
100	6
150	9
225	13.5
300	18
375	45
450	54
525	63
600	72

Surface water sewers and drains shall be tested for a minimum of 30 minutes and the test head of water shall not be less than 1m over the crown at the high point and not more than 2 m over the corwn at low points of the line under test. Acceptance criteria shall be as for foul sewers unless otherwise approved.

Where either foul or surface water sewers or drains fail the appropriate test, remedial work shall be subject to approval.

2. AIR TEST: Air shall be pumped into the section of sewer or

drain under test until a pressure of 100 mm of water is indicated on a U-tube connnected to the system. The air pressure shall not fall to less than 75 mm head of water during a period of 5 minutes without further pumping, after a period of requisite stabilisation.

Failure to pass this test is not conclusive and, when failure does occur, a water test as specified in (1) shall be carried out. Acceptance or rejection of the line under test shall be based on the results of this water test.

1.14. INFILTRATION TEST FOR MANHOLES

Manholes greater than 1m deep shall be tested for infiltration of ground water. Infiltration to manholes shall not exceed 5 litres per hour per manhole.

Infiltration tests shall be carried out when the water table in the ground adjacent to the manhole is at its highest level or at some other approved time.

1.15. CLEANING OF SEWERS AND DRAINS.

At the time of completion of the development works the developer shall ensure to the satisfaction of the Local Authority that all sewers and drains within the site are clean and free from obstructions.

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

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

Bloc 2, Ionad Bheatha
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/0283 Date : 5th March 1991

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

Dear Sir/Madam,

DEVELOPMENT : Change of use from residential to office use at first floor and alterations to previously approved two storey shops and flat development

LOCATION : Orlagh Estate,Scholarstown Rd. Rathfarnham

APPLICANT : Gannon Homes Ltd.

APP. TYPE : PERMISSION

With reference to above, I acknowledge receipt of your application received on 4th March 1991.

Yours faithfully,

.....

PRINCIPAL OFFICER

Conroy Crowe Kelly,
26 Kingram Place,
Dublin 2.

Dublin County Council
Comhairle Chontae Atha Cliath

22/10

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 ORLAGH GROVE, SCHOLARSTOWN ROAD
(If none, give description sufficient to identify) DUBLIN 16.

3. Name of applicant (Principal not Agent) GANNON HOMES LTD.
Address 68 AMIENS STREET DUBLIN 1 Tel. No. 366800

4. Name and address of CONROY CROWE KELLY, 26 KINGRAM PLACE
person or firm responsible for preparation of drawings DUBLIN 2 Tel. No 613990 /1

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

6. Brief description of CHANGE OF USE OF 1ST FLOOR FROM RESIDENTIAL TO
proposed development OFFICE TO PREVIOUSLY APPROVED SCHEME

7. Method of drainage PUBLIC 8. Source of Water Supply PUBLIC

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.
(b) Proposed use of each floor

DUBLIN COUNTY COUNCIL
Planning permission is sought for change of use from residential use to office use of first floor and subsequent alterations to previously approved 2 storey shops and flat development at Orlagh Estate, Scholarstown Rd, Rathfarnham, Dublin 16. Signed Gannon Homes Ltd.

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

Incl Fees 19/2/91

11.(a) Area of Site 162 Sq. m.
(b) Floor area of proposed development 225M² (1ST FLOOR ONLY) Sq. m.
(c) Floor area of buildings proposed to be retained within site NIL Sq. m.

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.

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

15. List of documents enclosed with application.
SEE ACCOMPANYING LETTER.

16. Gross floor space of proposed development (See back) 583.7 Sq. m.
No of dwellings proposed (if any) ✓ Class(es) of Development 4.
Fee Payable £ 395 Basis of Calculation 225 M² @ £175 per m²
If a reduced fee is tendered details of previous relevant payment should be given

Signature of Applicant (or his Agent) Daniel P. Kelly Date 4/03/1991

395 S/3
N34069

Application Type P
Register Reference 91A/0283
Amount Received £ 3.20.0
Receipt No
Date

FOR OFFICE USE ONLY

RECEIVED
-4 MAR 1991
REG. SEC.

COMHAIRLE CHONTAE ÁTHA CLIATH

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

RECEIPT CODE

Issue of this receipt is not acknowledgement that the tendered is the prescribed application fee. N 34069

PAID BY —

CASH

CHEQUE ✓

M.O.

B.L.

I.T.

£ 395.00

5H

Received this 5th day of March 1991

from Hill Samuel Bank (Ireland) Ltd (Gannon House)
Adelaide Rd, 68 Amiens St.,
D.2 D.1)

the sum of three hundred and ninety five — Pounds

— Pence, being fee for

pla-p application at Orlagh Grove

Noeleen Keane Cashier

S. CAREY
Principal Officer

Class 4

COMHAIRLE CHONTAE ÁTHA CLIATH

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

RECEIPT COD

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

PAID BY

CASH

CHEQ

M.O.

B.L.

U.T.

N 34069

£395.00

Received this 5th day of March 19 91

from Hill Samuel Bank (Ireland) 45, (Gannon House)
Adelaide Rd.,
D.2
68 Amiens St.,
D.1

the sum of three hundred and ninety five Pounds

Pence, being five pp

Cashier

S. CAREY
Principal Officer

C O N R O Y C R O W E K E L L Y
A R C H I T E C T S
26 KINGRAM PLACE, FITZWILLIAM SQUARE, DUBLIN 2 613990 613991 Fax 765715

BARRY CONROY Dip Arch
MICHAEL CROWE B.Arch
DANIEL KELLY B.Arch

Our Ref: 9002 DK/AK.

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

4th March, 1991.

RE: PROPOSED SHOP AND OFFICE DEVELOPMENT ORLAGH ESTATE, SCHOLARSTOWN ROAD, DUBLIN 16.

REGISTER REFERENCE: 89A/236.
AN BORD PLEANALA REFERENCE: PL 6/5/82396.

04 MAR 91

Dear Sirs,

On behalf of our clients Gannon Homes Ltd. we wish to apply for Planning Permission for change of use of first floor area of proposed shop and flat development at Scholarstown Road to office use.

The following information is included in quadruplicate.

1. Architects Drawings:

   9002 D 100 Rev B
   9002 D 103 Rev C
   9002 D 104 Rev D
   9002 D 105 Rev A

2. Engineers Drawings:

   D/223/06.

3. Architects Report.

4. Completed application form.

5. Irish Press Newspaper Advertisement dated 19th February, 1991.

DUBLIN COUNTY COUNCIL
Planning Dept. Registry Section
04 MAR 1991
91A/0283

We also enclose application fee in the sum £395 (Cheque).

We await your favourable decision on the above.

Yours faithfully,

Daniel Kelly.

CONROY CROWE KELLY ARCHTECTS.

Encs.

c.c. Gannon Homes Ltd.

CONROY CROWE KELLY
ARCHITECTS
26 KINGRAM PLACE, FITZWILLIAM SQUARE, DUBLIN 2 613990 613991 Fax 765715

BARRY CONROY Dip. Arch.
MICHAEL CROWE B.Arch.
DANIEL KELLY B.Arch.

Our Ref: 9002 DK/AK.

ARCHITECTS REPORT.

PROPOSED SHOPS AND OFFICES AT ORLAGH GROVE, SCHOLARSTOWN ROAD, DUBLIN 16.

BACKGROUND:

Dublin County Council Register Reference Number 89A/236
Bord Pleanala Ref: PL/5/82396

Planning Permission was granted for a development comprising four shops and four flats in a two storey block by An Bord Pleanala on 31st January, 1991.

PROPOSAL:

This application is for a change of use of the first floor part of the building from residential to office use. The only physical changes proposed to the building are for alterations to the layout to the first floor area, ommission of two staircases, lowering of two side screen walls to the terrace as this will no longer be used as a terrace and minor additional windows to service toilets on site elevation.

REASONS FOR CHANGE OF USE:

It is now felt that flats located over shops would be inappropriate. It is felt that it would not be a desirable place to live in a surburban location and that the flats would be unsustainable as residential units and would in time become vacant or perhaps get used in some way connected with the shops units below. If this happened on a piecemeal basis it would make the use of the remaining units difficult. It is felt tht an office use comprising small units and aimed at local community based activities such as Estate Agent or Solicitors would be more appropriate and this is now what is being proposed.

CAR PARKING:

The previous Permission provided 17 car spaces for four shops and flats, and this number was agreed to be sufficient with the Department. Four additional spaces could be provided within the curtilege of the site however at this stage we would propose the the numbers of on site spaces as is ie. at 17 spaces to density of carparking.

SERVICES:

Service connection to foul, surface water and drainage as per enclosed Engineer's drawings.

March 1991.

1. **WALLS:**

425mm thick external cavity wall comprising 215mm inner leaf in solid block 100mm cavity with 50mm interlocking polystyrene insulation 100mm outer leaf in solid block or 102.5mm outer leaf in selected clay brick.

WALL TIES:

Wall ties shall be stainless steel and to conform to BS 1243. They shall be at 450mm centres horizontally and 750mm centres vertically. Ties to be staggered.
Ties should be inserted within 450mm of an internal corner. Additional ties to be inserted at openings. Vertical spacing not greater than 225mm. Ties to be bdded at least 50mm in each leaf. Ensure that there are no mortar droppings on ties.

WALL FINISHES:

Internal:
Gyplite undercoat 11mm thick on scratched basecoat
Gyplite finish coat 1.6mm thick, steel trowelled finish.

External:
Smooth render sand/cement in 3 coats or other approved plaster finish or selected brick as indicated. Finish plaster in Dulux exterior paint.

2. 100mm or 215mm or 325mm solid block internal walls finished in Gyplite plaster as described above.

3. 100mm stud partitions comprising 12.7mm plasterboard, taped and filled joints Gyplite finish skim on 75 x 38mm s.w. tanalised studs at 600mm c/c. All fixed to manufacturers requirements.

4. Doors:
30/30 BS 476 part 8 tested ½ hour fire door. To specification.
60/60 BS 476 part 8 tested 1 hour fire door. To specificatiorn.
otherwise
flush panel solid core door.

5. SHOPFRONTS:

Hardwood stained and satin polyurethane finish screens incorporating doors, solid and glazed panels. All opening sections to be draught stripped.
All glass to be laminated.
Ironmongery to be selected.
Hardwood panelling, mouldings boxing to shutters etc., stained and varnish finish.

6. STAIRS:

Reinforced concrete stairs comprising 18 risers at 163.33 each
250mm goings with
25mm overhung nosings.
Painted m.s. 50mm diameter tubular handrail.
Finish to stairs to be selected anti slip ceramic tiles with special nosing units.

7. Ventilated lobbies and w.c.'s with 225mm glavanised steel vent. or PERMANENT ROOF VENT

8. 100mm extract duct and axial fan wire to light switch and delay mechanism to comply with proposed building regulations section L8 to give 3 air changes / hour.

9. DRAINAGE:

To comply with Dublin County Council, Bye-laws, uPVC installation of pipes &/s gulley traps etc. in Marley or Terrain. Sizes of pipes to be as indicated on the drawings. The drains are to be layed on selected granular material or encased in concrete 150mm thick where under floor slab or roadways, 100mm drains shall be layed at falls not less than 1:60 or as indicated on the drawings SVP's shall be terminated at roof level using a patent vent by Glidvale (Necoflex). The drainage system shall comply with the following:
BS 4514, 5254, 5255, 5572, 5955 (All latest editions).
Where 100mm stacks penetrate 1st floor slabs and other fire protected structure approved intumescent collars are to be provided.

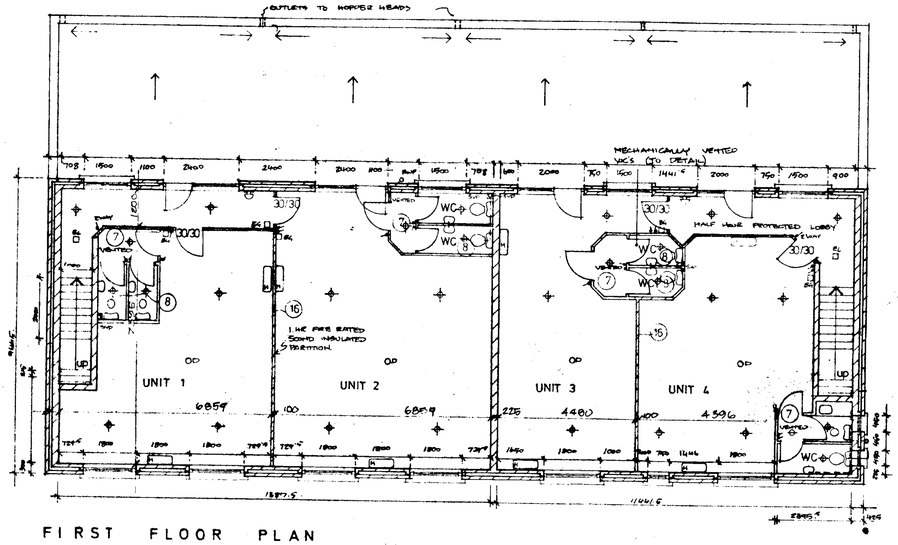
MANHOLES:

To be to Structural Engineer's drawings and specification

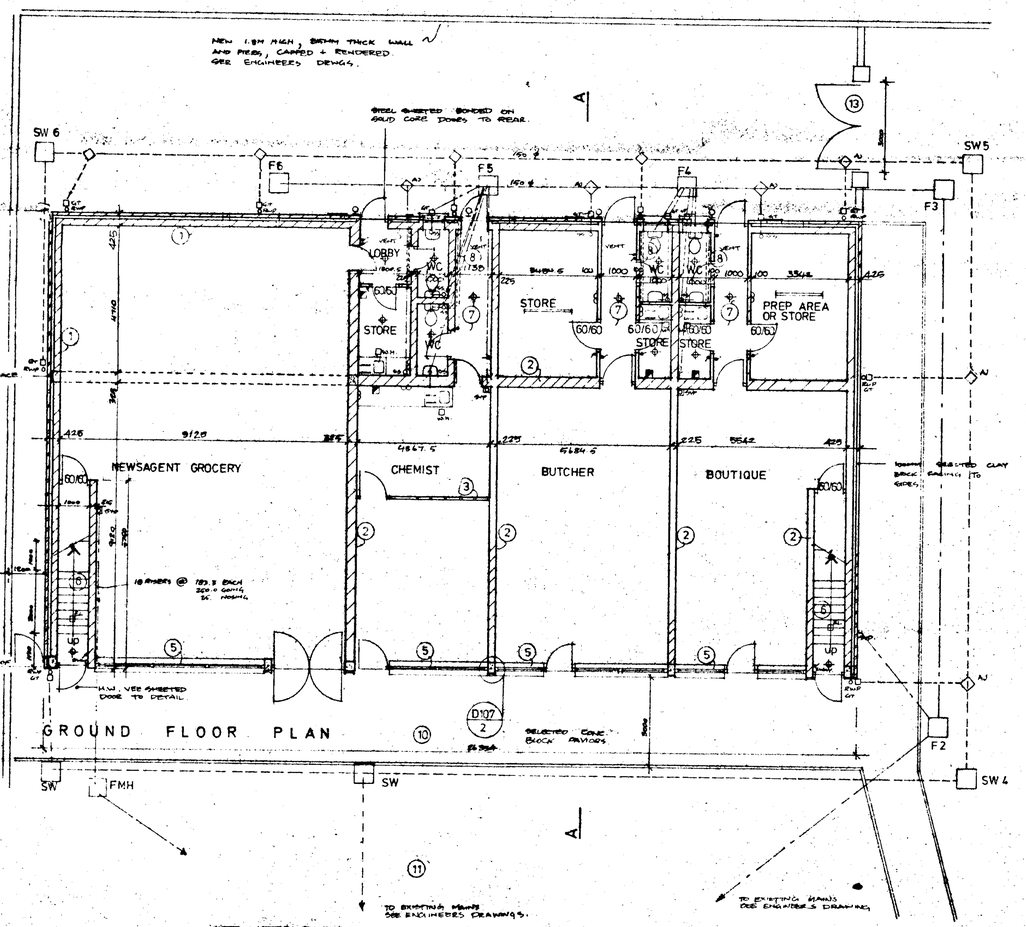
10. Selected concrete block pavions, layed to falls and in herringbone pattern laid on 50mm sand/cement and to manufacturers details. Special kerb pavior.

armac to carparking bays and roads to r's requirements.

planting in beds with kerb pavior surrounds.



