DUBLIN COUNTY COUNCIL

Tel. 724755 (ext. 262/264)

PLANNING DEPARTMENT,
BLOCK 2,
IRISH LIFE CENTRE,
LR. ABBEY STREET,
DUBLIN 1.

Notification of Decision to Grant Permission/[redacted]

Local Government (Planning and Development) Acts, 1963-1983

To: Fergal McCabe,
Architect and Town Planner,
40, Fitzwilliam Place,
Dublin 2.

Decision Order Number and Date: P/3187/91 - 11.07.1991
Register Reference No.: 91A-0779
Planning Control No.:
Application Received on: 15.05.1991

Applicant: Southside Taverns Ltd. Floor Area: 1,200 sq. m.

In pursuance of its functions under the above-mentioned Acts, the Dublin County Council, being the Planning Authority for the County Health District of Dublin, did by Order dated as above make a decision to grant Permission/[redacted] for:—

3 retail units and an office at Old Bawn Road, at rear Main Street, Tallaght.

SUBJECT TO THE FOLLOWING CONDITIONS

CONDITIONS	REASONS FOR CONDITIONS
1. The development to be carried out in its entirety in accordance with the plans, particulars and specifications lodged with the application, save as may be required by the other conditions attached hereto.	1. To ensure that the development shall be in accordance with the permission and that effective control be maintained.
2. That before development commences, approval under the Building Bye-Laws be obtained, and all conditions of that approval be observed in the development.	2. In order to comply with the Sanitary Services Acts, 1878-1964.
3. That the requirements of the Chief Fire Officer be ascertained and strictly adhered to in the development.	3. In the interest of safety and the avoidance of fire hazard.
4. That the requirements of the Supervising Environmental Health Officer be ascertained and strictly adhered to in the development.	4. In the interest of health.
5. That the water supply and drainage arrangements, including the disposal of surface water, be in accordance with the requirements of the County Council.	5. In order to comply with the Sanitary Services Acts 1878-1964.
(Continued)	

Signed on behalf of the Dublin County Council: [signature]
For Principal Officer

Date: 11th July, 1991.

IMPORTANT: Turn overleaf for further information

(Continued) CONDITIONS	REASONS FOR CONDITIONS
6. That no advertising sign or structure be erected, except those which are exempted development, without prior approval of the Planning Authority.	6. In the interest of the proper planning and development of the area.
7. That the applicant submit specific proposals for the colour and type of pavior setts and metal railings in the proposed development prior to commencement of development, to the satisfaction of the Planning Authority.	7. In the interest of the proper planning and development of the area.
8. That no music or other amplified sound shall be broadcast from any of the premises of the proposed development in such a manner as to cause nuisance to the occupants of adjoining nearby premises.	8. In the interest of the proper planning and development of the area.
9. That adequate refuse and waste disposal facilities, including litter and waste bins, be provided to the satisfaction of the County Council.	9. In the interest of the proper planning and development of the area.
10. That a satisfactory scheme of landscaping and planting for the car parking areas and along the inside of the boundary be submitted to and agreed with the Planning Authority prior to the commencement of development.	10. In the interest of visual amenity.
11. That the developer shall facilitate the Office of Public Works in the safeguarding of any items of archaeological significance which the site may possess. In this regard, the developer shall notify National Monuments Branch of the Office of Public Works in writing in advance of commencement of works on site i.e. 4 weeks before work commences to facilitate archaeological appraisal of the site during the digging of foundations and the laying of utility services on the site.	11. In the interest of the proper planning and development of the area.

(Continued)

NOTE:

If there is no appeal to An Bord Pleanala against this decision PERMISSION/APPROVAL will be granted by the Council as soon as may be after the expiration of the period for the taking of such appeal. If every appeal made in accordance with the Acts has been withdrawn, the Council will grant the PERMISSION/APPROVAL after the withdrawal.

An appeal against the decision may be made to An Bord Pleanala. The applicant may appeal within one month from the date of receipt by him of this notification. ANY OTHER PERSON may appeal within twenty-one days beginning on the date of the decision.

An appeal shall be in writing and shall state the subject matter and grounds of the appeal. It should be addressed to:—
An Bord Pleanala, Blocks 6 and 7, Irish Life Centre, Lower Abbey Street, Dublin 1.

(1) An appeal lodged by an applicant or his agent with An Bord Pleanala will be invalid unless accompanied by a fee of £36 (Thirty-six Pounds). (2) A party to an appeal making a request to An Bord Pleanala for an Oral Hearing of an appeal must, *in addition* to (1) above, pay to An Bord Pleanala a fee of £36 (Thirty-six Pounds). (3) A person who is not a party to an appeal must pay a fee of £10 (Ten Pounds) to An Bord Pleanala when making submissions or observations to An Bord Pleanala in relation to an appeal.

Approval of the Council under Building Bye-Laws must be obtained and the terms of the approval must be complied with in the carrying out of the work before any development which may be permitted is commenced.

FUTURE PRINT LTD.

DUBLIN COUNTY COUNCIL

Tel. 724755 (ext. 262/264)

PLANNING DEPARTMENT,
BLOCK 2,
IRISH LIFE CENTRE,
LR. ABBEY STREET,
DUBLIN 1.

Notification of Decision to Grant Permission/[redacted]

Local Government (Planning and Development) Acts, 1963-1983

To Fergal McCabe,
Architect and Town Planner,
40, Fitzwilliam Place,
Dublin 2.

Decision Order Number and Date P/3187/91 - 11.07.1991
Register Reference No. 91A-0779
Planning Control No.
Application Received on 15.05.1991

Applicant Southside Taverns Ltd. Floor Area: 1,200 sq. m.

In pursuance of its functions under the above-mentioned Acts, the Dublin County Council, being the Planning Authority for the County Health District of Dublin, did by Order dated as above make a decision to grant Permission/[redacted] for:-

3 retail units and an office at Old Bawn Road, at rear Main Street, Tallaght.

SUBJECT TO THE FOLLOWING CONDITIONS

CONDITIONS (Continued)	REASONS FOR CONDITIONS
12. The treatment of the northern and western boundaries shall be similar to the existing northern boundary of the "Superbowl", including the use of paviors and the planting of trees.	12. In the interest of the proper planning and development of the area.
13. Area to the east of the existing car park (inside blue line shown on Drg. No. 90067 100/1) shall be developed as a car park if/when required by the Planning Authority.	13. In the interest of the proper planning and development of the area.
14. The height and design of the proposed free-standing sign shall be agreed with the Planning Authority prior to the commencement of development.	14. In the interest of the proper planning and development of the area.
15. Any roller shutters proposed to be erected on the shop fronts shall be recessed behind the fascias and shall be of the transparent type in suitable colours.	15. In the interest of visual amenity.
(Continued)	

Signed on behalf of the Dublin County Council [signature]
For Principal Officer

Date 11th July, 1991.

IMPORTANT: Turn overleaf for further information

(Continued) CONDITIONS	REASONS FOR CONDITIONS
16. All signage on the shop fronts to be confined to the fascia areas as shown on Drg. No. 90067.104.	16. In the interest of the proper planning and development of the area.
17. The specific proposals for the aluminium glazing frames to be discussed and agreed with the Planning Authority prior to the commencement of development.	17. In the interest of the proper planning and development of the area.
18. That a financial contribution in the sum of £6,900.00 be paid by the proposer to the Dublin County Council towards the cost of provision of public services in the area of the proposed development and which facilitate this development; this contribution to be paid before the commencement of development on the site and represents the balance of the overall contribution required by Condition No. 3 of planning permission granted under Reg. Ref. 88A/1707.	18. The provision of such services in the area by the Council will facilitate the proposed development. It is considered reasonable that the developer should contribute towards the cost of providing the services.
NOTE: Compliance with one or more of the conditions of this permission may result in material alterations to the development as initially proposed and, accordingly, may require the submission of a further planning application.	

NOTE:

If there is no appeal to An Bord Pleanala against this decision PERMISSION/APPROVAL will be granted by the Council as soon as may be after the expiration of the period for the taking of such appeal. If every appeal made in accordance with the Acts has been withdrawn, the Council will grant the PERMISSION/APPROVAL after the withdrawal.

An appeal against the decision may be made to An Bord Pleanala. The applicant may appeal within one month from the date of receipt by him of this notification. ANY OTHER PERSON may appeal within twenty-one days beginning on the date of the decision.

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Approval of the Council under Building Bye-Laws must be obtained and the terms of the approval must be complied with in the carrying out of the work before any development which may be permitted is commenced.

FUTURE PRINT LTD.

KEANE MURPHY DUFF
Chartered Architects, Designers & Project Managers

4 Prince's Street South, City Quay, Dublin 2 Telephone: 770077 Facsimile: 771186

Ref: GG/MQ

14th July, 1992.

91A/779
1.1.0
Cond

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

Att: Mr. Richard Cremmings

Re: Leisure / Retail Development At Old Bawn, Tallaght - Free Standing Sign.

Your Ref: Reg. Ref. No. 91A/0779, Decision Order P/3187/91

Dear Sirs,

Concerning our meeting of the 29th June 1992 and your site inspection of the 1st July regarding our compliance of Condition No. 14 of the above Planning Permission relating to the free standing sign, we are writing to confirm our telephone conversation of the 3rd July 1992.

We agree to your request that the sign height be reduced so that its' eaves height will be the same as Block 3 presently under construction on the site. As a result of this height reduction we have also decided to reduce the width and depth of the sign to maintain its proportions. As a result the sign panel proportions have also been altered.

We enclose for your records copy of our revised sign drawing no. 90067/230C showing the reduced sign height. It is our intention to locate the sign in the position on the original planning application drawing but at a diagonal to the dual carriageway.

The colour of the sign structure will be the same blue as agreed with your office for the window frames.

Yours faithfully,

Gerard Grimes,
KEANE MURPHY DUFF.

Encls.

Ian Duff, B.Arch., Dip.A.F., M.R.I.A.I. Noel Murphy, Dip.Arch., A.R.I.B.A., M.R.I.A.I. J.F. Reynolds, B.Arch., M.R.I.A.I., R.I.B.A., Dip.Proj.Man. Michael J. Kinsella, B.Arch., M.R.I.A.I., R.I.B.A., Dip.Proj.Man., HNC (B.S.). Eugene F. Dunne, B.Arch., M.R.I.A.I., R.I.B.A. Consultant: David Keane, B.Arch., F.R.I.A.I., R.I.B.A., A.C.I.Arb., Barrister-at-Law. Associates: D. O'Doherty, R.I.A.I. (Tech). Niall Phelan, R.I.A.I. (Tech). M.B.I.A.T. Colm Reid, B.Arch., M.R.I.A.I., R.I.B.A.
Keane Murphy Duff Limited. Company Registration Number: 155935

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

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

Bloc 2, Ionad Bheatha na hEireann,
Bloc 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/0779/C1 Date : 22nd July 1992

LOCAL GOVERNMENT (PLANNING AND DEVELOPMENT) ACTS, 1963 TO 1991

Dear Sir/Madam,

DEVELOPMENT : Compliance with condition No. 14

LOCATION : Old Bawn Road, at rear of Main St., Tallaght

APPLICANT : Southside Taverns Ltd.

APP. TYPE : Compliance with Conditions

With reference to the above, I acknowledge receipt of your submission to comply with conditions received on 15th July 1992.