FIRST FLOOR PLAN



LEGEND

- 100 ϕ SVP WC SVP.
- 100 ϕ STUB
- 300 INLET GULLEY TRAP
- INSPECTION CHAMBER
- METER POSITION.
- 1500 LONG TWIN FLOORESCENT LIGHT.
- LIGHTING POINT.
- 15A. TWIN SOCKET
- ELCB POSITION.
- 7 GAL UNDER SINK WATER HEATER.
- WALL MOUNTED LIGHT SWITCH
- STORAGE HEATER.
- 5HR NON MAINTAINED EMERGENCY LIGHT.
- BREAK GLASS UNIT
- SMOKE DETECTOR.
- ALARM BELL

NOTE
FOR M+E LEVELS ETC. REFER TO ENGINEERS DRAWINGS.
UNREGLAS DRAINS ENCASED IN CONCRETE 150 THICK.
FOR SITE LAYOUT LIGHTING SEE DRWG 9002 D100

13. Galvanised steel gates painted (to detail)
215mm brick wall 2.4 metres high, capped with brick on edge on D.P.C.
450mm piers in brick enclosing 100 x 100mm steel post (galvanised) set in concrete base
600 x 600 x 1000mm deep. All to detail.

14. ELECTRICAL INSTALLATION:

The installation is to be in accordance with the following:

The National Rules for Electrical Installation issued by the ETCI.

IEE regulations (latest edition)

All relevant Irish and British Standards and Codes.

The requirements of the ESB.

FIRE ALARM:

A fire alarm is to installed to comply with IS 5217 1990. The arrangement and design of this is to be to later detail.

Emergency lighting:

An emergency lighting system is to be installed to comply with IS 3217 1989. The arrangement and design of this is to be to later detail.

Heating system:

To be a system of storeage heaters and fan assisted convectors See electrical layout.

15. PLUMBING SYSTEM:

Provide cold water storage tanks in attic to comply with Dublin County Council requirements. Provide cold supply to each unit to feed instantaneous water heater. Provide drinking water supply to each unit. Insulate all pipes with 25mm armaflex. Insulate cold water tanks with 100mm fibre glass. Cover all tanks. Refer to plumbing layout. Refer to detailed specification.

6 SOUND PROOFED PARTITION:
2 LAYERS 12.7MM F BOARD JOINTS STAGGERED ON 100 x 50 TREATED STUDS @ 600c/c
SILICON ACOUSTIC SEALANT BEAD TO BOTH LAYER OF F BOARD FOAM STRIPS TO STUDS / RAFTERS
50MM ROCKWOOL RW3 SLABS TO CORE

DECORATION:
EXTERNAL PLASTER: 3 COAT DULUX WEATHERSHIELD
EXTERNAL JOINERY: PRIMED
EAVES + SOFFIT: 2 U/C + 1 FINISH IN GLOSS
DOORS + WINDOWS: 3 COAT GUIDELINE + 1 COAT SATIN CLEAR FINISH
INTERNAL JOINERY: PRIMED
DOORS, SKIRTINGS / ARCHITRAVES ETC
2 U/C + 1 FINISH COAT IN GLOSS
OFFICE AREA: (1ST FLOOR)
3 COAT DULUX MATT PAINT TO WALLS & CEILINGS.

GATES:
PRIMED
2/U/C + 1 FINISH COAT GLOSS

IRONMONGERY:
REAR DOORS.
6 LEVER CHUBB LOCKS.
1 ALUMINIUM PULL HANDLE (225 x 25)
3 H.D HINGES / LEAF

INTERNAL DOORS:
ALUMINIUM LEVER HANDLES / ROSE. - PAIR
ESCUTCHEONS - PAIR.
3 LEVER UNION LOCK
3 H.D HINGES
BRITON 2201 DOOR CLOSER (FIRE DOORS ONLY)

FRONT DOORS.
508 BRASS PULL HANDLE 450 LONG
ROOT FIXED - PAIR / DOOR.
CHUBB 5 LEVER + ESCUTCHEONS.
BRITON 2201 DOOR CLOSER
BRASS LETTERBOX.
3 H.D. HINGES /LEAF.

1. Do not scale this drawing.
2. Errors and omissions to be immediately notified to the Architect.
3. All dimensions to be checked on site.

Revisions	date	Inits
C DRAINAGE AMENDED	4/5/91	GD
B DIMS ADDED. NOTES ADDED MINOR ALTERATIONS	7/6/91	GR
A DRAINAGE + DIMENSIONS ADDED	5/2/91	DK

description
PLAN
Ground & First Floors

DUBLIN COUNTY COUNCIL
Planning Dept Registry Section
APPLICATION RECEIVED
11 APR 1991
REG No 91A/0234
APPLICATION TYPE O/P/A/BBL
No L D S

drawing no. 9002 D 103
rev. C

job
PROPOSED SHOPS at SCHOLARSTOWN ROAD

scale 1:100
date JAN 91
drawn
checked

client
GANNON HOMES LTD

issue

CONROY CROWE KELLY
ARCHITECTS
26 KINGRAM PLACE
FITZWILLIAM SQUARE
DUBLIN 2
TELEPHONE: 613990 FAX: 613391

1. Do not scale this drawing.
2. Errors and omissions to be immediately notified to the Architect.
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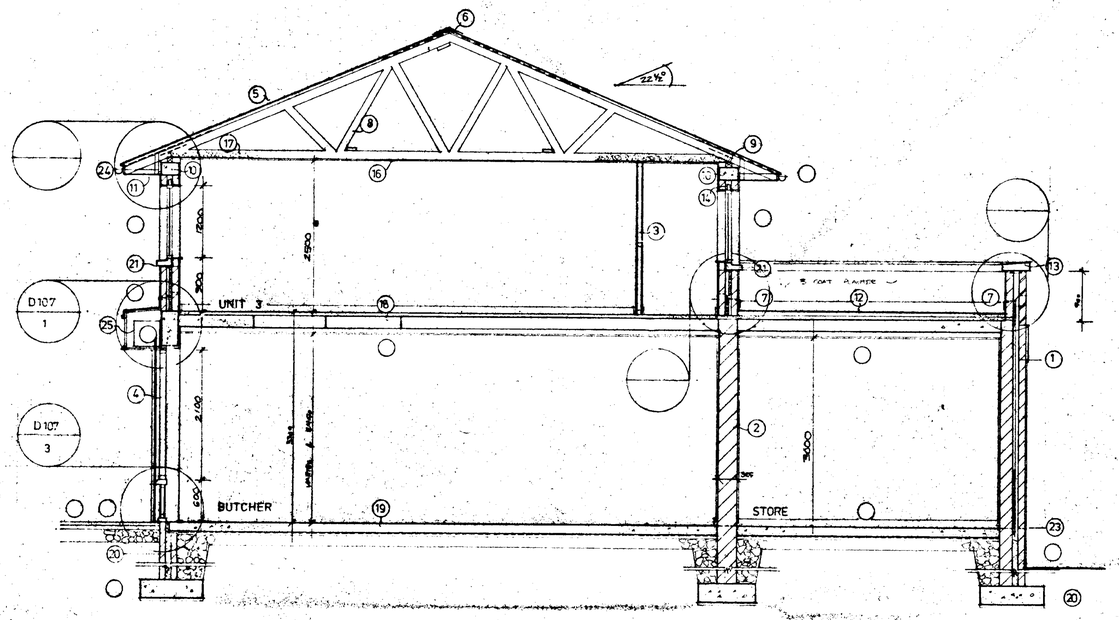


SECTION A-A

1. **WALLS:**

   425mm thick external cavity wall comprising 215mm inner leaf in solid block 100mm cavity with 50mm interlocking polystyrene insulation 100mm outer leaf in solid block or 102.5mm outer leaf in selected clay brick.

   WALL TIES:

   Wall ties shall be stainless steel and to conform to BS 1243. They shall be at 450mm centres horizontally and 750mm centres vertically. Ties to be staggered.
   Ties should be inserted within 450mm of an internal corner. Additional ties to be inserted at openings. Vertical spacing not greater than 225mm. Ties to be bedded at least 50mm in each leaf. Ensure that there are no mortar droppings on ties.

   WALL FINISHES:

   Internal:
   Gyplite undercoat 11mm thick on scratched basecoat.
   Gyplite finish coat 1.6mm thick, steel trowelled finish.

   External:
   Smooth render sand/cement in 3 coats or other approved plaster finish or selected brick as indicated. Finish plaster in Dulux exterior paint..

2. 100mm or 215mm or 325mm solid block internal walls finished in Gyplite plaster as described above.

3. 100mm stud partitions comprising 12.7mm plasterboard, taped and filled joints Gyplite finish skim on 75 x 38mm s.w. tanalised studs at 600mm c/s. All fixed to manufacturers requirements.

4. **SHOPFRONTS:**

   Hardwood stained and satin polyurethane finish screens incorporating doors, solid and glazed panels. All opening sections to be draught stripped. All glass to be laminated. Ironmongery to be selected. Hardwood panelling, mouldings boxing to shutters etc., stained and varnish finish

5. **ROOFS:**

   Selected interlocking flat concrete pantiles fixed to manufacturer's requirements on 38 x 35mm tanalised battens at centres to suit the tiles on breather type roofing felt (reinforced) to IS 36 type 1F.

6. Concrete ridge tile bedded in sand/cement and screwed down using brass screws (detail)

7. Code 5 lead upstand and cover flashings to detail. Code 5 soakers where required.

8. Timber roof trusses designed, manufactured, installed and braced in accordance with I.S. 193 1986. Trusses at 600mm c/s. Truss layouts and specification to Engineer's details.

9. 100 x 75mm tanalised wallplate fixed to concrete beam to Structural Engineer's details.

10. Reinforced concrete ring beam to Structural Engineer's details.

11. **EAVES SOFFITS:**

    Treated softwood eaves/soffit, painted finish. Top of eaves board to incorporate proprietary continous air vent unit. (manufactured by Glidevale) to give continous ventilation.

12. **FLAT ROOF:**

    Trocal flat roof membrane on all necessary underlays and vapour barriers and incorporating 50mm polyurethane insulation.
    All laid on 75mm min sand/cement screed laid to falls.
    Roof to be layed by specialist sub contractor.

13. Precast concrete coping on D.P.C. on A.C. slate support. Joints to be specially sealed (to detail).

14. Galvanised steel lintols incorporating insulation and plastering laths. Types to be approved. Min end bearing to be 150mm.

15. PC prestressed concrete lintols installed strictly to manufacturer's details. Min end bearing to be 150mm.

16. **CEILINGS:**

    12.7mm plasterboard and Gyplite finish on polythene vapour barrier all joints sealed or selected suspended ceiling system. (GROUND FLOOR ONLY)

17. 100mm fibre glass insulation. Special insulation retainer at eaves.

18. **INTERMEDIATE FLOORS:**

    75mm sand/cement screed on 200mm or 250mm PC prestressed slabs all installed to Structural Engineers details.

19. **GROUND FLOOR:**

    Reinforced powerfloated 150mm thick slab on 1000 gauge visqueen DPM on 50 sand/cement blinding on consolidated hardcore in layers all layed to Structural Engineers details.

20. **RISING WALLS/FOUNDATIONS:**

    Solid concrete block rising walls on reinforced concrete strip foundations on 50 sand/cement blinding.
    Levels of and surfaces of all footing cuttings to be approved by Structural Engineer. Concrete fill to cavity up to ground level.

21. PC cills on DPC wrapped up at back and sides and taken behind vertical DPC to jamb.

22. Vertical DPC to all cavity closures.

23. Hi Load DPC to all rising walls, min 150mm above ground level and lapped with DPM underslabs.

24. **GUTTERS AND DOWNPIPES:**

    100mm half round gutters and downpipes. (PVC)

25. **SHUTTER BOX/SHUTTER:**

    Colour coated aluminium shutters fixed to concrete beam and enclosed in timber sign box -
    Lead flashing and stepped DPC over.
    All to detail.

Revisions	date	Init
A. UPDATED. GAS. ADDED	FEB. 91	

description: SECTION

drawing no. 9002 D 105

issue:

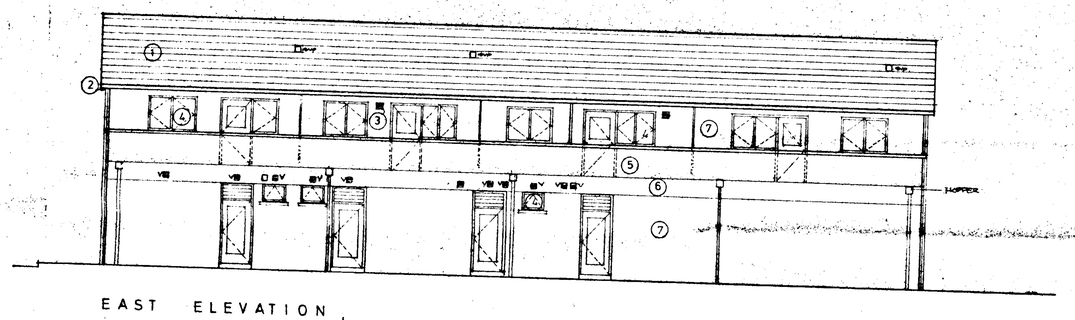
job: PROPOSED SHOPS at SCHOLARSTOWN ROAD

scale 1:50 | date JAN 91 | drawn | checked

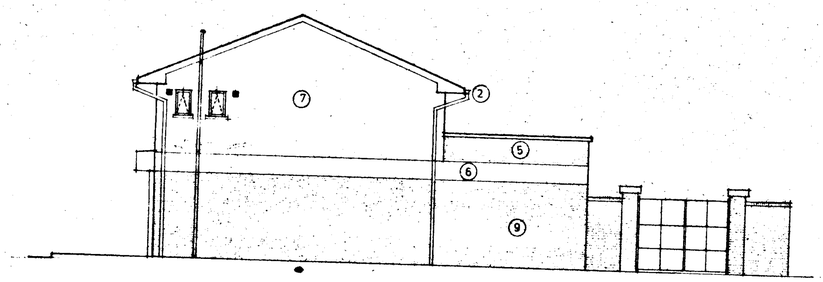
client: GANNON HOMES LTD

CONROY CROWE KELLY
ARCHITECTS
26 KINGRAM PLACE
FITZWILLIAM SQUARE
DUBLIN 2
TELEPHONE: 613990 FAX: 613391

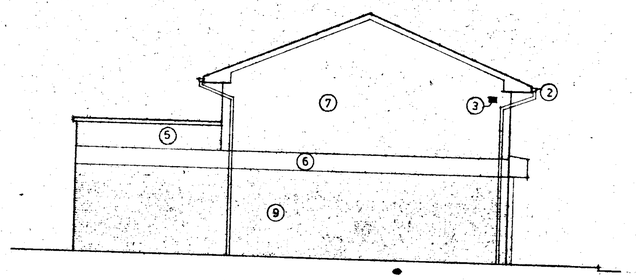
WEST ELEVATION



EAST ELEVATION



SOUTH ELEVATION



NORTH ELEVATION

ELEVATIONAL MATERIALS.

1. Selected roof tiles.
2. PVC & round gutters with round PVC down pipes.
3. 225 x 225mm vents.
4. Hardwood double glazed windows.
5. Brick faced parapet.
6. Smooth plaster band.
7. Selected plaster finish.
8. Timber shop fronts.
9. Brickwork

1. Do not scale this drawing.
2. Errors and omissions to be immediately notified to the Architect.
3. All dimensions to be checked on site.

A. MINOR ADDITIONS

Revisions | date | init

description: ELEVATIONS

drawing no: 9002 D 104

rev: A

job: PROPOSED SHOPS at SCHOLARSTOWN ROAD

scale: 1:100

date: JAN 91

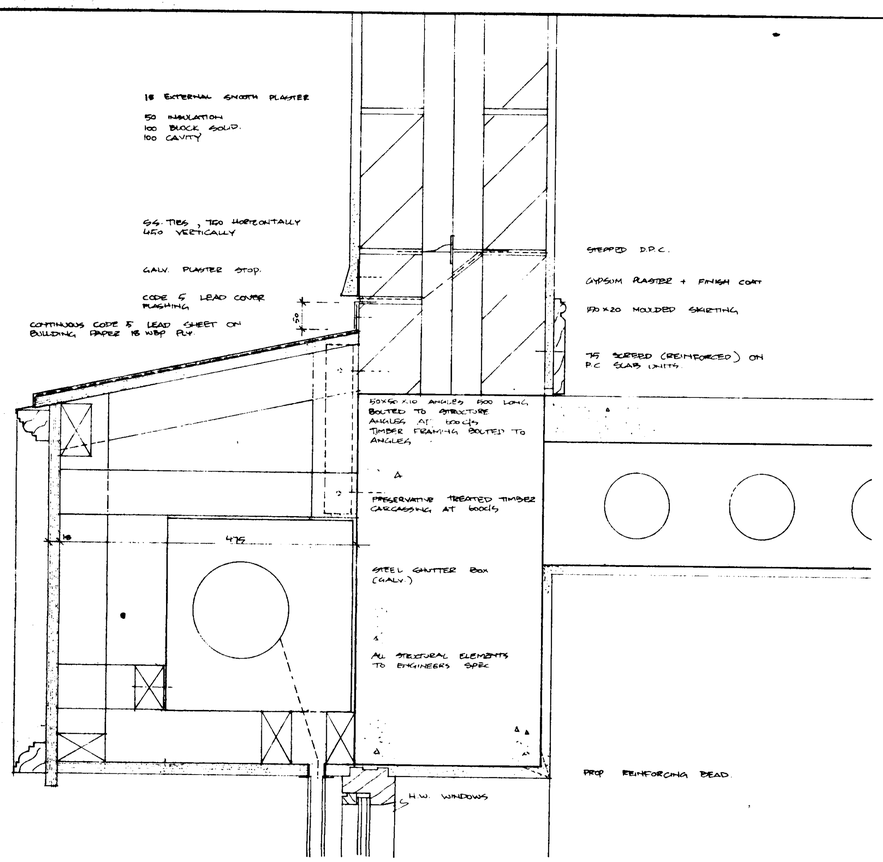
drawn:

checked:

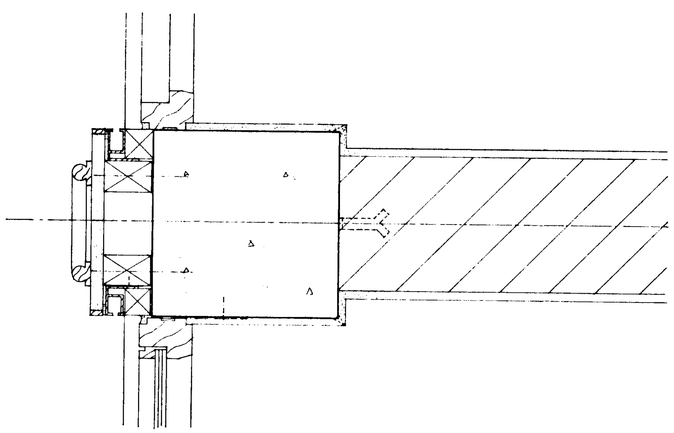
client: GANNON HOMES LTD

issue:

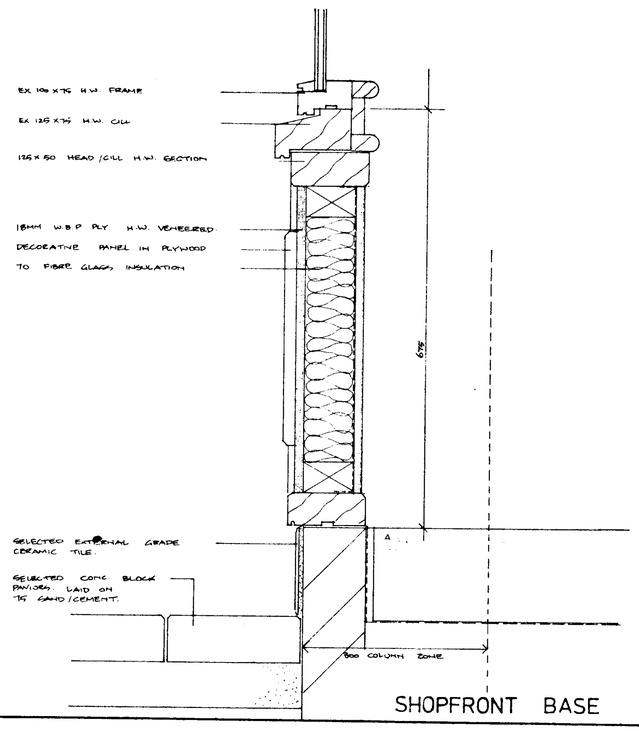
CONROY CROWE KELLY
ARCHITECTS
26 KINGRAM PLACE
FITZWILLIAM SQUARE
DUBLIN 2
TELEPHONE: 613990 FAX: 613391



DETAIL SHOP FASCIA
D107.1



DETAIL SHOP FRONT PLAN
D107.2



SHOPFRONT BASE

1. Do not scale this drawing.
2. Errors and omissions to be immediately notified to the Architect.
3. All dimensions to be checked on site.

Revisions | date | init

description: DETAILS

drawing no.: 9002 D107

rev.:

job: Shops and offices at Scholarstown Road

scale: 1 5

date: MAR 9

drawn:

checked:

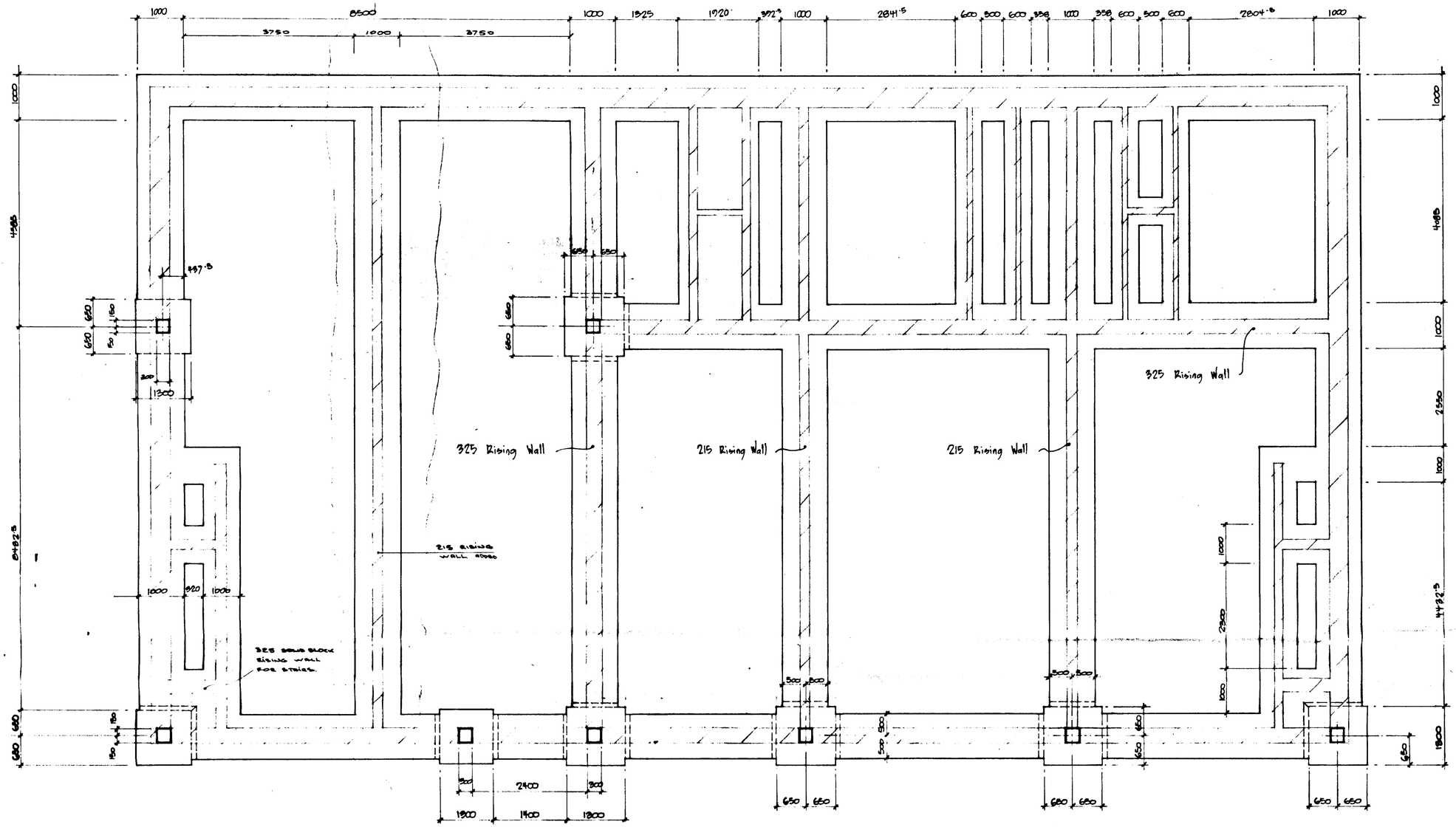
client: Gannon Homes Ltd

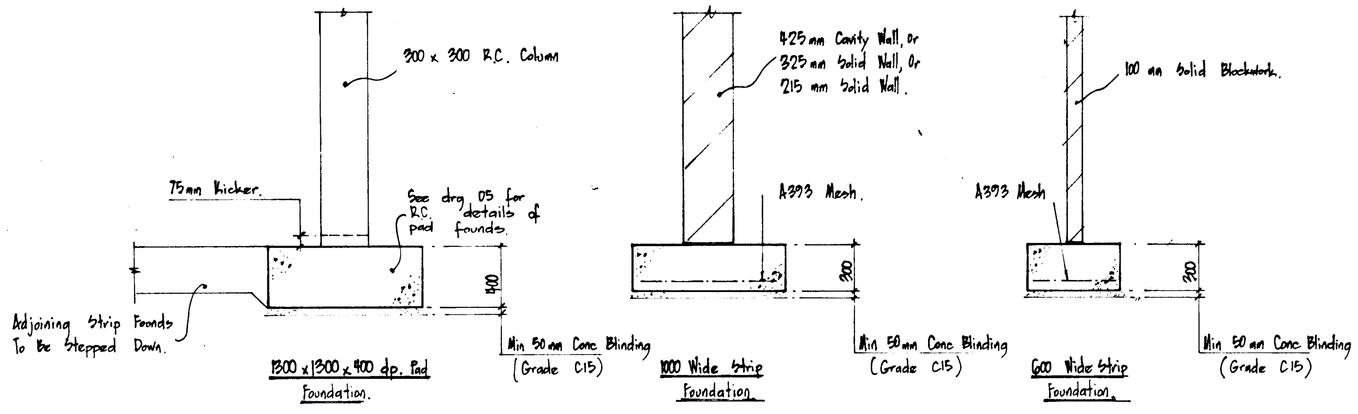
issue:

CONROY CROWE KELLY
ARCHITECTS
26 KINGRAM PLACE
FITZWILLIAM SQUARE
DUBLIN 2
TELEPHONE: 613990 FAX: 613391

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. Formation level of foundations to be agreed on site with the Engineer prior to placing of blinding or reinforcement.
4. Concrete to be grade C30.





TYPICAL FOUNDATION DETAILS

DUBLIN COUNTY COUNCIL
PLANNING UNIT REGISTRY SECTION
APPLICATION RECEIVED
11 APR 1991
REG No. 91A/0236
APPLICATION TYPE O/P/A/BR.
M.L.G.S.

REV.	DATE	AMENDMENT	DRN	CHK
C	-3-91	215 Rising wall added Issued For Tender	AC	
B	28.2.91	Col. altered, Stair Wall Added.	JB.	
A	7.2.91	Amended To Suit Archs Requirements	JB.	

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

CLIENT Gannon Homes Ltd.
ARCHITECT Conroy Crowe Kelly.
PROJECT Proposed Shop Units At Scholarstown Road.
TITLE Foundations General Arrangement.

SCALE		JOB NO	DRG NO
1:50		E223	01.
DRWN. F. Buckley	CHECKED	DATE Feb '91	REVISION C

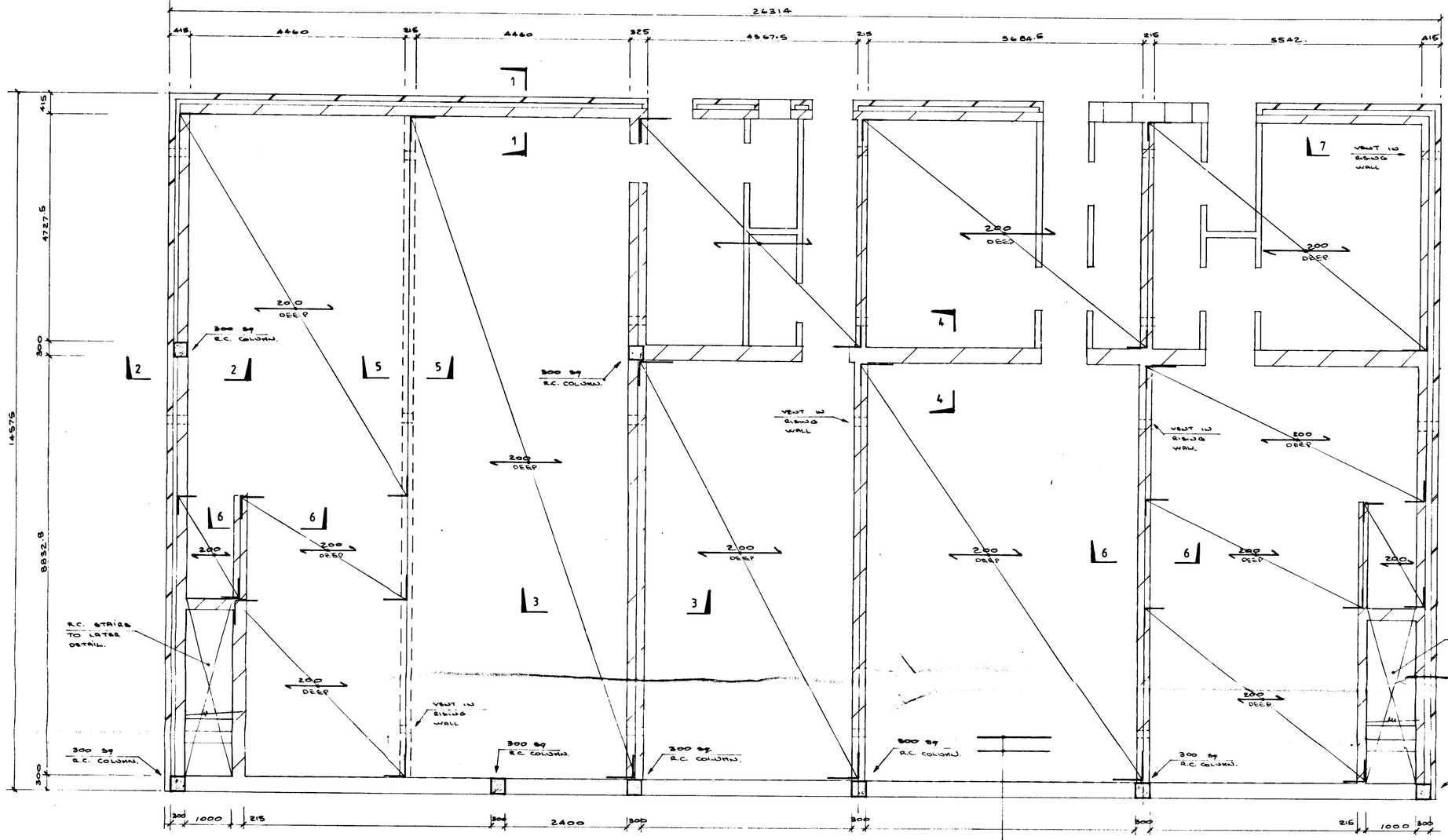
JDH 13897

JDH 14781

NOTES

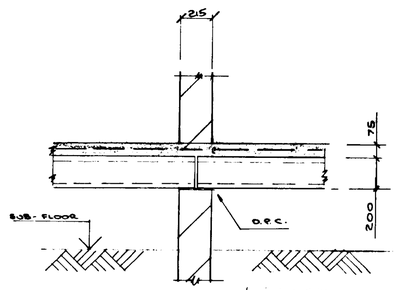
1. Do not scale. Use figured dimensions only.
2. This drawing to be read in conjunction with all other relevant architectural and engineering drawings.
3. ALL D.P.C. TO ARCHITECTS DETAIL.
4. FOR FINISHES ETC. REFER TO ARCHITECTS DRAWINGS
5. BLOCKWORK TO BE 5N/mm² STRENGTH UP TO GROUND FLOOR, 5N/mm² ELSEWHERE
6. CONCRETE TO BE GRADE 30N/20

NOTE :-
FOR SUB-FLOOR DRAINAGE DETAILS REFER TO DRG Nº E-223/06

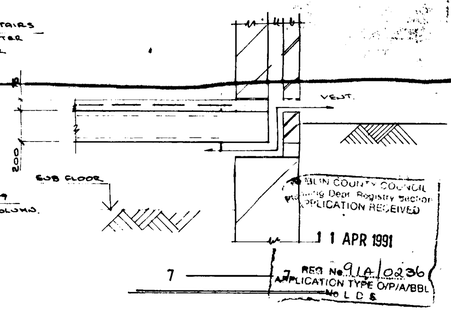


GROUND FLOOR PLAN

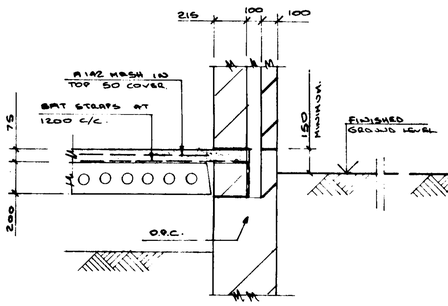
NOTE :-
2 NO T12 ON BARS TO BE CONTINUOUS ALONG PERIMETER OF SLAB. MINIMUM LAPS TO BE 600 mm.