Yours faithfully,

.....

for PRINCIPAL OFFICER

Keane Murphy Duff,
4, Prince's St. South,
City Quay,
Dublin 2.

usual A.I. re compliance,

KEANE MURPHY DUFF
Chartered Architects, Designers & Project Managers

4 Prince's Street South, City Quay, Dublin 2 Telephone: 770077 Facsimile: 771186

Ref: RH/TN

20 August 1992

Ms. Geraldine Boothman,
Planning Department,
Dublin County Council,
Block 2,
Irish Life Centre,
Lr. Abbey Street,
Dublin 2.

Re: Village Green Centre Phase 3 – Reg. Ref. Nº. 91A/779.

Dear Ms. Boothman,

Further to our telephone conversation last week, I enclose two copies of our drawing Nº. 90067/3/05 showing external roller shutters on Unit 17 at the above.

Due to various incidents of vandalism against glass in shopfronts, we have been asked by our Client to provide roller shutters externally in phase 3 of the above development. We have already fitted external shutters on the timber shopfront in phase 2 which is recently completed. The shutter barrel is concealed behind the sign fascias and we propose a similar detail at shopfronts in phase 3.

You will notefrom the enclosed drawing that the sign fascia in Unit 17 projects off the face of the wall by approximately 300mm. Due to the low height of shopfront in Unit 17, it was not possible to accommodate the roller shutter barrel within the structural opening.

I trust that this arrangement is satisfactory.

Yours sincerely,

Colm Reid,
KEANE MURPHY DUFF.

Enc.

Pinewood
Bishopstown,
Cork, Ireland
Telephone 021-545333
Fax No. 353-21-342497

58, North Great Charles Street,
Mountjoy Square,
Dublin 1
Telephone 01-728588
Fax No. 01-365195

Partners:
M. J. Horgan B.E., C.Eng., M.I.C.E., M.I.E.I.
D. F. Lynch B.E., C.Eng., F.I.E.I.
F. V. Murray B.E., C.Eng., M.I.Struct.E., M.I.E.I.
P. L. Anthony B.E., C.Eng., M.I.Struct.E., M.I.C.E., M.I.E.I.

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

HORGAN LYNCH + PARTNERS

CONSULTING ENGINEERS

Our ref	*Your ref*	*Reply to*	*Date*
TE/27		Dublin	17.1.92

Re: Proposed McDonalds Freestander Restaurant
Belgard Road, Tallaght, Dublin 22.

91A/779
1.0.0.2
Unsd A.I. for BPL
sent to Bye Laws
23/1/92

Order No: 91A/779 Submitted 20/12/91

Dear Sirs,

Further to the recent submission for Building Bye-Laws Approval for the above project we now enclose two copies of the Site Investigation Report which was not included with the original application.

We can now confirm that the Design Ground Bearing Pressures do not exceed those recommended in the Site Investigation Report.

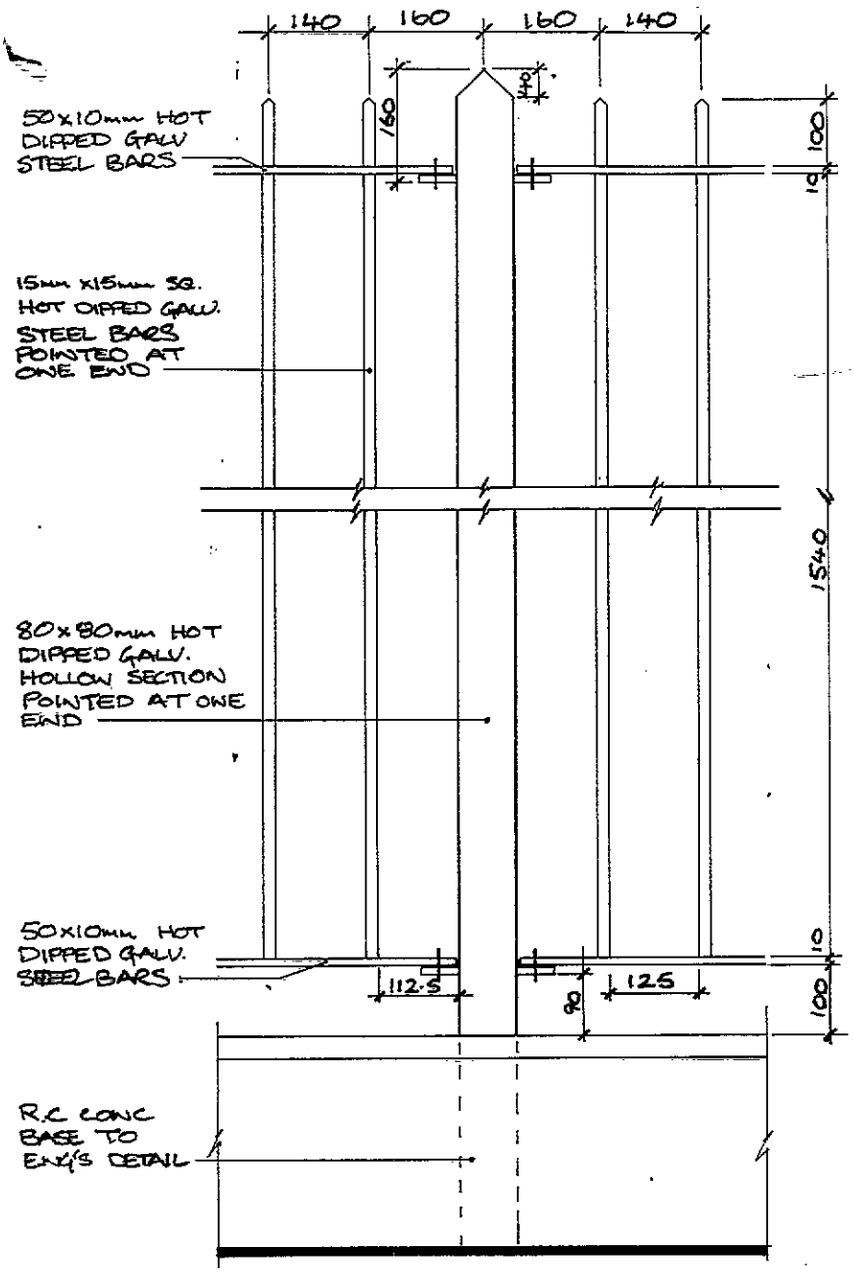
Yours faithfully

Michael Shortall.

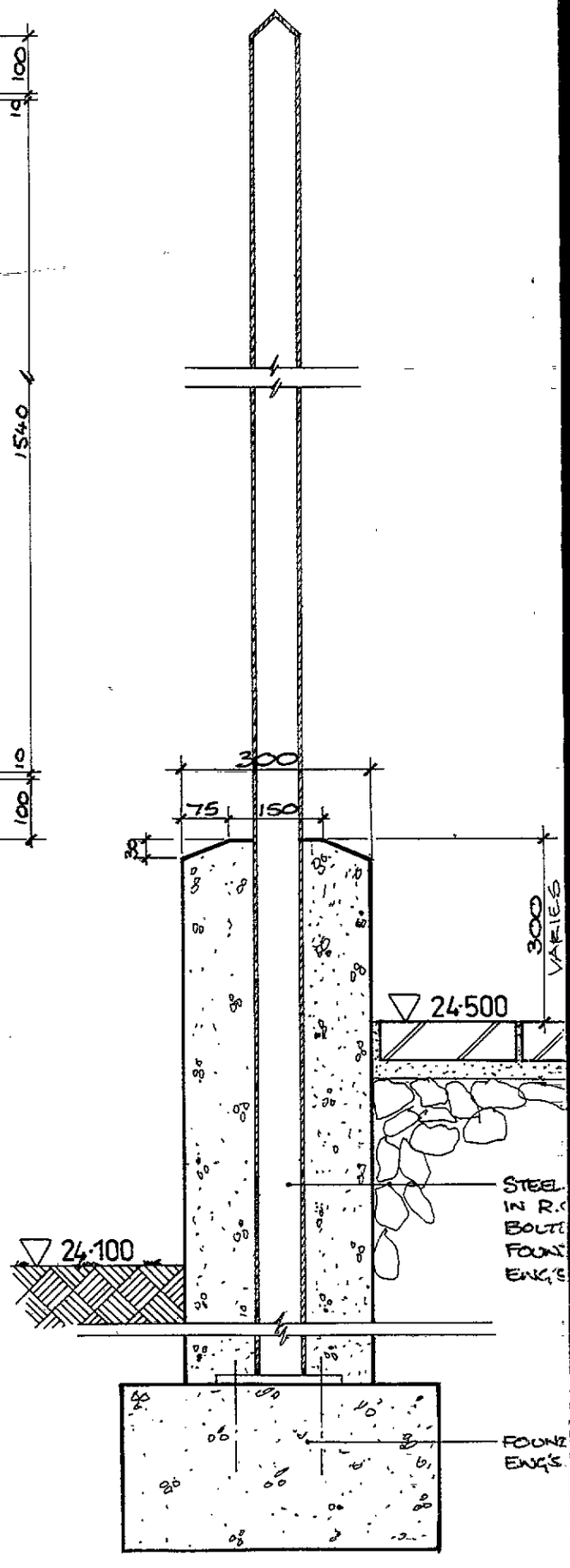
MICHAEL SHORTALL
Horgan Lynch & Partners

20 JAN 92

c.c. McDonalds Restaurants of Ireland - R. Dixon
Arthur Gibney & Partners - D. Harris