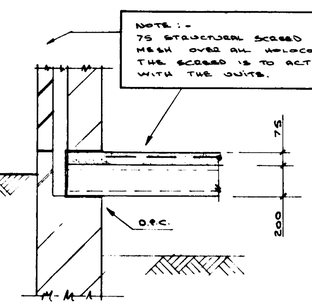
6 —— 6



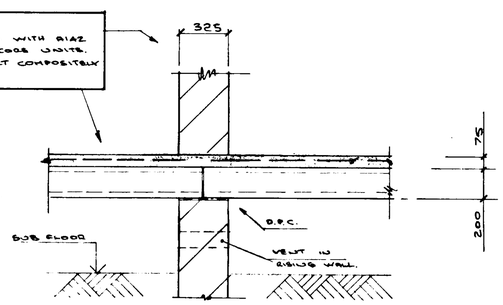
7 ——



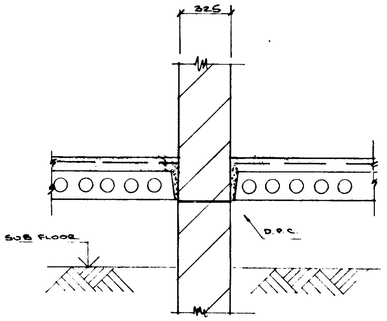
1 —— 1



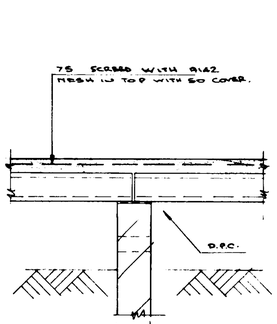
2 —— 2



3 —— 3



4 —— 4



5 —— 5

NOTE
ALL TOP SOIL AND VEGETABLE MATTER TO BE REMOVED OVER THE ENTIRE AREA OF THE SUB-FLOOR.

NOTE SUB FLOOR VOID TO BE GREATER THAN 75 mm

REV.	DATE	AMENDMENT	DRN	CHK
C	26·3·91	Section 7 - 7 Amended Note on subfloor drainage altered	AC	
B	15·3·91	Note on sub floor drainage added	AC	
A	8·3·91	Redrawn.	AC	

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

CLIENT	GANNON HOMES LTD
ARCHITECT	CONROY CROWE KELLY
PROJECT	PROPOSED SHOP UNITS AT SCHOLARSTOWN ROAD
TITLE	GROUND FLOOR SLAB GENERAL ARRANGEMENT DETAILS

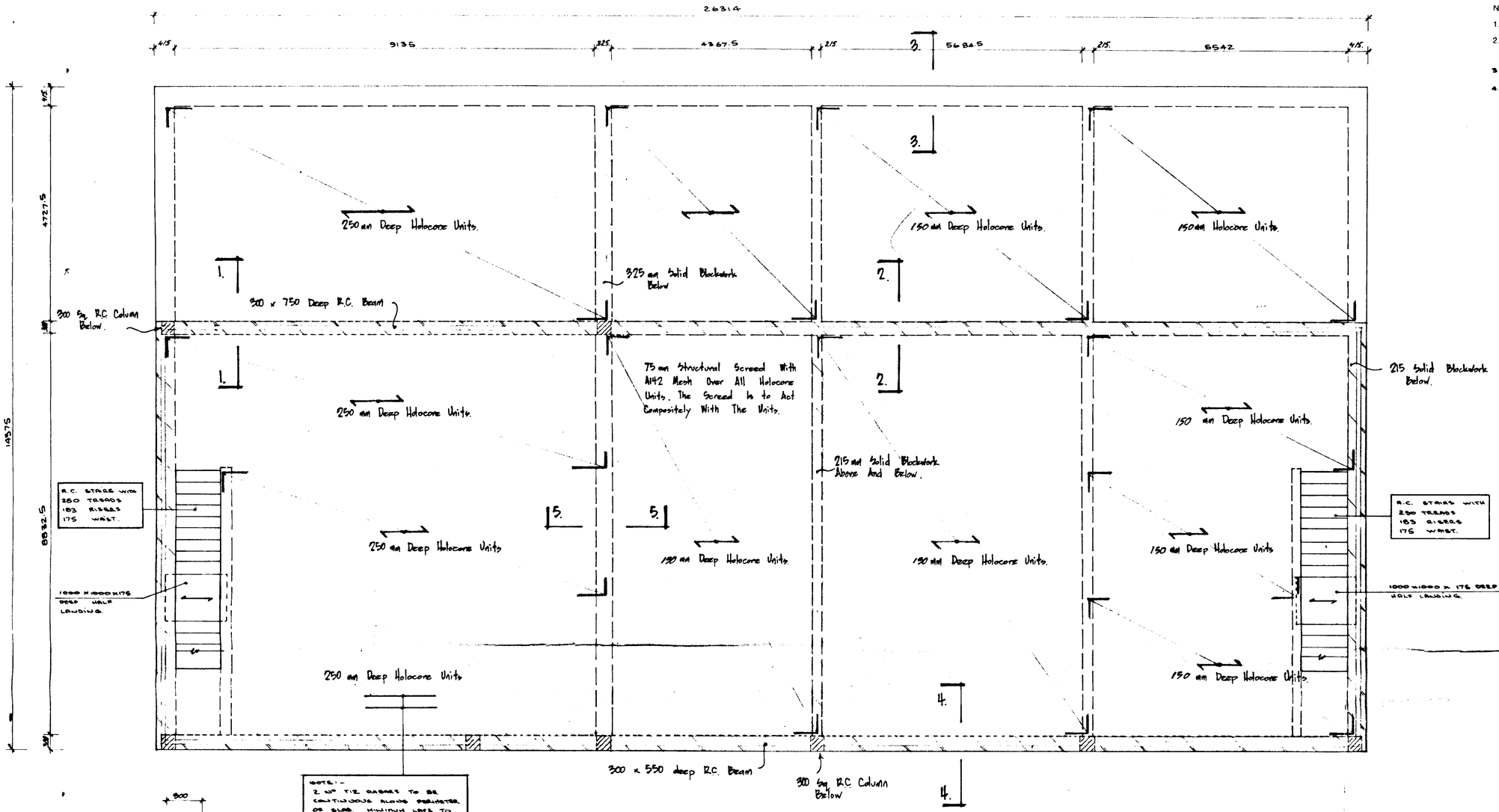
SCALE	JOB NO.	DRG. NO.
1:50 1:20	E-223	02
DRWN. Aidan Connolly / CHECKED	DATE MARCH '91	REVISION C

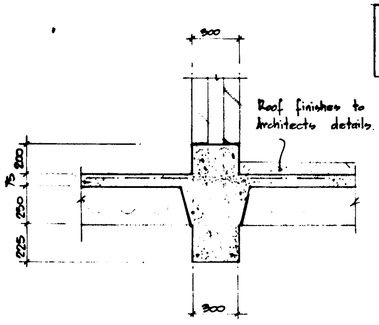
JDH 13997

JDH 14781

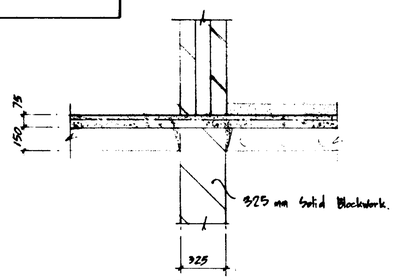
NOTES

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 30 N/20.
4. FOR GENERAL NOTES REFER TO DRG Nº E-223/02.

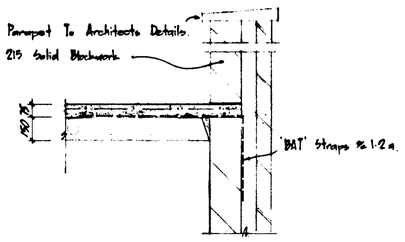




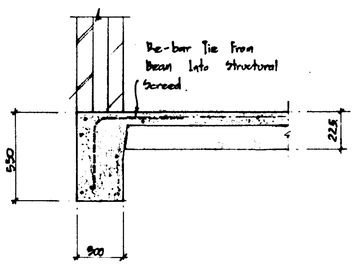
SECTION 1-1



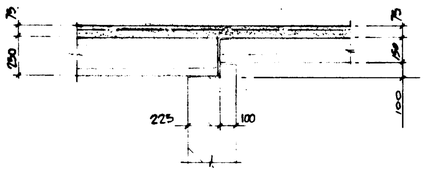
SECTION 2-2



SECTION 3-3



SECTION 4-4



SECTION 5-5

REINFORCEMENT ESTIMATE:

COLUMNS	150 kg/m³
R.C. BEAMS	250 kg/m³
R.C. STAIRS	150 kg/m³
ROOF SLAB BEAM.	125 kg/m³

REV.	DATE	AMENDMENT	DRN	CHK
A	8-3-91	General Revisions Issued For Tender	AC	

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

CLIENT Gannon Homes Ltd.

ARCHITECT Conroy Crowe Kelly.

PROJECT
Proposed Shop Units At Scholarstown Road.

TITLE
First Floor Slab General Arrangement.

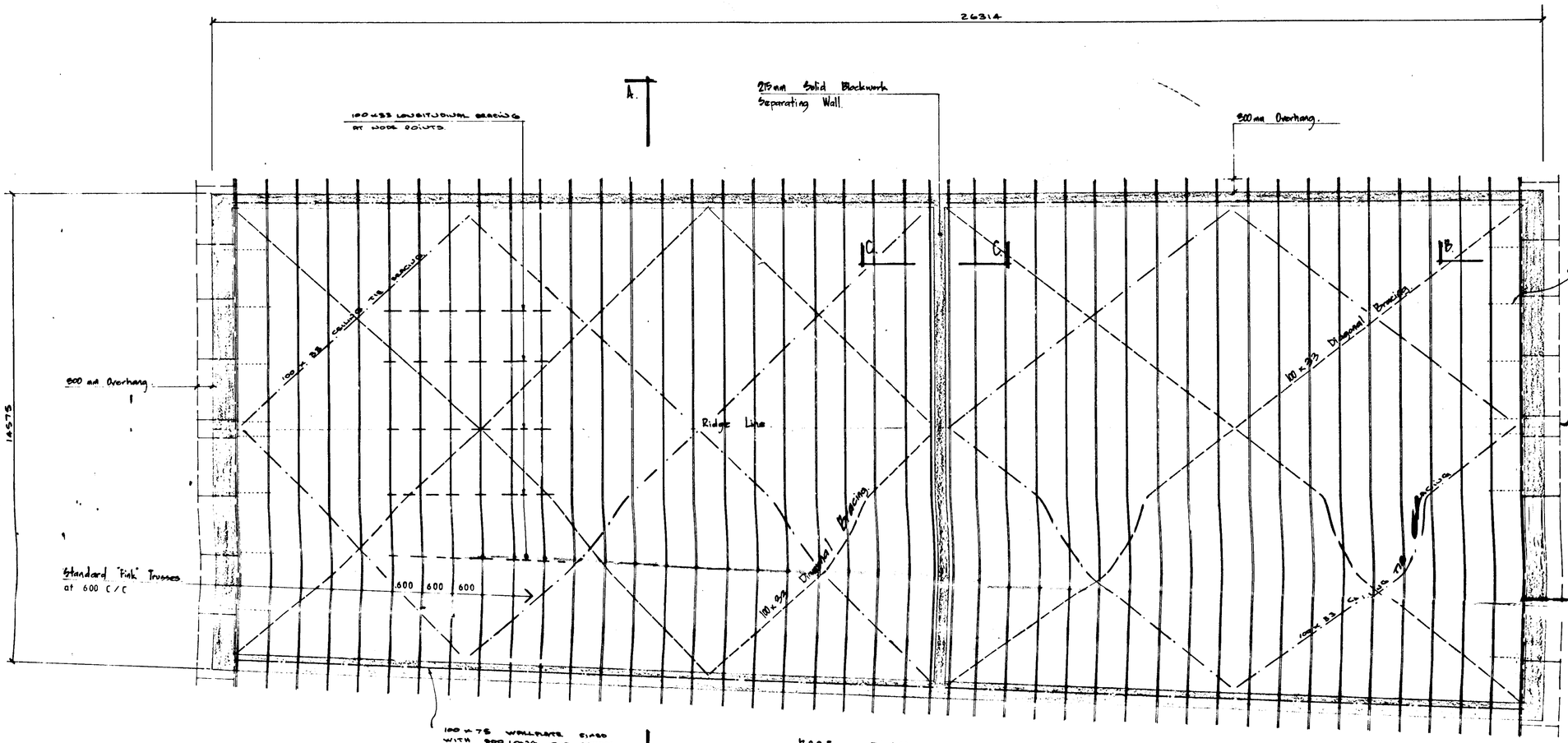
SCALE		JOB NO.	DRG. NO.
1:50	1:20	E223	03
DRWN. P. Buckley	CHECKED	DATE Feb '91	REVISION A

JDH 13897

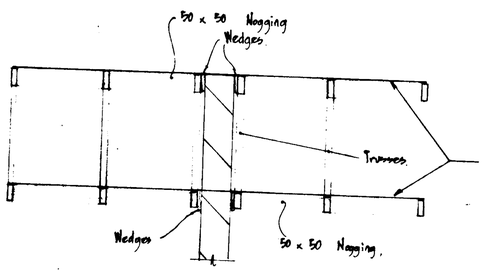
JDH 14781

NOTES

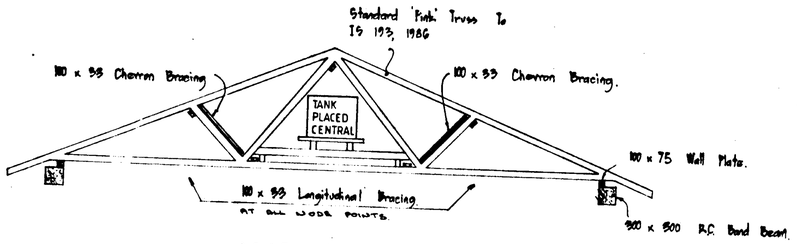
1. Do not scale. Use figured dimensions only.
2. This drawing to be read in conjunction with all other relevant architectural and engineering drawings.



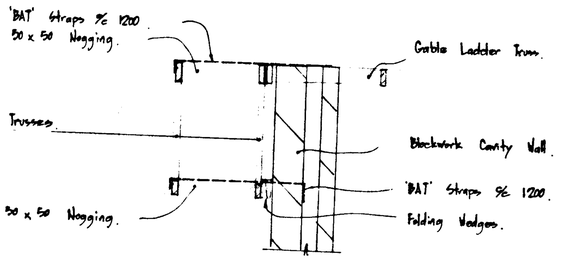
ROOF PLAN



SECTION C — C



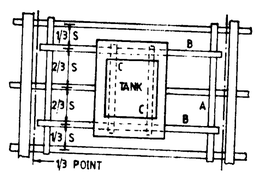
SECTION A — A



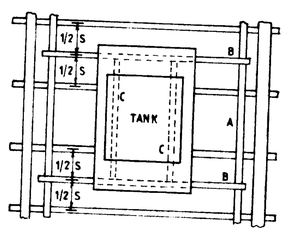
SECTION B — B

Tank Capacity	Minimum Member Size		
	A	B	C
DETAIL A 600 Litres Over 4 No Trusses	44 x 150	2/44 x 150	44 x 150
DETAIL B Not more than 230 Litres on 3 Trusses	47 x 72	2/35 x 97 or 1/47 x 120	47 x 72
NOTE Timber to be Strength Class C To SR11 1988			

TANK SUPPORTS TABLE.



DETAIL B



DETAIL A

Notes On Roof Bracing:

1. The ends of all longitudinal bracing members shall be in direct contact with the gable or separating walls.
2. The lower ends of the diagonal bracing members shall abut the end walls as closely as possible to the intersection between the end wall and the wallplate.
3. No bracing shall cross the separating/fire wall.
4. All bracing fixings shall consist of 2 No 3.35 mm ø x 75 mm long galvanised round wire nails.
5. Where a brace has to be lapped in its length, the lap shall cover two truss members.

REV.	DATE	AMENDMENT	DRN	CHK
A	8-3-91	Issued For Tender	AC	

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

CLIENT Gannon Homes Ltd.

ARCHITECT Conroy Crowe Kelly.

PROJECT
Proposed Shop Units At Scholarstown Road.

TITLE
Roof Level General Arrangement.

SCALE	JOB NO.	DRG NO.
1:50 1:20	E223	04.
DRWN. P. Buckley / CHECKED / DATE Feb '91		REVISION A

JDH 12997

JDH 14781

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. All levels are in metres rejated to Malin Head OD
4. Legend

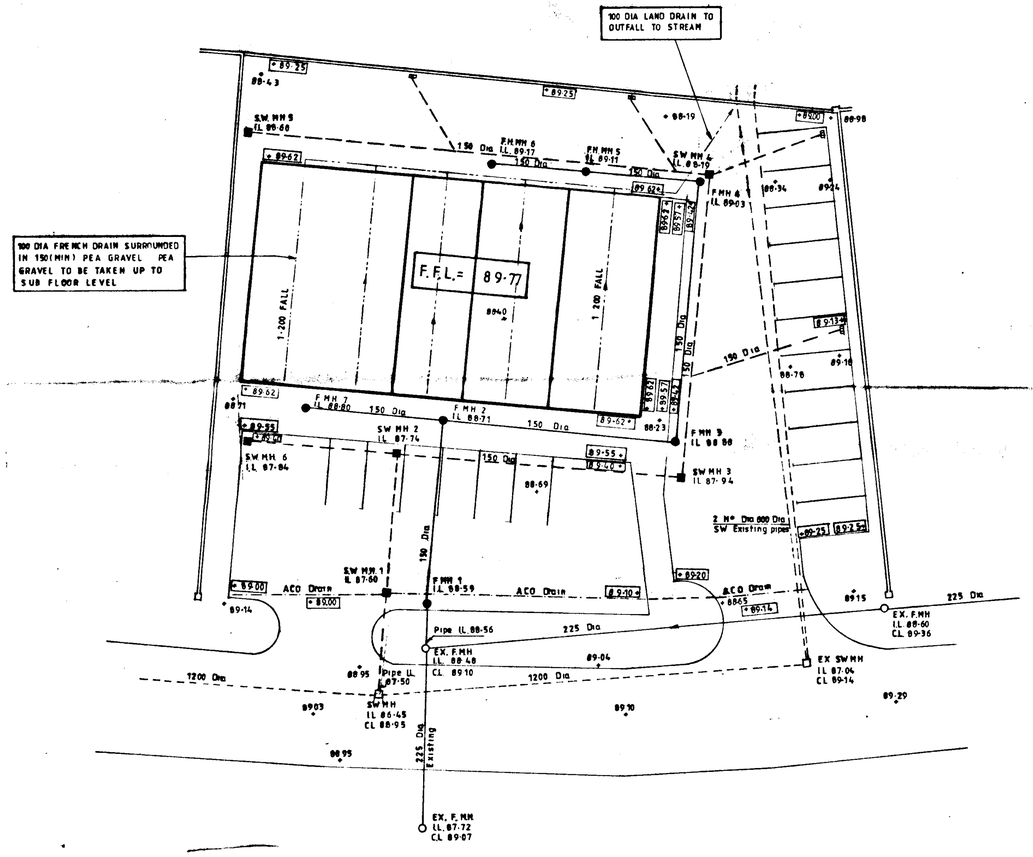
+ 88·34	Denotes existing ground level
+ 89·62	Denotes proposed ground level
	Denotes surface water drain - spigot and socket concrete pipe on 150mm concrete bed and surround.
	Denotes proposed foul dram – U P V C pipes on 150 concrete bed and surround
	Denotes existing surface water dram
	Denotes existing foul drain

5 Flexible paving

40mm of marshall asphalt to B S 594 on 50mm of 20mm dense bitumen macadam to clause 903 of DOE specification on 150 mm of crushed stone graded in accordance with Clause 804 of DOE specification on 225 mm of 100mm crushed stone

6 Brick Paviors

Selected interlocking paviors on 40mm compacted sand base on 150mm deep compacted layer of crushed stone graded in accordance with Clause 804 of DOE specification



REV.	DATE	AMENDMENT	DRN	CHK
B	26 3 91	Sub floor drainage details added Invert level to SW MH 2 added	A C	
A	15-3-91	Drainage updated		

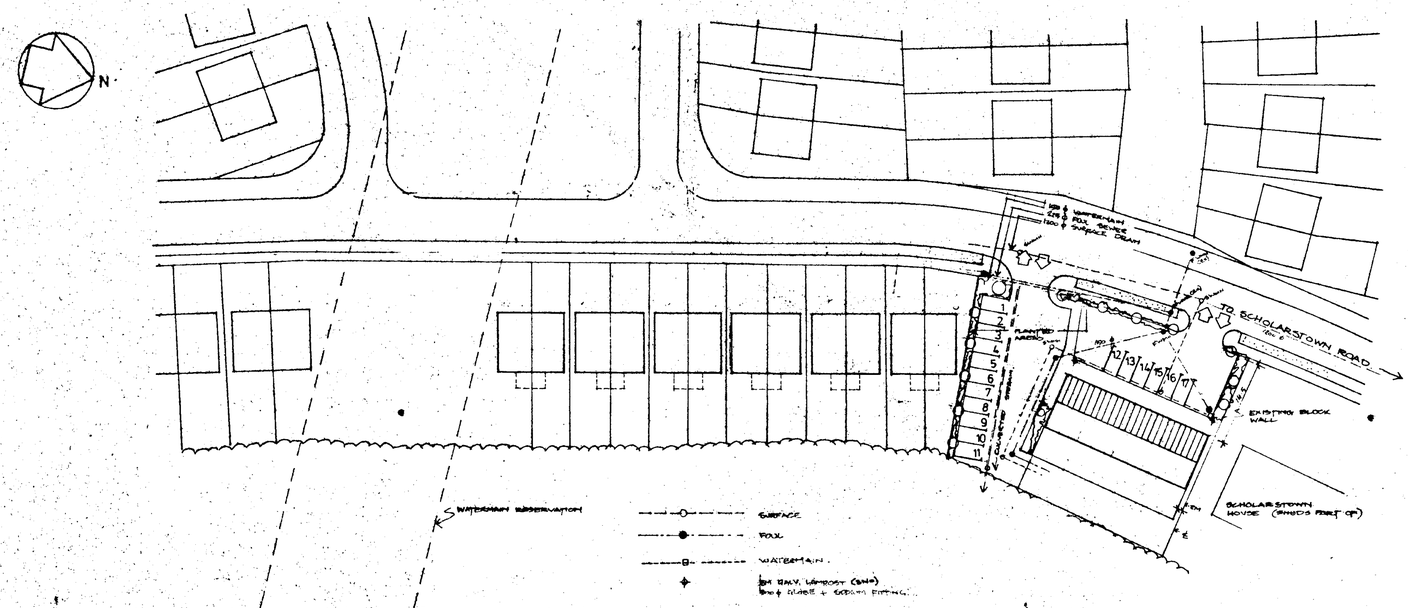
JOHN MOYLAN & ASSOCIATES
CONSULTING ENGINEERS,
79, MERRION SQUARE, DUBLIN 2
TEL. NO. 615337/612475. FAX NO. 610255

CLIENT Gannon Homes Ltd.
ARCHITECT Conroy Crowe Kelly.
PROJECT Proposed Shop Units At Scholarstown Road.
TITLE EXTERNAL WORKS

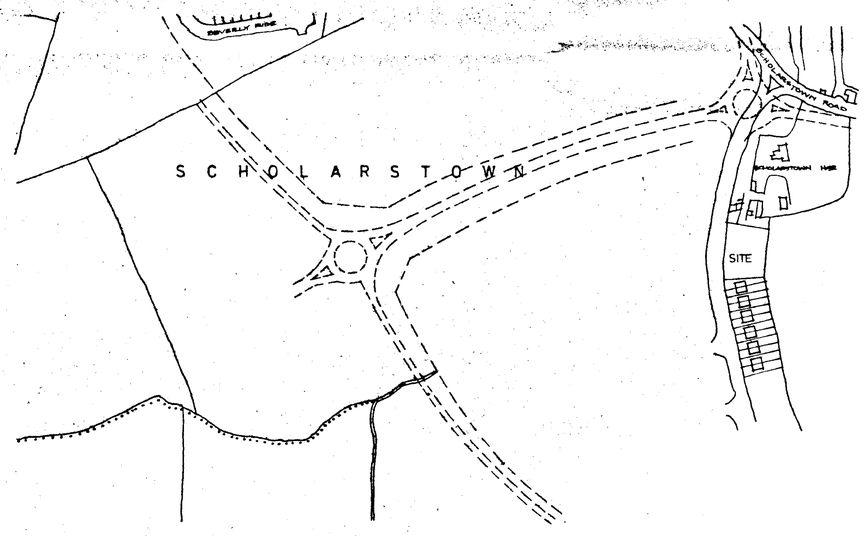
SCALE	JOB NO.	DRG. NO.
1: 200	E223	06
DRWN. P. Buckley. / CHECKED	DATE Feb '91.	REVISION B

JDH 13997

JDH 14781



SITE LAYOUT PLAN Scale 1:500



SITE LOCATION PLAN Scale 1:2500
O.S. Map Dublin 9, 10, 13 & 14.

1. Do not scale this drawing.
2. Errors and omissions to be immediately notified to the Architect.
3. All dimensions to be checked on site.

DUBLIN COUNTY COUNCIL
Planning Dept. Registry Section
APPLICATION RECEIVED
11 APR 1991
REG No 91A/0230
APPLICATION TYPE O/P/A/BBL
L.D.S.

Revisions	date	ins
B DRAINAGE LAYOUT REVISED	4/5/91	DK
A BUILDING REVISED	Jan/91	LD.

description
SITE LAYOUT PLAN and SITE LOCATION PLAN

drawing no 9002 D 100

rev B

job
Neighbourhood Centre at Scholarstown Road

scale As shown
date Jan 91
drawn
checked

client
GANNON HOMES LTD

issue

CONROY CROWE KELLY
ARCHITECTS
26 KINGRAM PLACE
FITZWILLIAM SQUARE
DUBLIN 2
TELEPHONE: 613990 FAX: 613391

1. WALLS:

425mm thick external cavity wall comprising 215mm inner leaf in solid block 100mm cavity with 50mm interlocking polystyrene insulation 100mm outer leaf in solid block or 102.5mm outer leaf in selected clay brick.

WALL TIES:

Wall ties shall be stainless steel and to conform to BS 1243. They shall be at 450mm centres horizontally and 750mm centres vertically. Ties to be staggered.
Ties should be inserted within 450mm of an internal corner. Additional ties to be inserted at openings.
Vertical spacing not greater than 225mm. Ties to be bdded at least 50mm in each leaf. Ensure that there are no mortar droppings on ties.

WALL FINISHES:

Internal:
Gyplite undercoat 11mm thick on scratched basecoat
Gyplite finish coat 1.6mm thick, steel trowelled finish.

External:
Smooth render sand/cement in 3 coats or other approved plaster finish or selected brick as indicated. Finish plaster in Dulux exterior paint.

2. 100mm or 215mm or 325mm solid block internal walls finished in Gyplite plaster as described above.

3. 100mm stud partitions comprising 12.7mm plasterboard, taped and filled joints Gyplite finish skim on 75 x 38mm s.w. tanalised studs at 600mm c/s. All fixed to manufacturers requirements.

4. Doors:
30/30 BS 476 part 8 tested ½ hour fire door. To specification.
60/60 BS 476 part 8 tested 1 hour fire door. To specificatiorn.
otherwise
flush panel solid core door.

5. SHOPFRONTS:

Hardwood stained and satin polyurethane finish screens incorporating doors, solid and glazed panels. All opening sections to be draught stripped.
All glass to be laminated.
Ironmongery to be selected.
Hardwood panelling, mouldings boxing to shutters etc., stained and varnish finish.

6. STAIRS:

Reinforced concrete stairs comprising 18 risers at 183.33 each
250mm goings with
25mm overhung nosings.
Painted m.s. 50mm diameter tubular handrail.
Finish to stairs to be selected anti slip ceramic tiles with special nosing units.

7. Ventilated lobbies and w.c.'s with 225mm glavanised steel vent. or PERMANENT VENT

8. 100mm extract duct and axial fan wire to light switch and delay mechanism to comply with proposed building regulations section L8 to give 3 air changes / hour.

9. DRAINAGE:

To comply with Dublin County Council, Pye-laws, uPVC installation of pipes AJs gulley traps etc. in Marley or Terrain. Sizes of pipes to be as indicated on the drawings. The drains are to be layed on selected granular material or encased in concrete 150mm thich where under floor slab or roadways, 100mm drains shall be layed at falls not less than 1:60 or as indicated on the drawings SVP's shall be terminated at roof level using a patent vent by Glidvale (Necoflex).
The drainage system shall comply with the following:
BS 4514, 5254, 5255, 5572. 5955 (All latest editions).
Where 100mm stacks penetrate 1st floor slabs and other fire protected structure approved intumescent collars are to be provided.

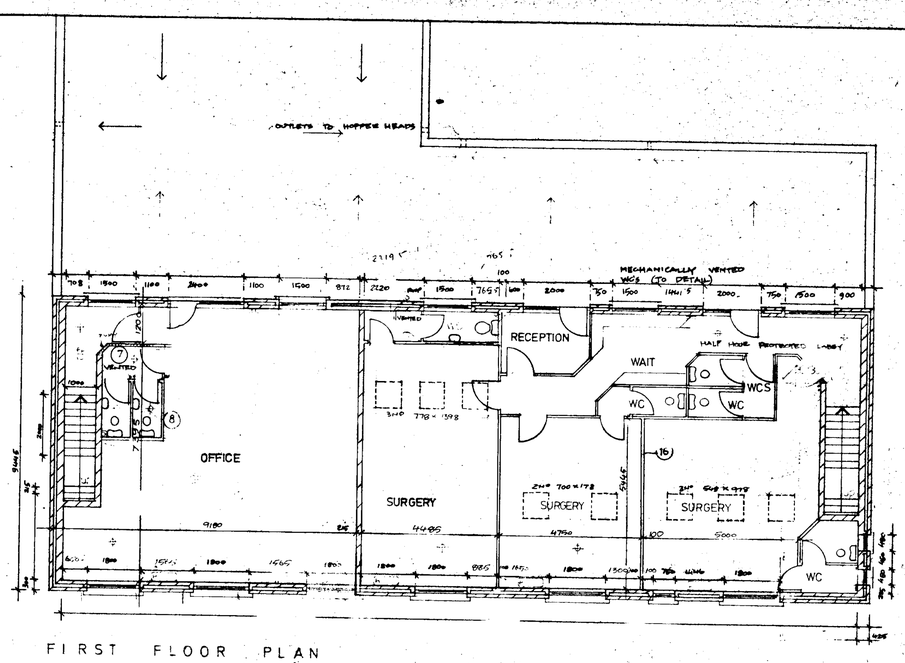
MANHOLES:

To be to Structural Engineer's drawings and specification

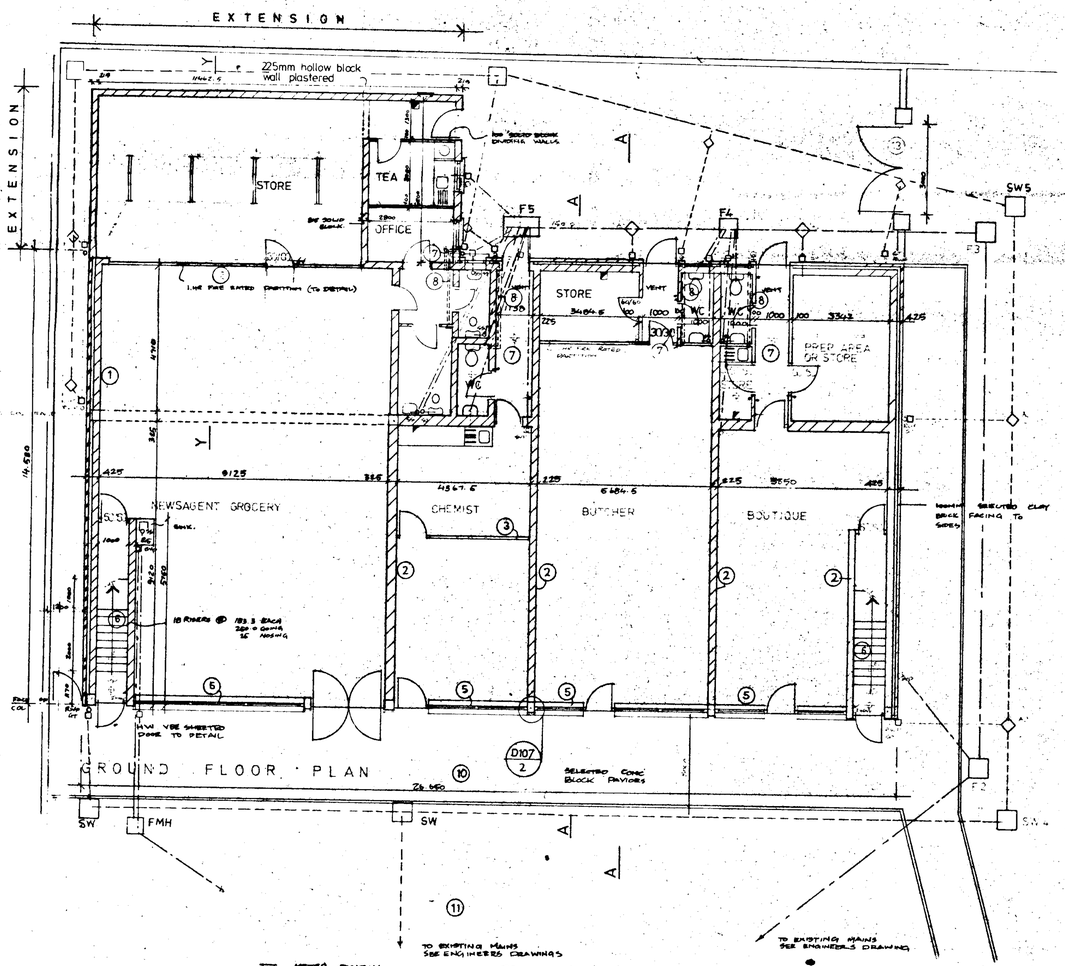
10. Selected concrete block paviors, layed to falls and in herringbone pattern laid on 50mm sand/cement and to manufacturers details. Special kerb pavior.

11. Tarmac to carparking bays and roads to Engineer's requirements.

12. Selected planting in beds with concrete kerb,pavior surrounds.



FIRST FLOOR PLAN



GROUND FLOOR PLAN

LEGEND

- METER POSITION
- 600 LONG TWIN FLUORESCENT LIGHT
- LIGHTING POINT
- BA TWIN SOCKET
- BLOB POSITION
- 3 GAL UNDER SINK WATER HEATER
- WALL MOUNTED LIGHT
- SWITCH
- STORAGE HEATER
- DHR NON MAINTAINED EMERGENCY LIGHT
- BREAK GLASS UNIT
- SMOKE DETECTOR
- ALARM BELL

13. Galvanised steel gates painted (to detail)
215mm brick wall 2.4 metres high, capped with brick on edge on D.P.C. 450mm piers in brick enclosing 100 x 100mm steel post (galvanised) set in concrete base
600 x 600 x 1000mm deep. All to detail.

14. ELECTRICAL INSTALLATION:

The installation is to be in accordance with the following:

The National Rules for Electrical Installation issued by the ETCI.

IEE regulations (latest edition)

All relevant Irish and British Standards and Codes.

The requirements of the ESB.

FIRE ALARM:

A fire alarm is to installed to comply with IS 3217 1990. The arrangement and design of this is to be to later detail.

Emergency lighting:

An emergency lighting system is to be installed to comply with IS 3217 1989. The arrangement and design of this is to be to later detail.

Heating system:

To be a system of storeage heaters and fan assisted convectors See electrical layout.

15. PLUMBING SYSTEM:

Provide cold water storage tanks in attic to comply with Dublin County Council requirements. Provide cold supply to each unit to feed instantaneous water heater. Provide drinking water supply to each unit. Insulate all pipes with 25mm armaflex. Insulate cold water tanks with 100mm fibre glass. Cover all tanks. Refer to plumbing layout. Refer to detailed specification.

SOME PROPOSED PARTITION
- 1 RATHEN 2 STUD 1 BOARD 3 LAYS EACH SIDE
- 2 RATHEN 2 STUD 2 BOARD 3 LAYS EACH SIDE
- 3 RATHEN ACOUSTIC SEALANT DETAIL TO SLAB
- 4 EACH FACE OF PARTITION PLASTER TO BOARD
- 5 SKIRTING BOARD SLAB TO WALL

DECORATION
EXTERNAL JOINERY 3 COAT LINSEED WEATHERSHIELD
INTERNAL JOINERY PRIMED
WALLS PLASTER 2 COAT EMULSION
DOORS - WINDOWS 3 COAT GARNISH + LIGHT GARNISH CLEAR FINISH
INTERNAL JOINERY PRIMED
DOORS FOR STAINING ARCHITRAVES ETC
2 COAT WORK WITH CUT IN SATIN
EXTERNAL WORK 2 COATS
2 COAT WORK WITH PAINT TO MANUFACTURERS
GATES
PRIMER
2 COAT + FINISH COAT GLOSS

IRONMONGERY
REAR DOORS
5 LEVER CHUBB LOCKS
ALUMINIUM PULL HANDLE (225 x 25)
3 PR BUTT HINGES LEAF

INTERNAL DOORS
ALUMINIUM LEVER HANDLES (ROSE - PAIR
ESCUTCHEONS - PAIR
3 LEVER UNION LOCK
3 PR BUTT HINGES
BOTTOM 200 ROSE LOCKER (CAKE DOORS ONLY)

FRONT DOORS
300 BRASS PULL HANDLES ROSE LONG
BOLT FIXED - PAIR DOOR
LOCKS 5 LEVER - ESCUTCHEONS
BOTTOM 200 DOOR LOCKER
BRASS LETTERS
3 PR BUTT HINGES LEAF

1. Do not scale this drawing.
2. Errors and omissions to be immediately notified to the Architect
3. All dimensions to be checked on site

Revisions	date	inits
1. LINTOLS GETTING OUT INCREASED FIRST FLOOR LAYOUT ALTERED	25/6/91	
2. LAYOUT TO BUTCHER UNIT ALTERED	2/5/91	
3. STORE LAYOUT ALTERED	22/4/91	

description
PLAN
Ground & First Floors
Indicating proposed extension

DUBLIN COUNTY COUNCIL Planning Dept. Register Section APPLICATION RECEIVED
24 JUL 1991
REG. 91/283 + 915

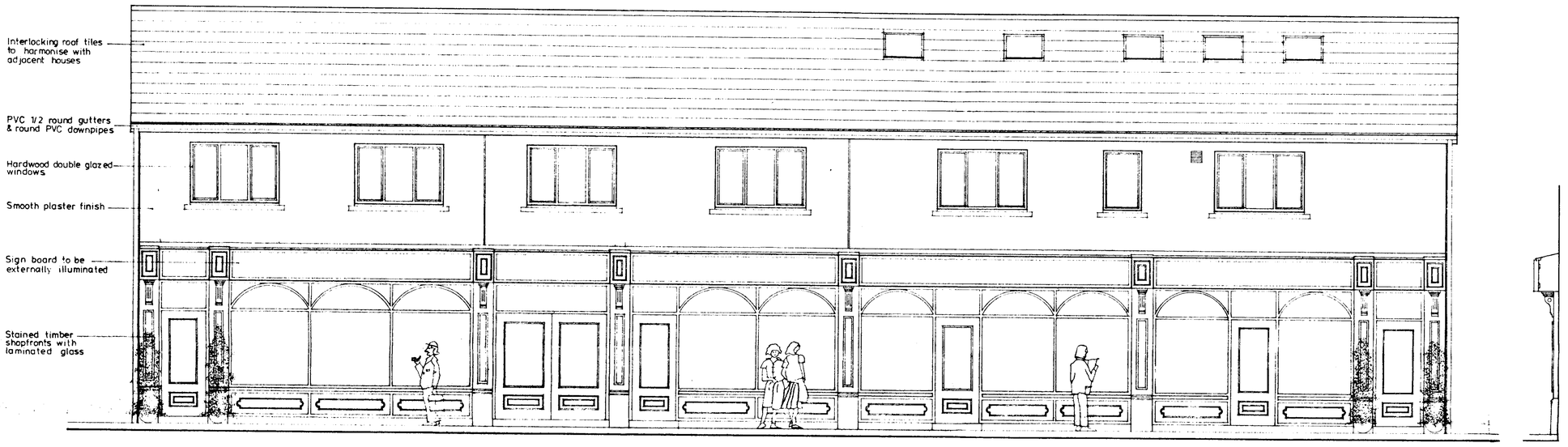
drawing no. 9002 D 110
rev. D
scale
date
drawn
checked

PROPOSED SHOPS at SCHOLARSTOWN ROAD

client
GANNON HOMES LTD

issue

CONROY CROWE KELLY
ARCHITECTS
26 KINGRAM PLACE
FITZWILLIAM SQUARE
DUBLIN 2
TELEPHONE: 613990 FAX: 613391



FRONT ELEVATION

SECTION

1. Do not scale this drawing.
2. Errors and omissions to be immediately notified to the Architect.
3. All dimensions to be checked on site.

Revisions | date | inls

description
ELEVATION
Front

drawing no
9002 D112

revn

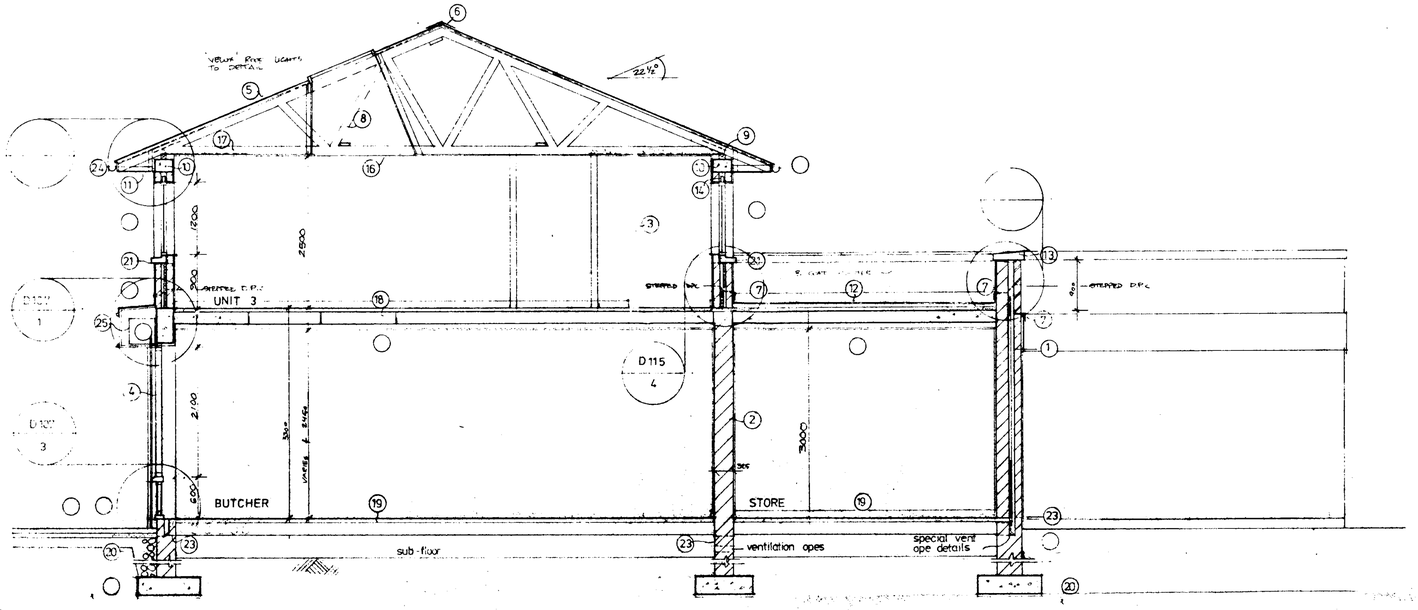
job
PROPOSED SHOPS at SCHOLARSTOWN ROAD

scale 1:50
date APR 91
drawn
checked

client
GANNON HOMES LTD

issue

CONROY CROWE KELLY
ARCHITECTS
26 KINGRAM PLACE
FITZWILLIAM SQUARE
DUBLIN 2
TELEPHONE: 613990 FAX: 613391



SECTION A-A

1. **WALLS:**

425mm thick external cavity wall comprising 215mm inner leaf in solid block 100mm cavity with 50mm interlocking polystyrene insulation 100mm outer leaf in solid block or 102.5mm outer leaf in selected clay brick.

WALL TIES:

Wall ties shall be stainless steel and to conform to BS 1243. They shall be at 450mm centres horizontally and 750mm centres vertically. Ties to be staggered.
Ties should be inserted within 450mm of an internal corner. Additional ties to be inserted at openings. Vertical spacing not greater than 225mm. Ties to be bedded at least 50mm in each leaf. ensure that there are no mortar droppings on ties.

WALL FINISHES:

Internal:
Gyplite undercoat 11mm thick on scratched basecoat.
Gyplite finish coat 1.6mm thick, steel trowelled finish.

External:
Smooth render sand/cement in 3 coats or other approved plaster finish or selected brick as indicated. Finish plaster in Dulux exterior paint..

2. 100mm or 215mm or 325mm solid block internal walls finished in Gyplite plaster as described above.

3. 100mm stud partitions comprising 12.7mm plasterboard, taped and filled joints Gyplite finish skim on 75 x 38mm s.w. tanalised studs at 600mm c/s. All fixed to manufacturers requirements.

4. **SHOPFRONTS:**

Hardwood stained and satin polyurethane finish screens incorporating doors, solid and glazed panels. All opening sections to be draught stripped. All glass to be laminated. Ironmongery to be selected. Hardwood panelling, mouldings boxing to shutters etc., stained and varnish finish

5. **ROOFS:**

Selected interlocking flat concrete pantiles fixed to manufacturer's requirements on 38 x 38mm tanalised battens at centres to suit the tiles on breather type roofing felt (reinforced) to IS 36 type 1F.

6. Concrete ridge tile bedded in sand/cement and screwed down using brass screws (detail)

7. Code 5 lead upstand and cover flashings to detail. Code 5 soakers where required.

8. Timber roof trusses designed, manufactured, installed and braced in accordance with I.S. 193 1986. Trusses at 600mm c/s. Truss layouts and specification to Engineer's details.

9. 100 x 75mm tanalised wallplate fixed to concrete beam to Structural Engineer's details.

10. Reinforced concrete ring beam to Structural Engineer's details.

11. **EAVES SOFFITS:**

Treated softwood eaves/soffit, painted finish. Top of eaves board to incorporate proprietary continous air vent unit. (manufactured by Glidevale) to give continous ventilation.

12. **FLAT ROOF:**

Trocal flat roof membrane on all necessary underlays and vapour barriers and incorporating 50mm polyurethane insulation.
All laid on 75mm min sand/cement screed laid to falls.
Roof to be layed by specialist sub contractor.

13. Precast concrete coping on D.P.C. on A.C. slate support. Joints to be specially sealed (to detail).

14. Galvanised steel lintols incorporating insulation and plastering laths. Types to be approved. Min end bearing to be 150mm.

15. PC prestressed concrete lintols installed strictly to manufacturer's details. Min end bearing to be 150mm.

16. **CEILINGS:**

12.7mm plasterboard and Gyplite finish on polythene vapour barrier all joints sealed or selected suspended ceiling system. (GROUND FLOOR ONLY)

17. 100mm fibre glass insulation. Special insulation retainer at eaves.

18. **INTERMEDIATE FLOORS:**

75mm sand/cement screed on 200mm or 250mm PC prestressed slabs all installed to Structural Engineers details.

19. **GROUND FLOOR:**

75mm structural screed on 200mm pc hollowcore slabs all to engineer s details

20. **RISING WALLS/FOUNDATIONS:**

Solid concrete block rising walls on reinforced concrete strip foundations on 50 sand/cement blinding.
Levels of and surfaces of all footing cuttings to be approved by Structural Engineer. Concrete fill to cavity up to ground level.