Elevation of Post SCALE 1:10

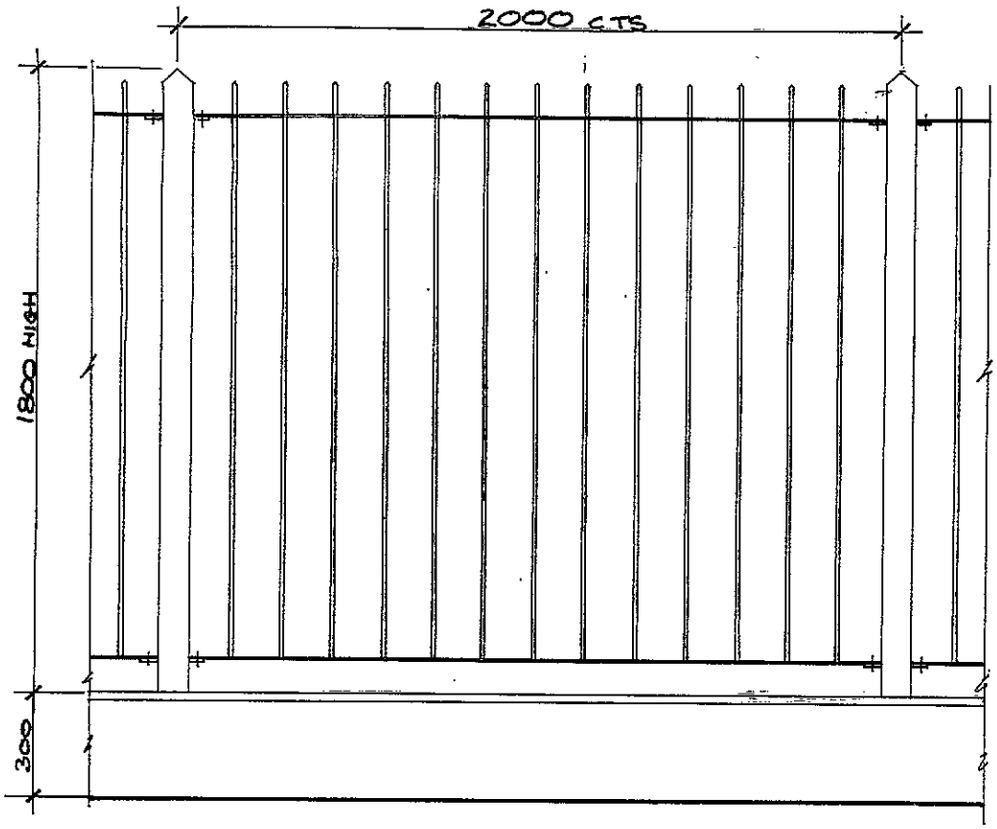


Section through Post SCALE 1:1

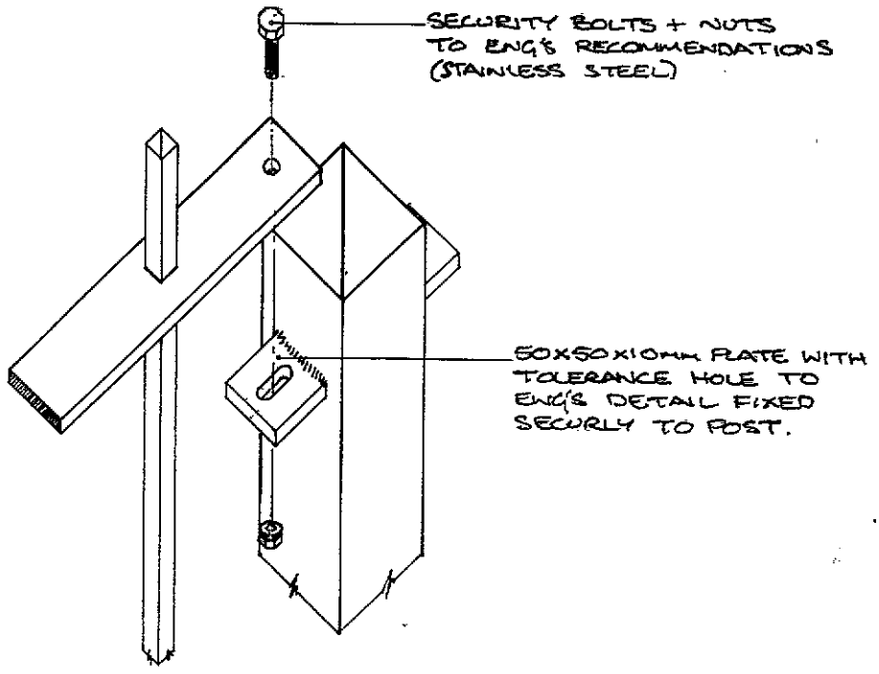
9/11/779

27/4/82

JDH 13878



Typical Railing Bay SCALE 1:20



POST CAST
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DETAILS

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DETAILS

Fixing Detail SCALE 1:5

DETAIL 16/202

KMD

KEANE MURPHY DUFF

Chartered Architects

4 PRINCES ST. SOUTH, CITY QUAY, DUBLIN 2.
PHONE: 770077
FAX: 771186

LEISURE / RETAIL DEVELOPMENT
OLD BAWN ROAD, TALLAGHT
SOUTHSIDE TAVERNS

RAILINGS DETAILS AT UNIT 3 / OLD BAWN ROAD.

C

scale	date
1:5, 1:10, 1:20	24/10/91

D.H.	90067	270

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

8th October, 1991

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

LOCATION: Old Bawn Road/Tallaght By-Pass

PROPOSED DEVELOPMENT: Office Development

APPLICANT: Southside Taverns Limited

PLANNING REG.REF.: 91A/779

DATE OF RECEIPT OF SUBMISSION: 27th September, 1991

A Chara,

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

Building Bye-Law Approval

Mise, le meas

A. Smith

PRINCIPAL OFFICER

Keane Murphy Duff,
4 Prince's Street South,
City Quay,
Dublin 2

KEANE MURPHY DUFF
Chartered Architects, Designers & Project Managers

4 Prince's Street South, City Quay, Dublin 2. Telephone: 770077 Fax: 771186

Ref: CR/MQ

27th September, 1991.

91A/0779
2.54.4.4
BBL

Mr. John Kearney,
Building Control Section,
Dublin County Council,
Irish Life Centre,
Lr. Abbey Street,
Dublin 1.

Re: Development At Corner Of Old Bawn Road & Tallaght By-Pass

Dear Sir,

We wish to apply for Building Bye-Law Approval for the above development. The development comprises three separate buildings to accommodate retail units at ground floor level and in the case of one building, offices at first floor level.

We enclose the following;

1. Fee cheque for £4430.00 calculated on the basis of 1237 sq.m. at £3.50 per square metre.
2. Architectural drawings nos. 90067/ 100A, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214. (2 copies).
3. Outline specification and general description of materials and workmanship. (2 copies).
4. Structural drawings nos. KM/04/01, 02, 03, 04, 05, SK1, SK2, SK3, SK4. (2 copies).
5. Structural specification. (2 copies).
6. Structural calculations. (2 copies).
7. Outline specification for mechanical and electrical services together with services drawing no. 579/01. (2 copies).

We have already obtained Planning Permission for the above development, Reg. Ref. No. 91A/0779.

Yours faithfully,

BYE LAW APPLICATION
REC. No. N 50233 27/9/91
£4330.00

Colm Reid,
KEANE MURPHY DUFF.

C.C. Mr. Kevin Molloy - Southside Taverns Ltd. (plus all drawings).

RECEIPT CODE

COMHAIRLE CHONTAE ATHA CLIATH

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

PAID BY
CASH
CHEQUE ✓
M.O.
P.L.
I.T.

BYE LAW APPLICATION.

REC. No. N 50233

£4330.00

Received this 24th day of September 19 91

from Southside Taverns Ltd,
The Foxes Covert,
Tallaght

the sum of four thousand three hundred & thirty Pounds

Pence, being Nil for

bye-law application at Old Bawn Rd.

Noelle Dowd Cashier

S. CAREY Class C
Principal Officer

GARVIN EVANS + ASSOCIATES CHARTERED BUILDING SERVICES ENGINEERS

MARGARETS PARK MALAHIDE CO. DUBLIN

Tel 450762 / 450154 Fax 450762

BYE-LAW PROVISIONS FOR PHASE 3

TALLAGHT VILLAGE DEVELOPMENT.

WATER SERVICES.

Each block is to have water storage, sufficient for 24 hours storage, either computed per person when the occupancy is known, as 45 litres per person, or from C.P. 310 where the occupancy is not known.

VENTILATION.

All toilet areas are to be ventilated to outside air, either directly with areas of openings as required as a minimum by the Proposed Building Regulations, or by mechanical means with a minimum volume of 3 air changes per hour.

Every lobby leading to a toilet area shall also be ventilated by means of an opening direct to outside air, or with a suitable passive inlet air duct.

Other spaces shall be ventilated to direct to outside, or have a mechanical system capable of a minimum of 2 air changes per hour.

FIRE HYDRANTS.

The areas of the blocks are less than 1000 sq. metres each, and as such they do not need to comply with Clause Q5 of the proposed Building regulations. Even so, they do conform to that clause with the existing hydrants located on the site.

FIRE ALARM & EMERGENCY LIGHTING.

The buildings are to be equipped with a Fire Alarm installation to an L2 standard, conforming to B.S. 5839. Part 1, and are also to have an emergency lighting installation in accordance with I.S. 3217.

GAS INSTALLATIONS.

All gas installations within the buildings shall conform to I.S. 3212, and to I.C.P. 4.

The accompanying drawing 579 - 01 shows the disposition of the primary services around the site, and the approximate planned routes into the various blocks.

J.G.Evans. September 1991

KEANE MURPHY DUFF
Chartered Architects, Designers & Project Managers

4 Princes Street South, City Quay, Dublin 2. Telephone: 770077 Fax: 771186

DRAWING ISSUE

BY: ~~POST~~ / HAND / ~~COLLECTION~~

PROJECT TALLAGHT PHASE III

DATE OF ISSUE 27/9/91

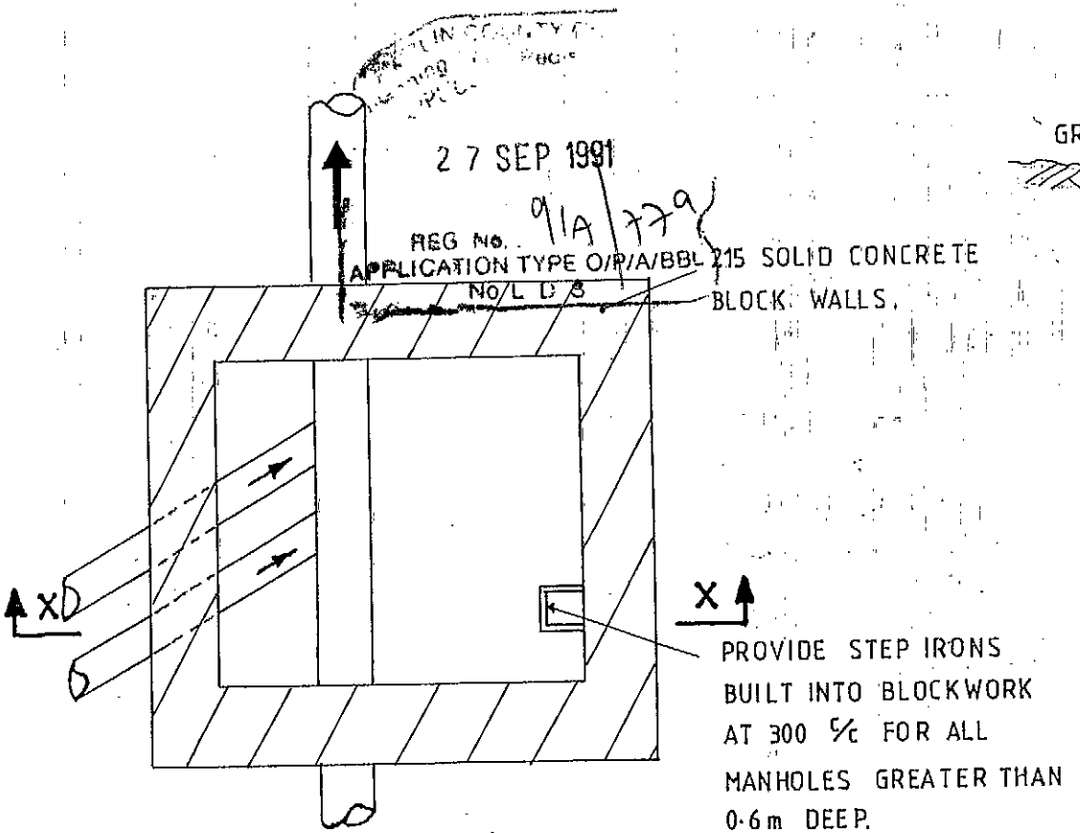
ISSUED BY DAMIAN HOWARD

REMARKS

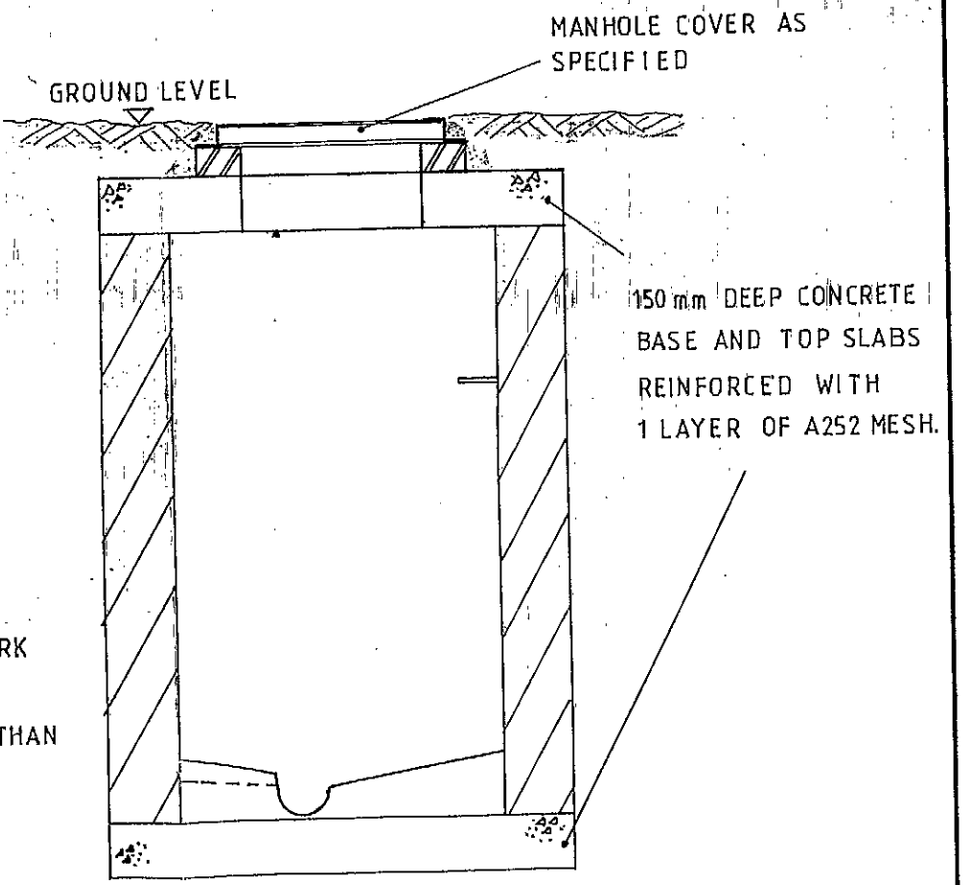
BYE LAW SUBMISSION DRAWINGS

DRAWING NO.	ISSUED TO: BYE-LAW OFFICE DUBLIN COUNTY COUNCIL — NO. OF COPIES
100'A' – LOCATION MAP	1
200 – SITE PLAN	1
201 – SITE DRAINAGE PLAN	1
202 – GROUND FLOOR PLAN	1
203 – FIRST FLOOR PLAN	1
204 – ROOF PLAN	2
205 – GR. FL. DRAINAGE PLAN	2
206 – FIR. FL. DRAINAGE PLAN	2
207 – OVERALL ELEVATIONS	2
208 – ELEVATIONS – (UNIT 1)	2
209 – ELEVATIONS – (UNIT 2)	2
210 – ELEVATIONS – (UNIT 3)	2
211 – SECTIONS – (UNIT 1)	2
212 – SECTIONS – (UNIT 2)	2
213 – SECTIONS – (UNIT 2)	2
214 – SECTIONS – (UNIT 3)	2

HORGAN LYNCH PARTNERS CONSULTING ENGINEERS	PROJECT TALLAGHT PHASE III	SCALE 1:20	PAGE
CLIENT	TITLE DRAINAGE DETAILS (no 1)	REV / DATE / BY	DRAWN A.R. DATE SEPT '91 CHKD



Plan On Typical Blockwork Manhole.

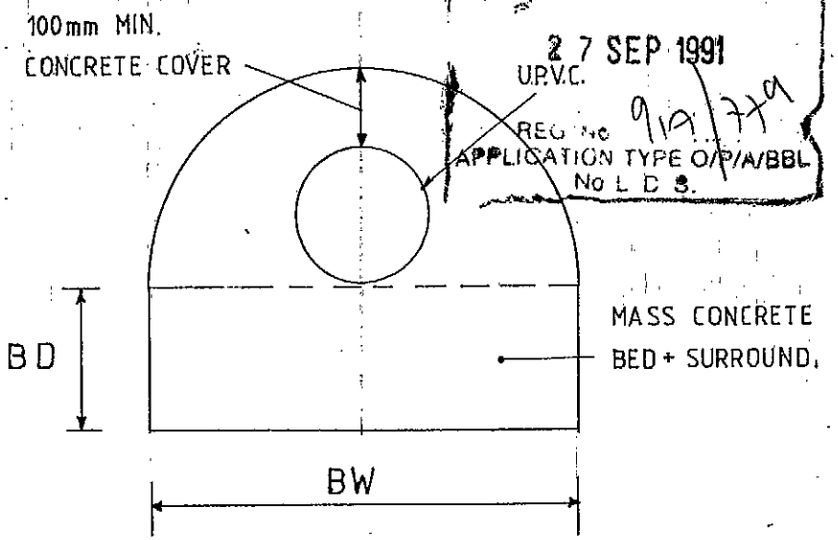


Section X-X

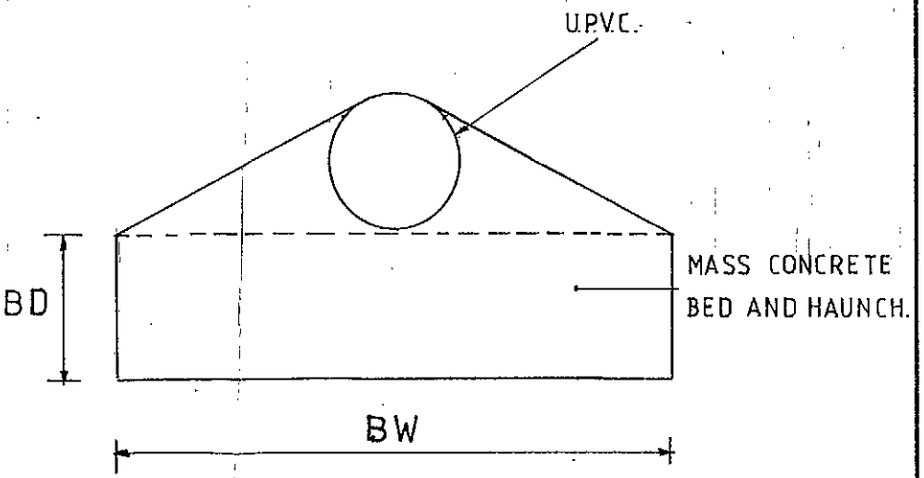
DRG. No. KM/04/Sk1

GTS 12374

HORGAN LYNCH PARTNERS CONSULTING ENGINEERS	PROJECT TALLAGHT PHASE III	SCALE N.T.S.	PAGE
CLIENT	TITLE DRAINAGE DETAILS. (no2)	REV / DATE / BY	DRAWN A.R. DATE SEPT '91 CHKD



Drainage Detail 1



Drainage Detail 2

PIPE SIZE	100mm	150mm
BW	300	450
BD	100	150

DRG. No. KM/04/Sk2

GTS 12374

HORGAN LYNCH PARTNERS
CONSULTING ENGINEERS

CLIENT

PROJECT
TALLAGHT PHASE
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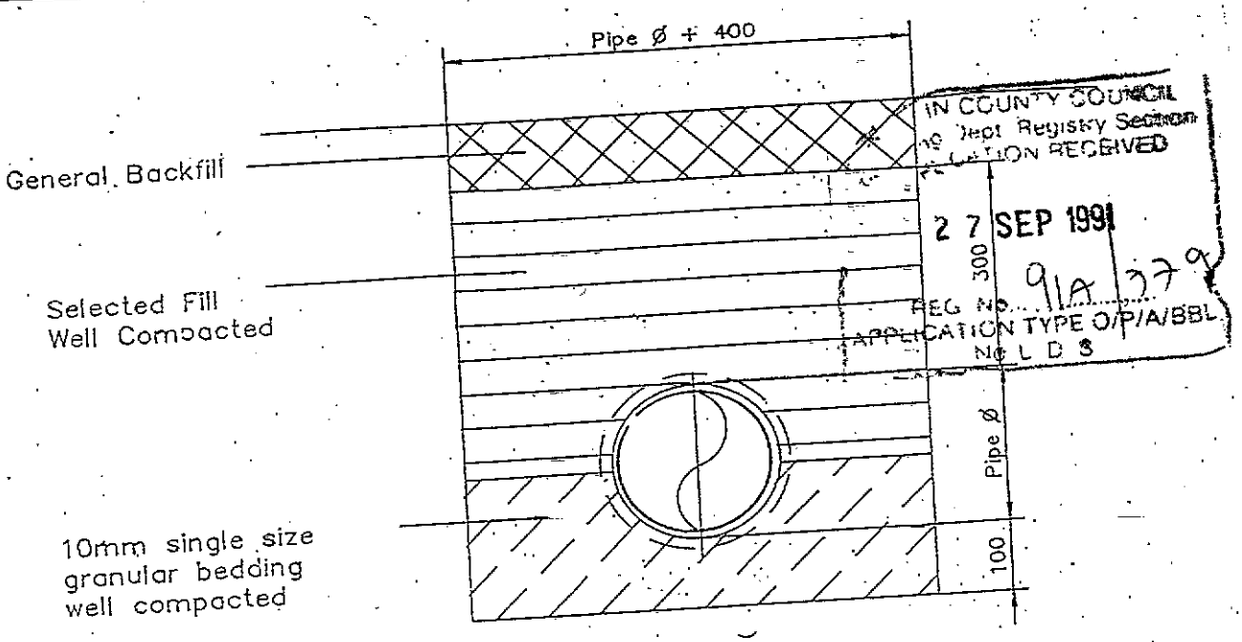
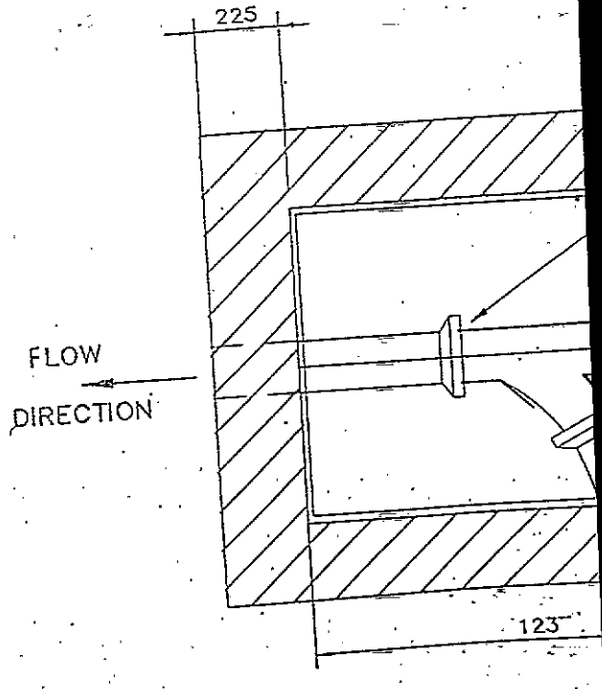
TITLE
DRAINAGE DETAIL