21. PC cills on DPC wrapped up at back and sides and taken behind vertical DPC to jamb.

22. Vertical DPC to all cavity closures.

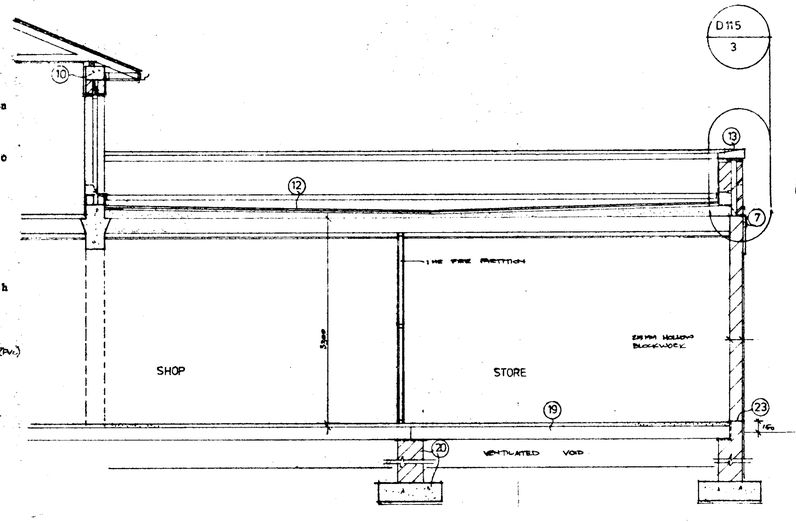
23. Hi Load DPC to all rising walls, min 150mm above ground level and lapped with DPM underslabs.

24. **GUTTERS AND DOWNPIPES:**

100mm half round gutters and downpipes (PVC)

25. **SHUTTER BOX/SHUTTER:**

Colour coated aluminium shutters fixed to concrete beam and enclosed in timber sign box -
Lead flashing and stepped DPC over.
All to detail.



SECTION Y-Y

1. Do not scale this drawing.
2. Errors and omissions to be immediately notified to the Architect.
3. All dimensions to be checked on site.

D VELUX ROOF LIGHT ADDED, ROOFING DETAIL REVISED — 16/7/91
C SECTION YY ADDED — 12/09/91
B GROUND FLOOR SLAB ALTERED TO P.C. UNITS. EXTENSION INDICATED — APR 91
A. UPDATED. SPEC ADDED — FEB 91

Revisions — date — init

description: SECTION

drawing no: 9002 D 105

rev:

job: PROPOSED SHOPS at SCHOLARSTOWN ROAD

scale: 1:50
date: JAN 91
drawn
checked

client: GANNON HOMES LTD

issue

CONROY CROWE KELLY
ARCHITECTS
26 KINGRAM PLACE
FITZWILLIAM SQUARE
DUBLIN 2
TELEPHONE: 613990 FAX: 613391

1. Do not scale this drawing.
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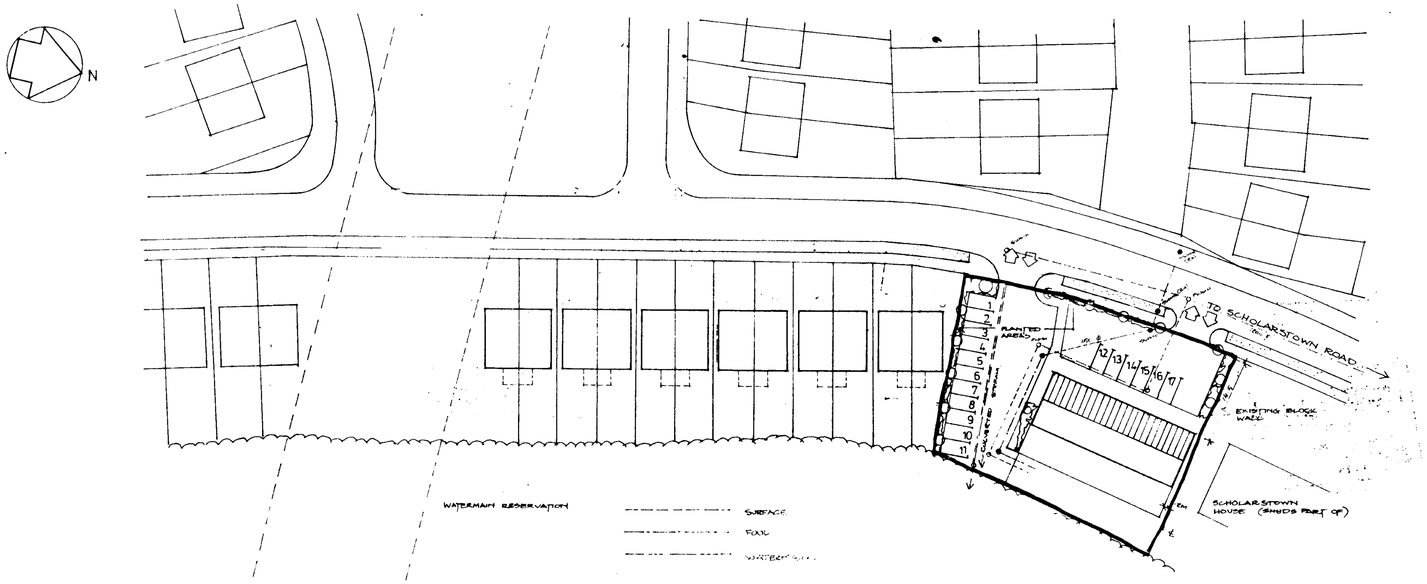
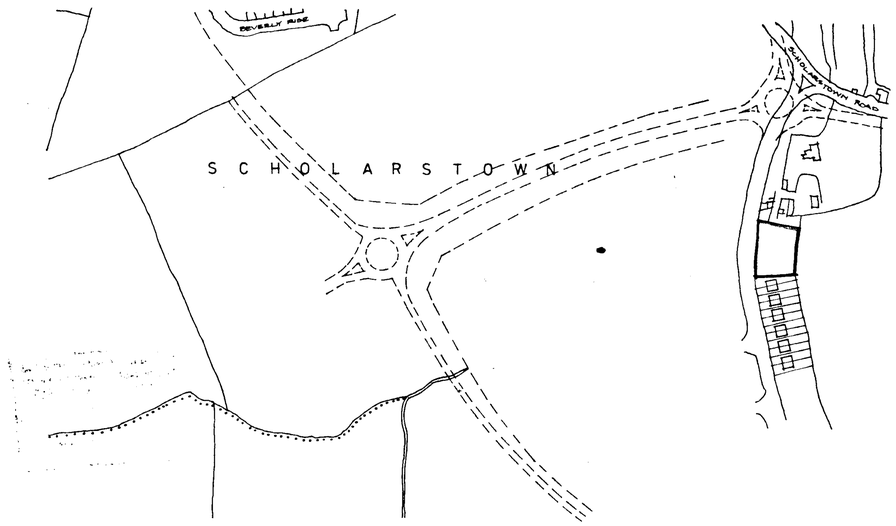
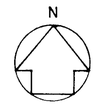
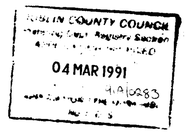


SITE LAYOUT PLAN Scale 1:500



SITE LOCATION PLAN Scale 1:2500
O.S. Map Dublin 9, 10, 13 & 14.





Revisions	date	ints
B DRAINAGE LAYOUT REVISED	4/3/91	DK
A BUILDING REVISED	JAN 91	GD

description
SITE LAYOUT PLAN and SITE LOCATION PLAN

drawing no. 9002 D 100

rev. C

job
Neighbourhood Centre at Scholarstown Road

scale As shown
date Jan 91
drawn
checked

client
GANNON HOMES LTD

issue

CONROY CROWE KELLY
ARCHITECTS
26 KINGRAM PLACE
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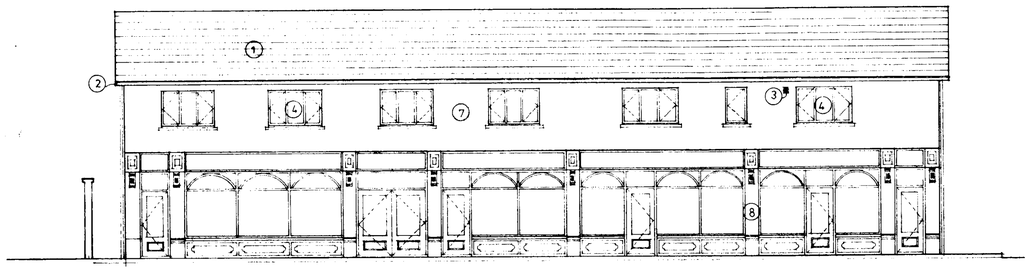
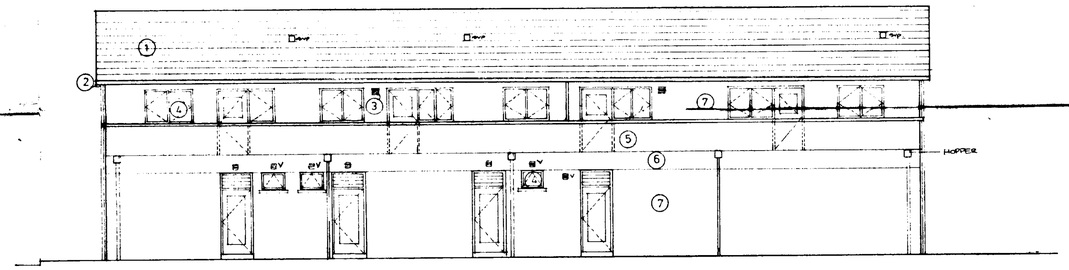
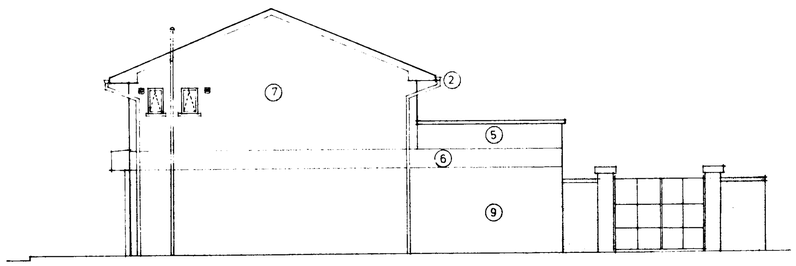
DUBLIN 2
TELEPHONE: 613990 FAX: 613391



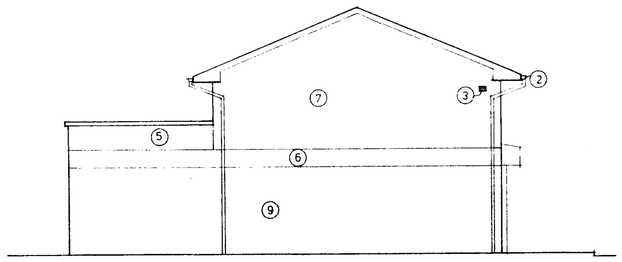
WEST ELEVATION



EAST ELEVATION



SOUTH ELEVATION



NORTH ELEVATION

ELEVATIONAL MATERIALS.

1. Selected roof tiles.
2. PVC ½ round gutters with round PVC down pipes.
3. 225 x 225mm vents.
4. Hardwood double glazed windows.
5. Brick faced parapet.
6. Smooth plaster band.
7. Selected plaster finish.
8. Timber shop fronts.
9. Brick work

1. Do not scale this drawing.
2. Errors and omissions to be immediately notified to the Architect.
3. All dimensions to be checked on site.

A. MINOR ADDITIONS

Revisions | date | init

description
ELEVATIONS

drawing no
9002 D 104

DUBLIN COUNTY COUNCIL
Planning Dept. Registry Section
04 MAR 1991
91A/0283

rev.
A

job
PROPOSED SHOPS at SCHOLARSTOWN ROAD

scale 1:100
date JAN 91
drawn
checked

client
GANNON HOMES LTD

issue

CONROY CROWE KELLY
ARCHITECTS
26 KINGRAM PLACE
FITZWILLIAM SQUARE
DUBLIN 2
TELEPHONE: 613990 FAX: 613391

1. **WALLS:**

425mm thick external cavity wall comprising 215mm inner leaf in solid block 100mm cavity with 50mm interlocking polystyrene insulation 100mm outer leaf in solid block or 102.5mm outer leaf in selected clay brick.

WALL TIES:

Wall ties shall be stainless steel and to conform to BS 1243. They shall be at 450mm centres horizontally and 750mm centres vertically. Ties to be staggered.
Ties should be inserted within 450mm of an internal corner. Additional ties to be inserted at openings.
Vertical spacing not greater than 225mm. Ties to be bdded at least 50mm in each leaf. Ensure that there are no mortar droppings on ties.

WALL FINISHES:

Internal:
Gyplite undercoat 11mm thick on scratched basecoat
Gyplite finish coat 1.6mm thick, steel trowelled finish.

External:
Smooth render sand/cement in 3 coats or other approved plaster finish or selected brick as indicated. Finish plaster in Dulux exterior paint.

2. 100mm or 215mm or 325mm solid block internal walls finished in Gyplite plaster as described above.

3. 100mm stud partitions comprising 12.7mm plasterboard, taped and filled joints Gyplite finish skim on 75 x 38mm s.w. tanalised studs at 600mm c/s. All fixed to manufacturers requirements.

4. **Doors:**
30/30 BS 476 part 8 tested ½ hour fire door. To specification.
60/60 BS 476 part 8 tested 1 hour fire door. To specificatiorn.
otherwise
flush panel solid core door.

5. **SHOPFRONTS:**

Hardwood stained and satin polyurethane finish screens incorporating doors, solid and glazed panels. All opening sections to be draught stripped.
All glass to be laminated.
Ironmongery to be selected.
Hardwood panelling, mouldings boxing to shutters etc., stained and varnish finish.

6. **STAIRS:**

Reinforced concrete stairs comprising 16 risers at 163.33 each
250mm goings with
25mm overhung nosings.
Painted m.s. 50mm diameter tubular handrail.
Finish to stairs to be selected anti slip ceramic tiles with special nosing units.

7. Ventilated lobbies and w.c.'s with 225mm glavanised steel vent. or PERMANENT ROOF VENT

8. 100mm extract duct and axial fan wire to light switch and delay mechanism to comply with proposed building regulations section L6 to give 3 air changes / hoer.

9. **DRAINAGE:**

To comply with Dublin County Council, Bye-laws, uPVC installation of pipes &/s gulley traps etc. in Marley or Terrain. Sizes of pipes to be as indicated on the drawings. The drains are to be layed on selected granular material or encased in concrete 150mm thich where under floor slab or roadways, 100mm drains shall be layed at falls not less than 1:60 or as indicated on the drawings SVP's shall be terminated at roof level using a patent vent by Glidvale (Wecoflex).
The drainage system shall comply with the following:
BS 4514, 5254, 5255, 5572. 5955 (All latest editions).
Where 100mm stacks penetrate 1st floor slabs and other fire protected structure approved intumescent collars are to be provided.