Bedding Details Generally



Plan of Typ

GTS 1977

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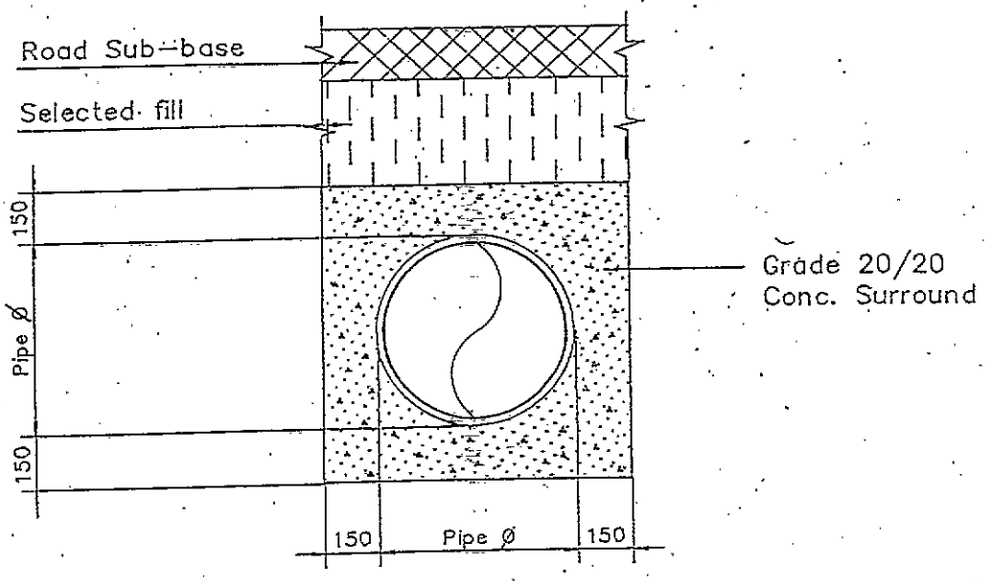
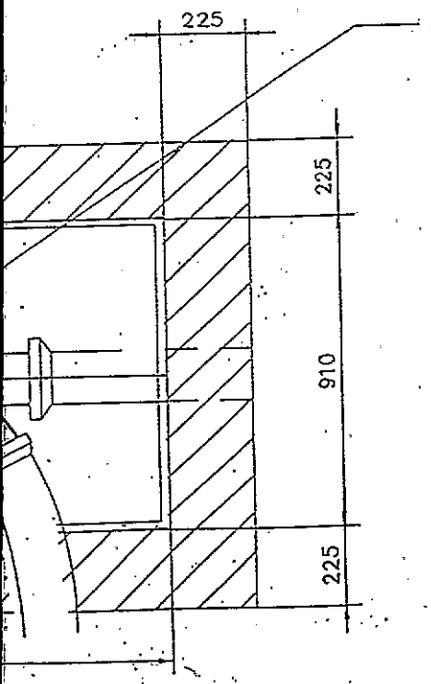
CHKD
DRG. No. KM/04/Sk4



Bedding Detail Under Roads



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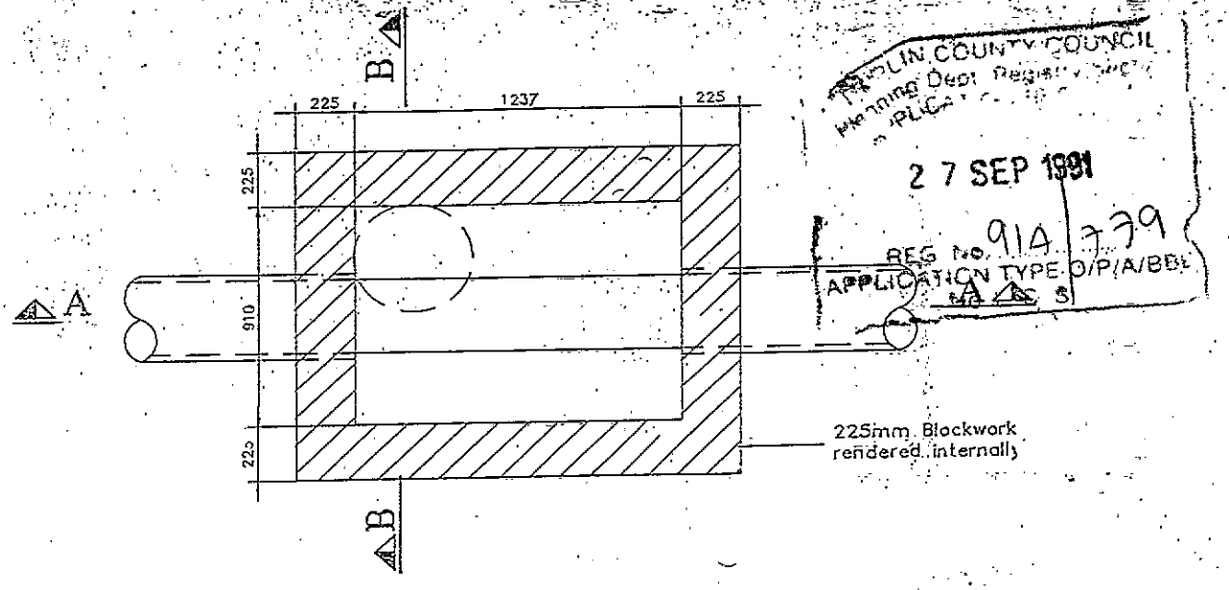
HORGAN LYNCH PARTNERS
CONSULTING ENGINEERS

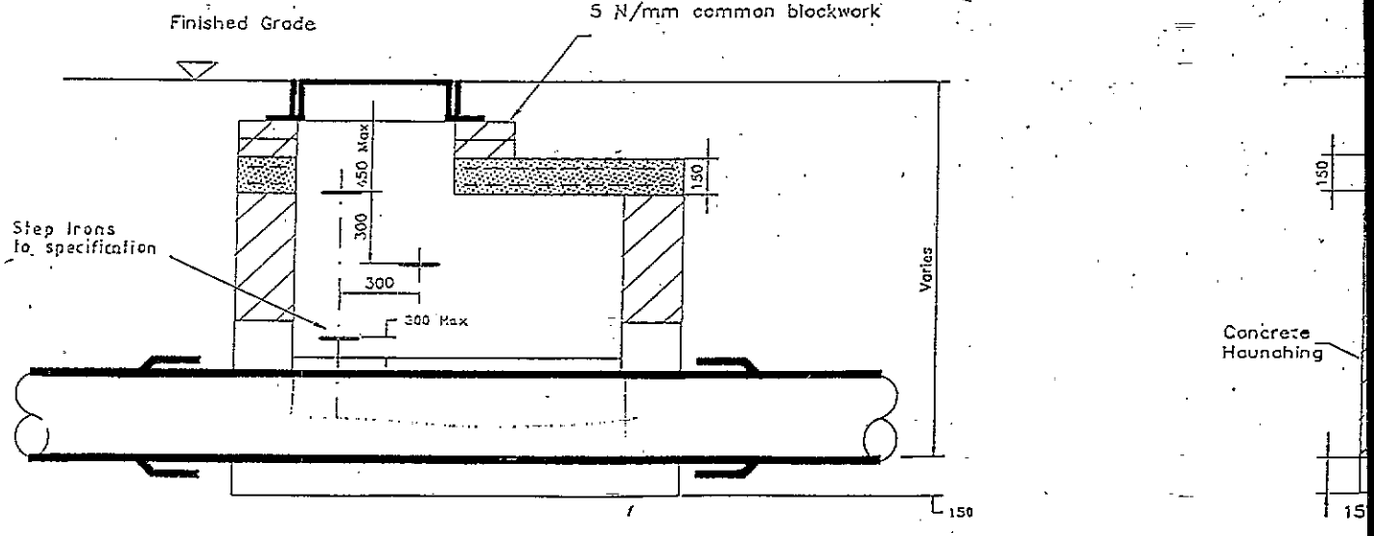
CLIENT

PROJECT
TALLAGHT PHAS

TITLE
DRAINAGE DETA



Plan of Manhole



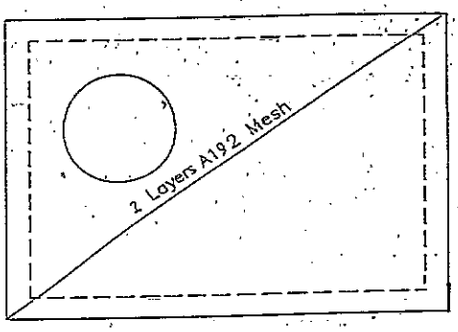
Section A-A

GTS 1911

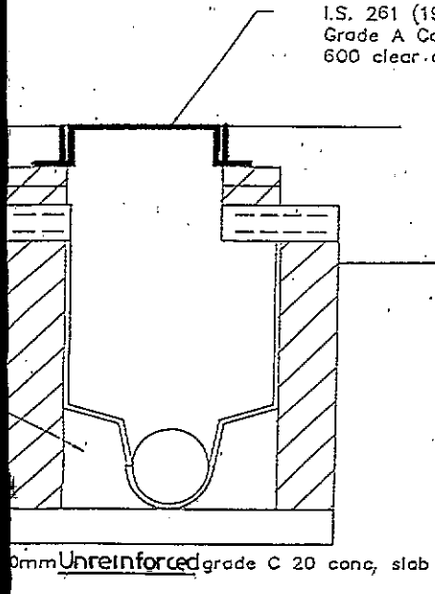
E III
(No 3)
AILS

REV	DATE	BY	DESCRIPTION

DRAWN A.R
DATE SEPT. '91
CHKD.
PAGE
SCALE 1:20
DRG. No. KM/04/Sk 3



Roof Plan



Section B-B

HORGAN LYNCH PARTNERS
Consulting Engineers
Fineweed
Bishop
Cork
Telephone 021-545333
Telex 75410 HL EI
Fax No. 353-21-342497

58, North Great Charles Street,
Mountjoy Square,
Dublin 1.
Telephone 01-728588
Fax No. 01-365195

TALLAGHT, PHASE III

Sub-section
STRUCTURAL

Design Information

Job ref.
KM/04

Sheet No. 1

Made by A.W.H.

Date 27.09.91

Checked by

Engineer responsible
A. Holmes

Building Regulation Authority or other

DUBLIN COUNTY COUNCIL
Planning Dept Registry Section
APPLICATION RECEIVED
27 SEP 1991
REF 91A/779

Client	Southside Taverns
Architect:	Keane Murphy Duff
	Dublin County Council
Relevant Building Regulations and Design Codes	D.O.E. Building Regulations Concrete BS 8110 / IS 325 Steel BS 449 Loadings BS 6399
Intended use of structure	Retail / Office
Fire resistance requirements	As per Fire Officer Requirements
General loading conditions	Imposed roof 0.75 kN/m^2 Imposed floor 4 kN/m^2 + 1 kN/m^2 partitions
Wind loading conditions	Speed 46 m/s Factors S2 = 0.74, V3 = 34.0 m/s q = 0.71 kN/m^2, F = (0.7-(-0.3))X0.71=0.71kN/m^2
Exposure conditions	
Subsoil conditions	Stiff grey-brown clay (Boulder clay) at an average depth of 1000 below existing ground level Design G.B.P. = 150kN/m^2
Foundation type	Pad foundations with plinths and ground beams
Material data	Concrete fcu = 37.5 N/mm^2 pads, plinths & ground beams fcu = 35.0 N/mm^2 superstructure Reinforcement fy = 460 N/mm^2 high tensile fy = 250 N/mm^2 mild steel
Other relevant information	Trussed rafter design by specialist sub-Contractor to be submitted to Engineer for approval.

INDEX

LOADINGS kN/m²

ROOF:-

ROOF TILES	= 0.75	
BATTENS + FELT	= 0.70	
RAFTERS + CEILING JOISTS / TRUSSES	= 0.05	
SOFFITE + INS.	= 0.35	
CEILING LIVE	= 0.15	
	= 0.25	
	2.25	2.25

FACTORED LOAD = 3.35 kN/m²

1ST FLOOR:-

IMPOSED + PARTITIONS	= 5.00	
SCREED + FINISHES	= 1.80	
200 bp P.C.C. UNITS	= 2.60	
SOFFITE + SERVICES	= 0.40	
	9.80	9.80

FACTORED LOAD = 14.7 kN/m²

EXTERNAL WALLS :-

100 BRICK	= 2.15	
215 BLOCK	= 4.30	
PLASTER + INS.	= 0.25	
	6.70	6.70

FACTORED LOAD = 9.4 kN/m²

PARTITION WALLS :-

215 HOLLOWBLOCK	= 2.70	
PLASTER x 2	= 0.50	
	3.20	3.20

FACTORED LOAD = 4.5 kN/m²

ROOF SLAB :-

FINISHES	= 0.45	
SCREED	= 1.20	
200 INSITU SLAB	= 4.80	
SOFFITE	= 0.15	
IMPOSED	= 0.75	
	7.35	7.35

FACTORED LOAD = 10.4 kN/m²

ROOF BEAMS

UNIT 1. VALLEY BEAMS SPAN = 7.3 m

LOADING: ROOF = 7.5/2 × 2.25 = 8.4
BEAM = 0.5
8.9 kN/m

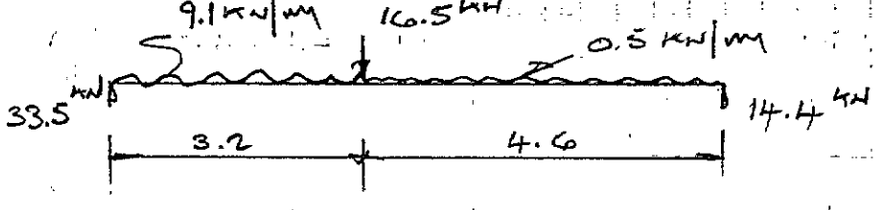
BM = 8.9 × 7.3²/8 = 59.5 kNm
Zreqd = 59.5 × 10³/165 = 361 cm³
Try 305 × 127 UB 37, Zprov = 472 cm³ o.k.
Δ L.L. only = 5 × 3.8 × 7300⁴/384 × 210 × 10³ × 7162 × 10⁴ = 9.3 mm m.o.k.

305 × 127 UB 37

UNIT 2

VALLEY BEAMS GRID LINES 7 & 8, SPAN = 7.8 m

LOADING: ROOF = 7.6/2 × 2.25 = 8.6
BEAM = 0.5
9.1 kN/m



BM = 33.5 × 3.2 − 9.1 × 3.2²/2 = 60.6 kNm
Zreqd = 60.6 × 10³/165 = 367 cm³
Try 305 × 165 UB 40, Zprov = 561 cm³ o.k.

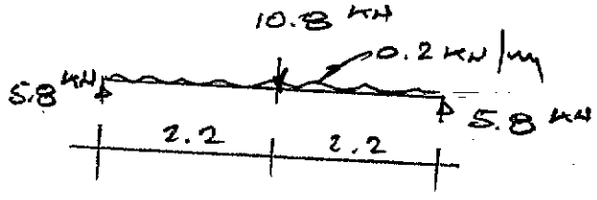
305 × 165 UB 40

PURLINS SPAN = 3.5 m MAX

LOADING = 3.8 kN/2 × 1.65 = 3.1 kN/m
BM = 3.1 × 3.5²/8 = 4.8 kNm
HR = = 5.4 kN
Zreqd = 4.8 × 10³/165 = 29.1 cm³
Try 125 × 75 × 10 L, Zprov = 36.5 mm³ o.k.
Δ NOT CRITICAL

125 × 75 × 10 L

INTERMEDIATE RAFTERS



BM = $5.8 \times 2.2 - 0.2 \times 2.2^2/2$ = 12.4 KNm
$Z_{req'd}$ = $12.4 \times 10^3 / 165$ = 75 cm³
Try 178 × 102 UB 19, Z_{prov} = 153 cm³
Δ NOT CRITICAL
O.K.

178 × 102 UB 19

HIPS SPAN = 6.5 m

P.L. AT MID SPAN = 5.4 + 3.4 = 8.8 KN
BM = $8.8 \times 6.5/4$ = 14.3 KNm
$Z_{req'd}$ = $14.3 \times 10^3/165$ = 87 cm³
Try 178 × 102 UB 19, Z_{prov} = 153 cm³
Δ NOT CRITICAL, R = 4.4 KN
O.K.

178 × 102 UB 19

VALLEY BEAM GRID LINE C/D (10-12)

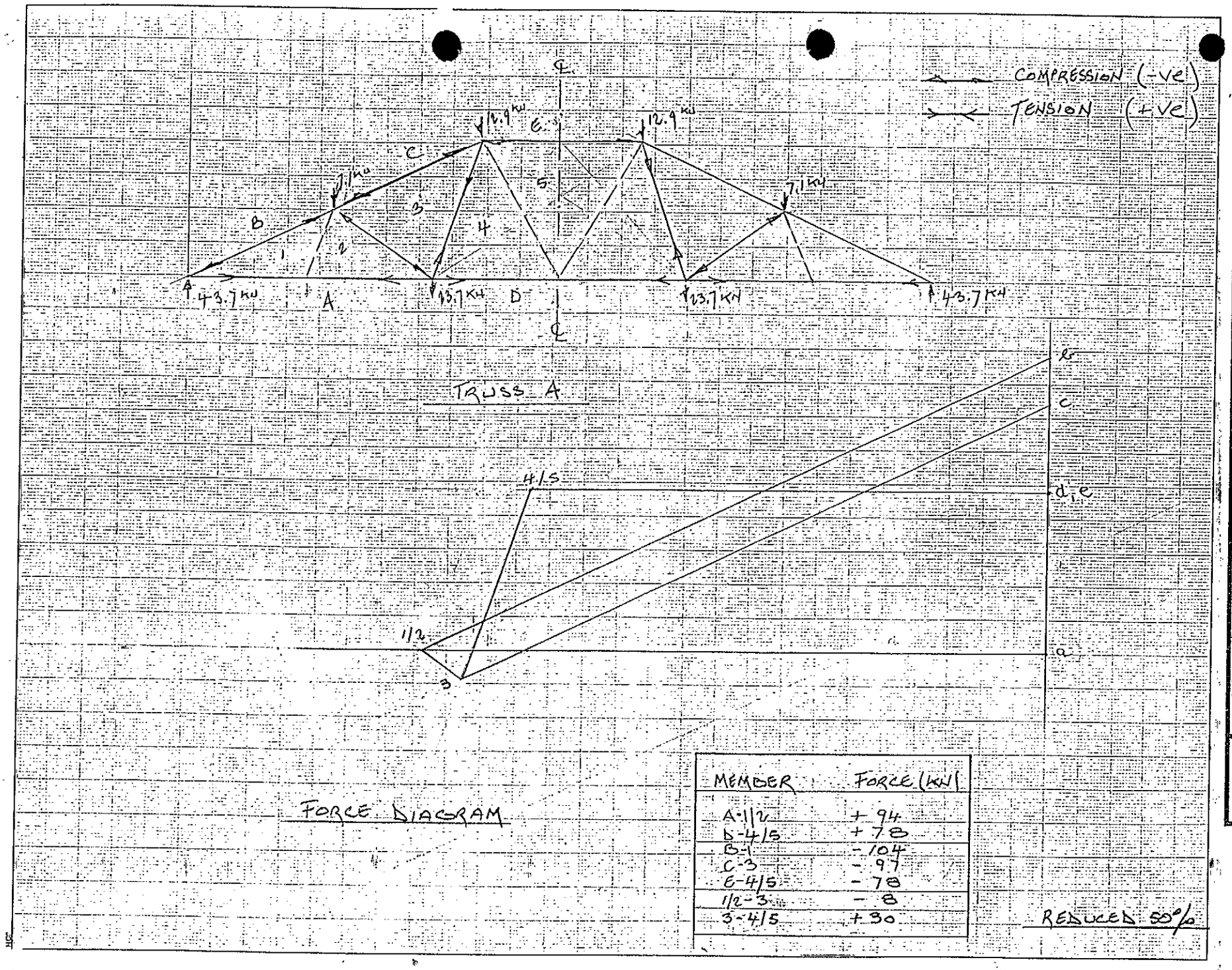
SPAN = 7.3 m

LOADING: ROOF BEAM = 7.4/2 + 2.25 = 8.3
= 0.5
8.8 KN/m

BM = $8.8 \times 7.3^2/8$ = 59 KNm
$Z_{req'd}$ = $59 \times 10^3/165$ = 356 cm³
Try 305 × 165 UB 40, Z_{prov} = 561 cm³
R = 32.1 KN
O.K.

$\Delta_{L.L.} = \frac{5 \times 3.7 \times 7300^4}{384 \times 210 \times 10^3 \times 8523 \times 10^4}$ = 7.6 mm
O.K.

305 × 165 UB 40



FORCE DIAGRAM

MEMBER	FORCE (KN)
A-1/2	+ 94
B-4/5	+ 78
B-1	- 104
C-3	- 97
E-4/5	- 78
1/2-3	- 8
3-4/5	+ 30

REDUCED 50%

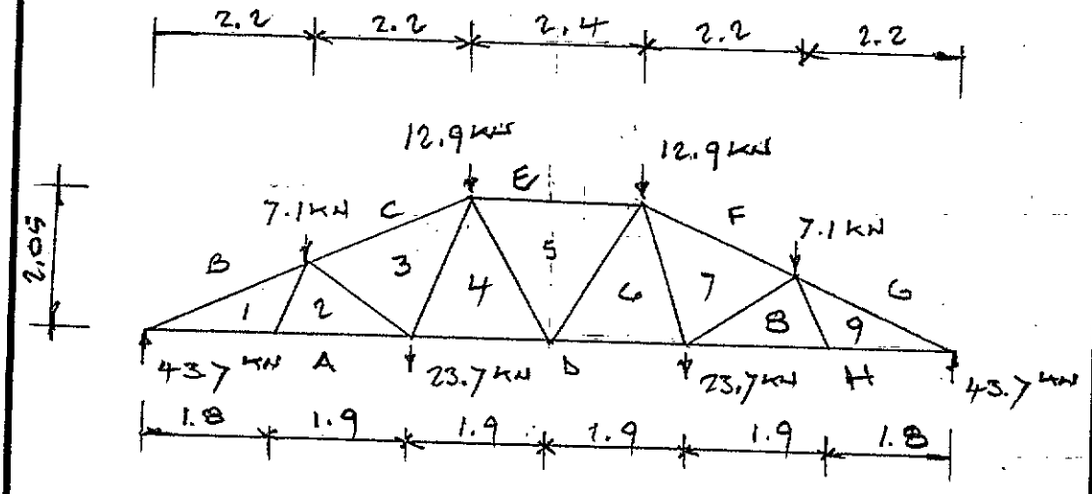
HORGAN LYNCH & PARTNERS
CONSULTING ENGINEERS
DUBLIN CORK

JOB:- TALLAGHT PHASE III

Drawn ZNHA | Checked | Date SEPT 91 | Scale 1:50

SHEET NO. 11.2

TRUSSES (TRUSS ADJ GRID LINE C WORST CASE)



CHECK LOAD:

TOTAL LOAD (APPROX) : $7.6 + 5.1 \times 2.25 = 87.2$ KN

O.K.