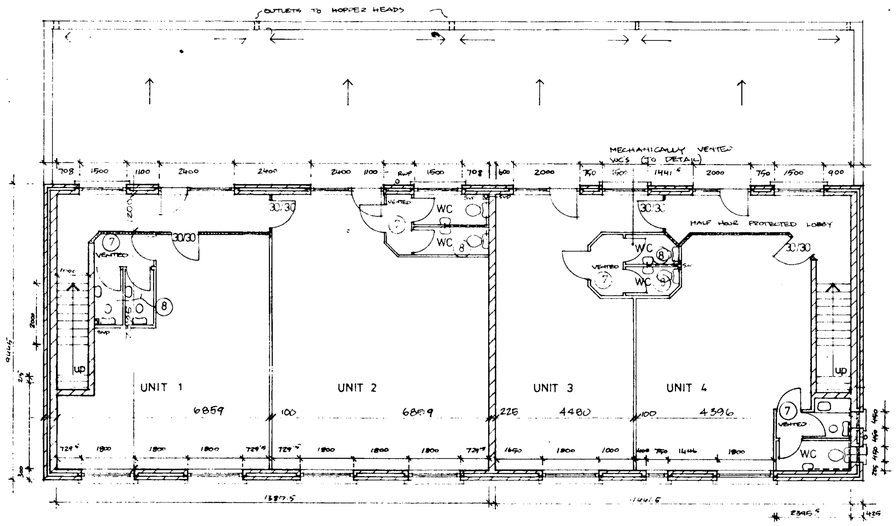
MANHOLES:

To be to Structural Engineer's drawings and specification

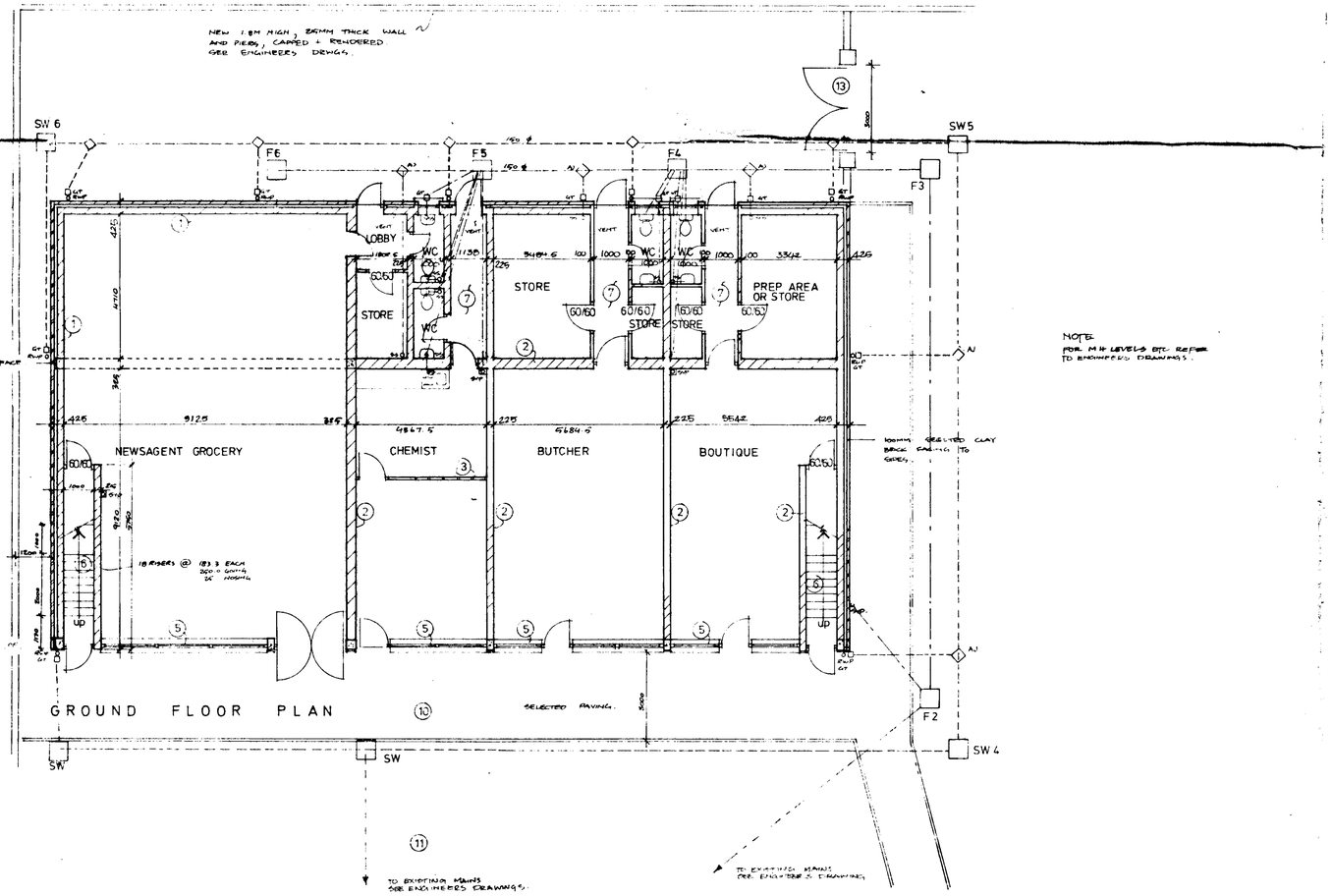
10. Selected concrete block paviors, layed to falls and in herringbone pattern laid on 50mm sand/cement and to manufacturers details. Special kerb pavior.

11. Tarmac to carparking bays and roads to Engineer's requirements.

12. Selected planting in beds with concrete kerb pavior surrounds.



FIRST FLOOR PLAN



GROUND FLOOR PLAN

LEGEND
- SVP & ROOF AIR S.V.P.
- 0.96 DIA ø STUB
- BACK INLET GULLEY TRAP
- INSPECTION CHAMBER

13. Galvanised steel gates painted (to detail)
215mm brick wall 2.4 metres high, capped with brick on edge on D.P.C. 450mm piers in brick enclosing 100 x 100mm steel post (galvanised) set in concrete base
600 x 600 x 1000mm deep. All to detail.

14. **ELECTRICAL INSTALLATION:**

The installation is to be in accordance with the following:

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IEE regulations (latest edition)

All relevant Irish and British Standards and Codes.

The requirements of the ESB.

FIRE ALARM:

A fire alarm is to installed to comply with IS 5217 1990. The arrangement and design of this is to be to later detail.

Emergency lighting:

An emergency lighting system is to be installed to comply with IS 3217 1989. The arrangement and design of this is to be to later detail.

Heating system:

To be a system of storeage heaters and fan assisted convectors See electrical layout.

15. **PLUMBING SYSTEM:**

Provide cold water storage tanks in attic to comply with Dublin County Council requirements. Provide cold supply to each unit to feed instantaneous water heater. Provide drinking water supply to each unit. Insulate all pipes with 25mm armaflex. Insulate cold water tanks with 100mm fibre glass. Cover all tanks. Refer to plumbing layout. Refer to detailed specification.

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3. All dimensions to be checked on site.

Revisions	date	inits
C DRAINAGE AMENDED	4/5/91	LO
B DIMS ADDED. NOTES ADDED NAME ALTERATIONS	7/5/91	DK
A DRAINAGE + DIMENSIONS ADDED	6/5/91	DK

description
PLAN
Ground & First Floors

DUBLIN COUNTY COUNCIL
04 MAR 1991
91A/0243

drawing no
9002 D 103

issue

job
PROPOSED SHOPS at SCHOLARSTOWN ROAD

scale 1:100
date JAN 91
drawn
checked

client
GANNON HOMES LTD

CONROY CROWE KELLY
ARCHITECTS
26 KINGRAM PLACE
FITZWILLIAM SQUARE
DUBLIN 2
TELEPHONE: 613990 FAX: 613391

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. All levels are in metres related to Malin Head OD
4. Legend

+ 88·34	Denotes existing ground level
+ 89·62	Denotes proposed ground level
——■——	Denotes surface water drain - spigot and socket concrete pipe on 150mm concrete bed and surround.
——●——	Denotes proposed foul drain – U P V C pipes on 150 concrete bed and surround
——□——	Denotes existing surface water drain
——○——	Denotes existing foul drain

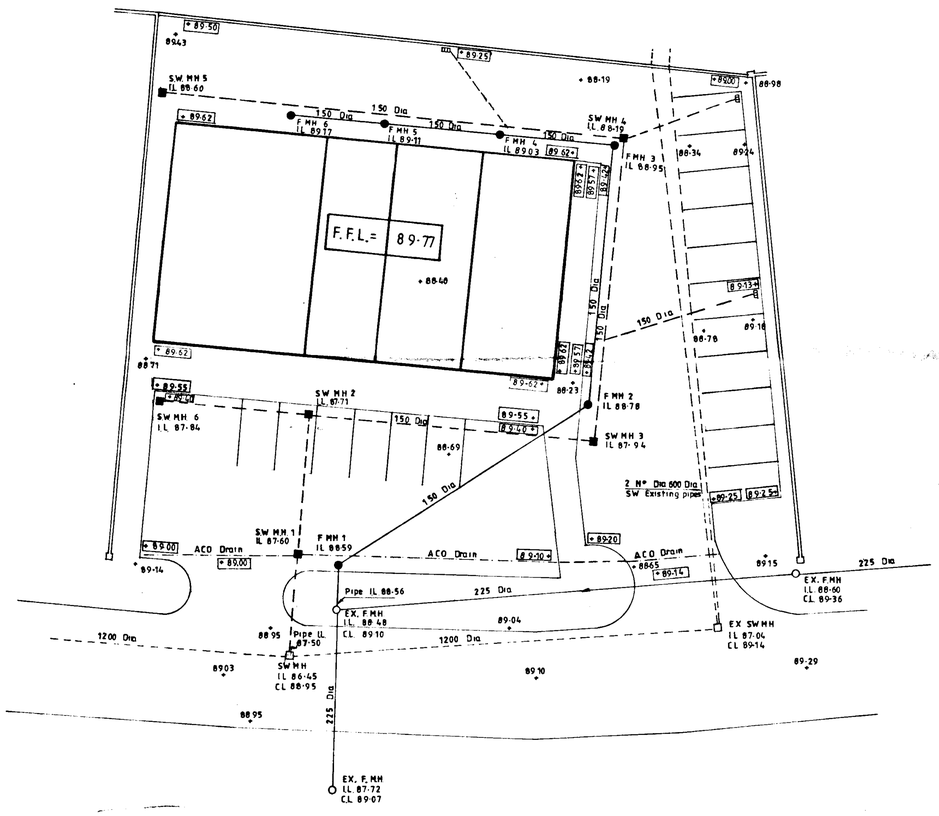
5 Flexible paving

40mm of marshall asphalt to B S 594 on 50mm of 20mm dense bitumen macadam to clause 903 of DOE specification on 150 mm of crushed stone graded in accordance with Clause 804 of DOE specification on 225mm of 100mm crushed stone

6 Brick Paviors

Selected interlocking paviors on 40mm compacted sand base on 150mm deep compacted layer of crushed stone graded in accordance with Clause 804 of DOE specification

N



REV.	DATE	AMENDMENT	DRN	CHK

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

CLIENT Gannon Homes Ltd.
ARCHITECT Conroy Crowe Kelly.

PROJECT
Proposed Shop Units At Scholarstown Road.

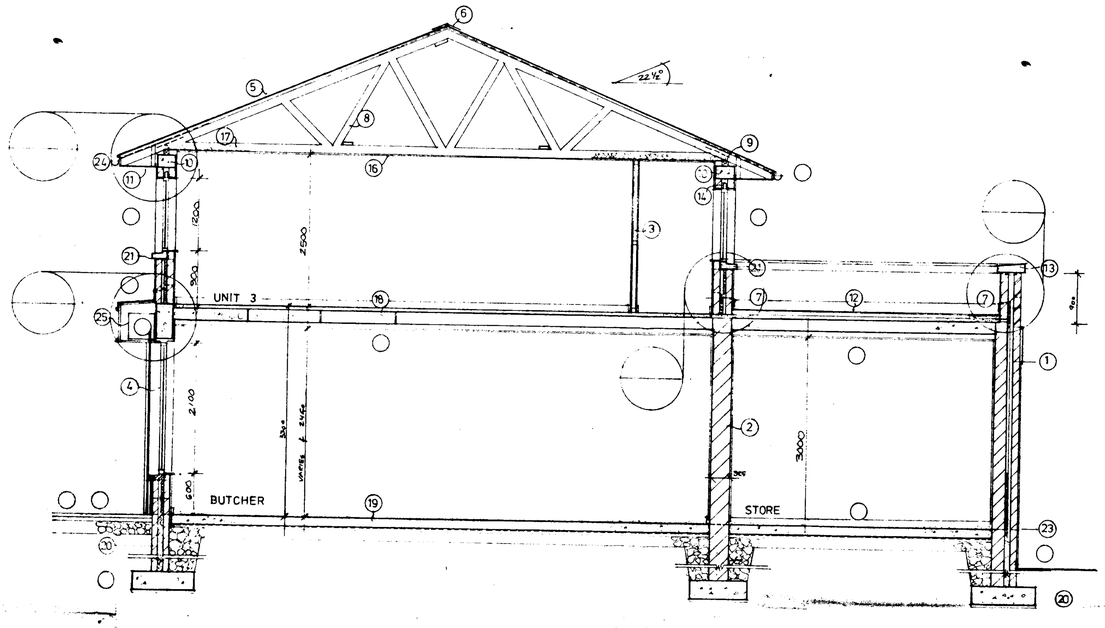
TITLE
EXTERNAL WORKS

SCALE	JOB NO.	DRG. NO.
1: 200	E 223	D6

DRWN.	CHECKED	DATE	REVISION
F. Buckley.		Feb '91.	

JDH 13997

JDH 14781



SECTION A-A

1. **WALLS:**

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Gyplite undercoat 11mm thick on scratched basecoat.
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External:
Smooth render sand/cement in 3 coats or other approved plaster finish or selected brick as indicated. Finish plaster in Dulux exterior paint.

2. 100mm or 215mm or 325mm solid block internal walls finished in Gyplite plaster as described above.

3. 100mm stud partitions comprising 12.7mm plasterboard, taped and filled joints Gyplite finish skim on 75 x 38mm s.w. tanalised studs at 600mm c/s. All fixed to manufacturers requirements.

4. **SHOPFRONTS:**

Hardwood stained and satin polyurethane finish screens incorporating doors, solid and glazed panels. All opening sections to be draught stripped. All glass to be laminated. Ironmongery to be selected. Hardwood panelling, mouldings boxing to shutters etc., stained and varnish finish

5. **ROOFS:**

Selected interlocking flat concrete pantiles fixed to manufacturer's requirements on 38 x 38mm tanalised battens at centres to suit the tiles on breather type roofing felt (reinforced) to IS 36 type 1F.

6. Concrete ridge tile bedded in sand/cement and screwed down using brass screws (detail)

7. Code 5 lead upstand and cover flashings to detail. Code 5 soakers where required.

8. Timber roof trusses designed, manufactured, installed and braced in accordance with I.S. 193 1986. Trusses at 600mm c/s. Truss layouts and specification to Engineer's details.

9. 100 x 75mm tanalised wallplate fixed to concrete beam to Structural Engineer's details.

10. Reinforced concrete ring beam to Structural Engineer's details.

11. **EAVES SOFFITS:**

Treated softwood eaves/soffit, painted finish. Top of eaves board to incorporate proprietary continous air vent unit. (manufactured by Glidevale) to give continous ventilation.

12. **FLAT ROOF:**

Trocal flat roof membrane on all necessary underlays and vapour barriers and incorporating 50mm polyurethane insulation.
All laid on 75mm min sand/cement screed laid to falls.
Roof to be layed by specialist sub contractor.

13. Precast concrete coping on D.P.C. on A.C. slate support. Joints to be specially sealed (to detail).

14. Galvanised steel lintols incorporating insulation and plastering laths. Types to be approved. Min end bearing to be 150mm.

15. PC prestressed concrete lintols installed strictly to manufacturer's details. Min end bearing to be 150mm.

16. **CEILINGS:**

12.7mm plasterboard and Gyplite finish on polythene vapour barrier all joints sealed or selected suspended ceiling system.

17. 100mm fibre glass insulation. Special insulation retainer at eaves.

18. **INTERMEDIATE FLOORS:**

75mm sand/cement screed on 200mm or 250mm PC prestressed slabs all installed to Structural Engineers details.

19. **GROUND FLOOR:**

Reinforced powerfloated 150mm thick slab on 1000 gauge visqueen DPM on 50 sand/cement blinding on consolidated hardcore in layers all layed to Structural Engineers details.

20. **RISING WALLS/FOUNDATIONS:**

Solid concrete block rising walls on reinforced concrete strip foundations on 50 sand/cement blinding.
Levels of and surfaces of all footing cuttings to be approved by Structural Engineer. Concrete fill to cavity up to ground level.

21. PC cills on DPC wrapped up at back and sides and taken behind vertical DPC to jamb.

22. Vertical DPC to all cavity closures.

23. Hi Load DPC to all rising walls, min 150mm above ground level and lapped with DPM underslabs.

24. **GUTTERS AND DOWNPIPES:**

100mm half round gutters and downpipes.

25. **SHUTTER BOX/SHUTTER:**

Colour coated aluminium shutters fixed to concrete beam and enclosed in timber sign box -
Lead flashing and stepped DPC over.
All to detail.

1. Do not scale this drawing.
2. Errors and omissions to be immediately notified to the Architect.
3. All dimensions to be checked on site.

A. UPDATED. SPEC. AGREED — FEB. 91
Revisions — date — Init.

description
SECTION

drawing no.
9002 D 105

rev'n.

job
PROPOSED SHOPS at SCHOLARSTOWN ROAD

scale 1:50
date JAN 91
drawn
checked

client
GANNON HOMES LTD

issue

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