BM $= 43.7 \times 5.6 - 7.1 \times 3.4 - 23.7 \times 1.9 - 12.9 \times 1.2$

$= 160.1$ KN m

RAFTER B-1

COMPRESSION FORCE (F_c) = 104 KN

TRY 152 × 76 C, $r_y = 2.24$, $A = 22.77$ cm²

$l/r_y = 240 \times 1.0 / 2.24 = 107$, $P_c = 72$ N/mm²

$f_c = 104 \times 10^3 / 22.77 \times 10^2 = 46$ N/mm²

O.K. 152 × 76 C

RAFTER E-5

$F_c = 78$ KN

$BM = 5.8 \times 2.4/4 + 5.9 \times 2.4^2/8 = 7.7$ KN m

$f_{bc} = 7.7 \times 10^3 / 112 = 69$ N/mm²

$l/r = 120 / 6.12 = 20$, $P_c = 147$ N/mm²

$f_c = 78 \times 10^3 / 22.77 \times 10^2 = 34$ N/mm²

$34/147 + 69/165 = 0.65 < 1.0$ O.K.

152 × 76 C

GTS

BTM TIE A-1

F_T = 94 kN
BM : $2.3 \times 1.8^2 / 8$ = 0.9 kNm
Try 152 × 76 C NOT SLD.

f_t : $94 \times 10^3 / 22.77 \times 10^2$ = 41 N/mm²
P_t = 155 N/mm² o.k.

152 × 76 C

INTERNAL TIE 3-4

F_t = 30 kN
AREA REQD = $30 \times 10^3 / 155 \times 8/7$ = 221 mm²
Try 70 × 70 × 6 L, A_{prov} = 813 mm² o.k.

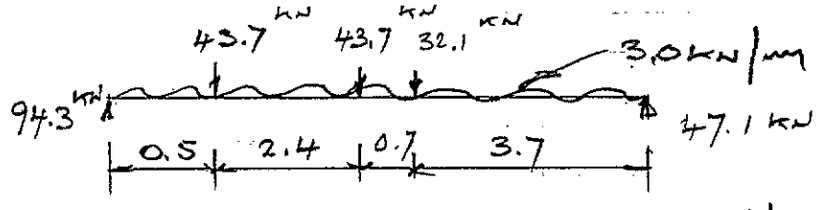
70 × 70 × 6 L

STRUT 2-3

F_c = 8 kN
Try 70 × 70 × 6 L
f_c : $8.0 \times 10^3 / 8.13 \times 10^2$ = 10 N/mm² o.k.

70 × 70 × 6 L

BEAM ON GRID LINE 10 (C-D) SPAN = 7.3 m

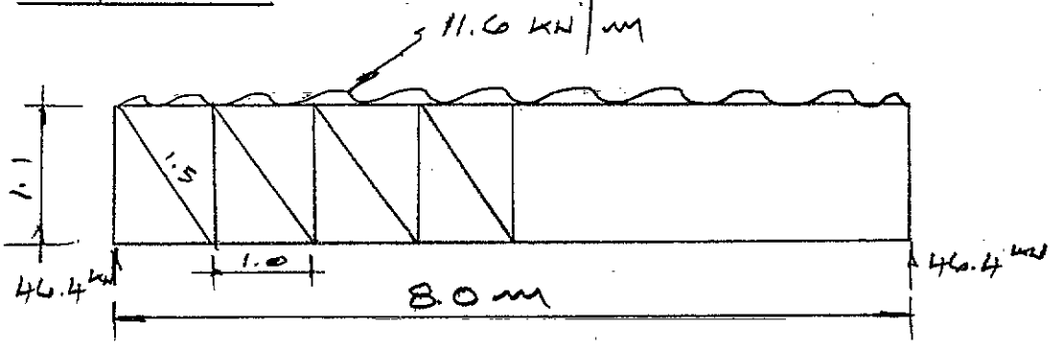


BM = $94.3 \times 2.9 - 43.7 \times 2.4 - 3.0 \times 2.9^2/2$ = 156.0 kNm
Z_{reqd} : $156.0 \times 10^3 / 165$ = 945 cm³
Try 356 × 171 UB 67, Z_{prov} = 1073 cm³ o.k.

356 × 171 UB 67

UNIT 3

TRUSSES



BM = $11.6 \times 8.0^2 / 8$ = 93.1 kNm

TOP BOOM (BTM BOOM SIMILAR)

Fc = 93.1 / 1.1 : 84.7 kN

Try 100 x 100 x 8L

l_e/r_y = $100 \times 1.0 / 1.96$ = 51, Pc = 133 N/mm²

f_c = $84.7 \times 10^3 / 15.5 \times 10^2$ = 55 N/mm²

BM = $11.6 \times 1.0^2 / 10$ = 1.2 kNm

f_{bc} = $1.2 \times 10^3 / 19.9$ = 58 N/mm²

$58/165 + 55/133 = 0.77 < 1.0$ O.K.

100 x 100 x 8L

INFILL

Fc max = 46.4 / 1.0 x 1.5 : 69.6 kN

Try 70 x 70 x 6L

l_e/r_y = $150 \times 0.85 / 1.37 = 93$, Pc = 87 N/mm²

f_c = $69.6 \times 10^3 / 8.13 \times 10^2$ = 86 N/mm²

O.K.

70 x 70 x 6L

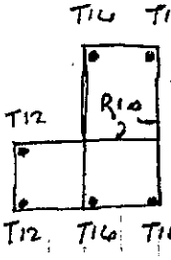
RC BEAMS & SLABS

EAVES BEAM:-

BOOT LINTEL BEAM, SPAN = 3.8m MAX

LOADING: ROOF = 7.5/2 + 3.35 = 12.6
BEAM & TC = 4.0
13.0 kN/m

BM = 13.0 × 3.8²/8 = 23.5 kNm
Try 450 × 215 BEAM, d = 400 mm
As = 23.5 × 10⁶ / (460 × 0.87 × 400 × 0.95) = 154 mm²
NOM REINF.



2T16 T&B
R10 LINKS
AT 200 CTS

FLAT ROOF SLAB OVER RECEPTION TO UNIT N°2

MAX SPAN = 4.3m d = 200 − 25 − 8 = 167
BM = 10.4 × 4.3²/8 = 24.0 kNm
As = 24.0 × 10⁶ / (460 × 0.87 × 167 × 0.95) = 379 mm²
Try T12 AT 250 CTS, As prov = 452 mm² o.k

T12@250

EAVES BEAMS ON GRID LINES 10-A/C & C-10/12

LOADING: PITCHED ROOF = 3.8/2 × 3.35 = 6.3
FLAT " = 3.5/2 × 10.4 = 18.2
BEAM = 4.9
29.4 kN/m

BM = 29.4 × 5.2²/8 = 99.4 kNm
Try 675 × 215 RC BEAM, d = 625 mm
As = 99.4 × 10⁶ / (460 × 0.87 × 625 × 0.95) = 418 mm²
Try 2T20, As prov = 628 mm² o.k.
NOM LINKS

2T20B
2T16T
R10 LINKS
@ 300 CTS.

CURVED BEAM OVER RECEPTION

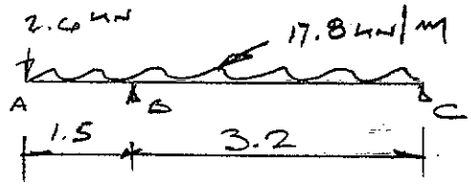
SPAN = 3.5m MAX

LOADING = 18.2 + 5.3 d.w. = 23.5 kN/m
BM = $23.5 \times 3.5^2/8$ = 36.0 kNm

NOM REINF.

4T12 T&B
R10 LINKS
@ 300 CTS

1ST FLOOR SLAB TO RECEPTION



BM A-B = $2.6 \times 1.5 + 17.8 \times 1.5^2/2$ = 23.9 kNm
BM B-C = $17.8 \times 3.2^2/8$ = 22.8 kNm

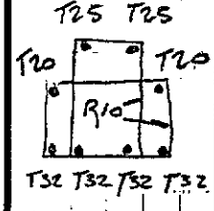
T12 @ 250
TOP & BTM

SPINE BEAM

SPAN = 5.6m

LOADING: WALL = 4.5×4.0 dw = 18.0
FLOOR = $14.5/2 \times 14.7$ = 106.6
BEAM = 8.0
132.6 kN/m

BM = $132.6 \times 5.6^2/8$ = 525.3 kNm
TRY 500W x 550 Dp TEE BEAM d = 498 mm
$K = 525.3 \times 10^6 / 500 \times 498^2 \times 35 = 0.12$, a = 0.83
$A_S = 525.3 \times 10^6 / 460 \times 0.87 \times 498 \times 0.83$ = 3176 mm²
TRY 4T32 + 1 ASPRN = 3220 mm²
$V = 371.3 \times 10^3 / 500 \times 498$ = 1.49 N/mm² o.k.
$f_{cu} = 100 \times 3220 / 500 \times 498 = 1.29$, V_c = 0.77
TRY T R10 LINKS, A_{SV} = 157
$S_V = 314 \times 0.87 \times 250 / 500 \times 0.72$ = 190 mm



4T32 BTM
R10 LINKS
@ 150 CTS

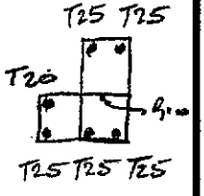
1ST FLOOR PERIMETER BEAM SPAN = 3.8m

LOADING: ROOF = 5.0 kN/m.
WALL = 3.2 × 9.4 = 30.1
FLOOR = 7.2/2 × 14.7 = 52.9
BEAM = 4.0
92.0 kN/m

BM = 92.0 × 3.8²/10 = 132.8kNm

T/m 425 × 215 BOOT LINTEL BEAM, d = 373
As = 132.8×10⁶/460×0.87×373×0.95 = 890 mm²
T/m 2T25 BTM, As prov = 982 mm² o.k.

v = 174.8×10³/215×373 = 2.17 N/mm²
100 As/bd = 100×982/215×373 = 1.22; vc = 0.77 N/mm²
Sv = 157×0.87×250/215×1.4 = 113 mm



2T25 T&B
R10 LINKS
IN PAIRS
AT 200cts

FOUNDATIONS DESIGN G.B.P. = 150 kN/m²

UNIT Nº 1

GROUND BEAMS G.L. 1 & 5

		kN/m
LOADING: ROOF = 8.0 × 3.35 / 2		= 13.4
WALL = 3.7 × 9.4		= 34.8
O.W.		= 6.3
		54.5

BM = 54.5 × 3.6² / 8 = 88.3 kNm
Try 415 W × 450 bp BEAM, d = 390 mm
As = 88.3 × 10⁶ / 460 × 0.87 × 390 × 0.95 = 596 mm²
Try 2T20, Asprov = 628 mm² OK
Nom. LINKS

415 W × 450 bp RC BEAM

2T20 T&B R10 LINKS @ 200 c/c

PAD A-3

LOADING: ROOF = 15.0/2 × 7.3/2 × 3.35 = 91.7
COL = 25.0
BEAM = 41.1 × 3.8 = 156.2
PAD = 19.0
289.9 kN

UNFACTORED LOAD = 289.9 / 1.5 = 193.3 kN
TRY 1200 × 1200 × 400 bp
G.B.P. = 193.3 / 1.2² = 134 kN/m²

Nom REINF

1200 × 1200 × 400 bp T16 @ 350 e.w. BTM

PAD C-3

LOADING: ROOF = 109 kN/m² × 3.35 = 365.2
COL = 23.0
PAD = 26.0
414.2 kN

UNFACTORED LOAD = 414.2 / 1.5 = 276.1 kN

Try 1400 × 1400 × 400 dp PAD

G.B.P. = 276.1 / 1.4^2 = 141 kN/m²

BM = (414.2 / 8 × 1.4) × $(1.4 - 0.3)^2$ = 44.7 kNM

NOM REINF.

1400 × 1400 × 400 Dp T16 @ 350 e.w. BTM.

UNIT Nº 2.

GROUND BEAMS G.L. D.

LOADING: BWK = 3.0 × 7.2 = 21.6
BLWK = 6.4 × 3.5 = 22.4
S.W. = 6.3
50.3 kN/m

BM = 50.3 × 3.8^2 / 8 = 90.8 kNM

AS = 90.8 × 10^6 / 400 × 0.87 × 390 × 0.9 = 604 mm²

Try 2T 25 B, Asprov = 982 mm² ok.

NOM LINKS

2T25T&B R10 LINKS @ 200 CTS

PAD D-8

LOADING: BEAM = 135.2 × 7.5 / 2 = 507
PAD = 35
542 kN

UNFACTORED LOAD = 542 / 1.5 = 361 kN
Try 1600 × 1600 × 400 dp PAD
G.B.P. = 361 / 1.6² = 141 kN/m² O.K.

BM = (542 / 8 × 1.6) × (1.6 − 0.4)² = 61.0 kNm
As = 61.0 × 10⁶ / 460 × 0.87 × 340 × 0.9 = 498 mm²
Try 5T16, Asprov = 1010 mm² O.K.

1600 × 1600 × 400 dp
5T16 @ 350 e.w. BTM

PAD C-7/8, (C-10 SIMILAR)

LOADING: 1st FLOOR = 14.5/2 × 11.1/2 × 14.7 = 591.5
BEAM = 8.0 × 11.1/2 = 44.4
COL = 23.0
PAD = 35.0
693.9 kN

UNFACTORED LOAD = 693.9 / 1.5 = 462.6 kN
TRY 1800 × 1800 × 400 dp PAD
G.B.P. = 462.6 / 1.8² = 143 kN/m² O.K.

BM = (693.9 / 8 × 1.8) × (1.8 − 0.4)² = 94.4 kNm
As = 94.4 × 10⁶ / 460 × 0.87 × 340 × 0.9 = 771 mm²
Try 6T16, Asprov = 1210 mm²

1800 × 1800 × 400 dp
6T16 @ 350 c/s e.w. BTM

UNIT Nº 3

GROUND BEAMS

LOADING: ROOF = 7.5/2 × 3.35 = 12.6
WALL = 7.3 × 9.4 = 68.6
BEAM = 6.3
87.5 kN/m

4.6m SPAN :-

BM = 87.5 × 4.6²/8 = 231.4 kNm
As = 231.4 × 10⁶/(460 × 0.87) × 390 × 0.9 = 1647 mm²
Try 4T25 B, Aspro = 1960 mm² o.k.

v = 201.3 × 10³/415 × 390 = 1.24 N/mm²
vc = 0.77 v − vc = 1.24 − 0.77 = 0.47 N/mm²
Try R10 LINKS
Sv = 157 × 0.87 × 250/415 × 0.47 = 175 mm

4T25 B
2T20 T
R10 LINKS
@175 CTS

3.8m SPAN :-

BM = 87.5 × 3.8²/8 = 157.9 kNm
As = 157.9 × 10⁶/(460 × 0.87 × 390 × 0.9 = 1124 mm²
Try 3T25, Aspro = 1470 mm² o.k.
NOM LINKS

3T25 B
2T20 T
R10 LINKS
@200 CTS

PAD E-9/12

LOADING: BEAM = 87.5 × 9.3/2 = 406.9
PAD = 26.3
433.2 kN

UNFACTORED LOAD = 433.2/1.5 = 288.8 kN
Try 1400 × 1400 × 400 dp PAD
G.B.P. = 288.8/1.4² = 147 kN/m² o.k.

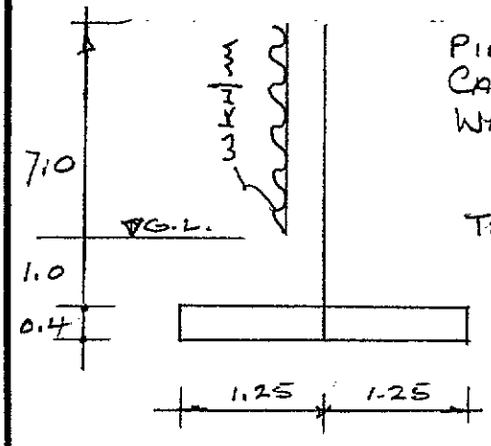
1400 × 1400 × 400 dp
T16 @350 e.w. BTM

BASES (F, G, H & J) - 9

LOADING: ROOF = 10.3/2 × 3.35 × 16.0/2 = 138.0
COLS = 17.3
PAD = 26.3
181.60

1400 × 1400 × 400 dp T16 @ 350 ew. BTM.

BASES (F, G, H & J) - (6, 12).



PIERS TO ACT AS VERT. CANTILEVERS TO RESIST WIND FORCES.

TRY 1000 W × 2500 LG × 400 DP PAD

$Z = 1.04\ m^3$

$W = [10.3/2 \times 0.7]/2$ = 1.8 kN/m
BM = 1.8 × 7.0 = 4.5 = 56.7 kN m

VERTICAL LOADING:

ROOF = 10.3/2 × 3.35 × 8.0/2 = 69.0
WALL = 68.6 × 4.8 = 329.3
BEAM = 6.3 × 4.8 = 30.2
PAD = 34.0 say
462.5 kN

UNFACTORED LOAD = 462.5/1.5 = 308.3 kN

a) D.L. + L.L. only
G.B.P. = 308.3/1.0 × 2.5 = 123 kN/m² ok

b) D.L. + L.L. + W.L.
G.B.P. = 308.3/1.0 × 2.5 ± 56.7/1.04
= 123 ± 55 = + 178 or + 68 kN/m²
ALLOWABLE G.B.P. = 150 × 1.25 = 187.5 kN/m² o.k.

PAD:-

BM. = (462.5 / 8 × 2.5) + 56) × (2.5 - 1.65)² = 73.4 kNm

As = 73.4 × 10⁶ / 460 × 0.87 × 340 × 0.9 = 599 mm²
Try 4T16, Aspro = 804 mm² ok.

1000 × 2500 × 400 DP
B - 4T16
L - 8T16
@ 550 cts

GROUND FLOOR SLAB

STORAGE HT. = 5.4 m
DESIGN LOAD = 5.4 × 4.8 = 26 kN/m²

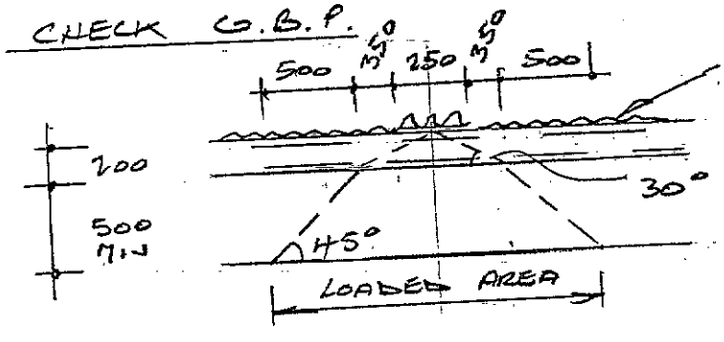
SAY 30 kN/m²

FLOOR TO BE DESIGNED FOR FUTURE MEZZANINE.

MEZZANINE FLOOR DESIGN LOAD = 5.0
DEAD LOAD (2nd CONST.) = 1.0
6.0 kN/m²

COLUMN P.L. BASED ON 3.8 m × 4.6 m GRID = 6.0 × 3.8 × 4.6 = 105 kN
ASSUME 250 × 250 BASE PLT.

CHECK G.B.P.



2.4 × 4.8 = 11.5 kN/m²

LOADED AREA = 1.95 × 1.95 = 3.8 m²
TOTAL LOAD = 105 + (3.8 × 11.5) = 148.7 kN
G.B.P. = 148.7 / 3.8 = 39.1 kN/m²
DESIGN G.B.P. = 50.0 kN/m²
o.k.

200 DP SLAB
A193 MESH TOP & BTM

GTS

PAD:-

BM. = $(462.5 / 8 \times 2.5) \times (2.5 - 1.65)^2 + 56.7$ = 73.4 kNm

$A_s = 73.4 \times 10^6 / 460 \times 0.87 \times 340 \times 0.9$ = 599 mm²

Try 4T16, $A_{s\,prov}$ = 804 mm² ok.

1000 x 2500 x 400 dp

B - 4T16
L - 8T16
@ 350 cts

GROUND FLOOR SLAB

STORAGE HT. = 5.4 m

DESIGN LOAD = 5.4 x 4.8 = 26 kN/m²

SAY 30 kN/m²

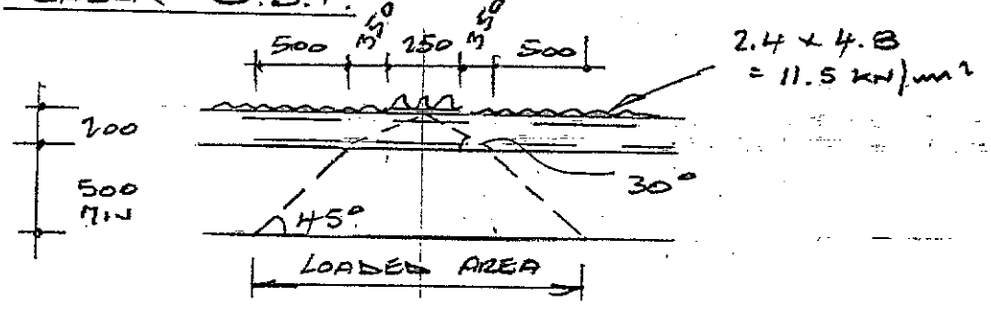
FLOOR TO BE DESIGNED FOR FUTURE MEZZANINE.

MEZZANINE FLOOR DESIGN LOAD = 5.0
DEAD LOAD (Cgmt Const.) = 1.0
6.0 kN/m²

COLUMN P.L. BASED ON 3.8 m x 4.6 m GRID = 6.0 x 3.8 x 4.6 = 105 kN

ASSUME 250 x 250 BASE PLT.

CHECK G.B.P.



LOADED AREA = 1.95 x 1.95 = 3.8 m²

TOTAL LOAD = 105 + (3.8 x 11.5) = 148.7 kN

G.B.P. = 148.7 / 3.8 = 39.1 kN/m²

DESIGN G.B.P. = 50.0 kN/m²

o.k.

200 DP SLAB
A193 MESH
TOP & BTM

COLUMNS

COLUMN C-7/8 300 x 300 Sq.

		kN
LOADING: BEAM	= 132.6 + 11.1 / 2	= 735.9
COL		= 10.5
		746.4

Try 4T20, Asc = 1260 mm²

CAPACITY = (0.35 x 35 x 300 x 300) + (0.67 x 460 x 1260) / 10³ = 1491 kN o.k.

4T20 R10 LINKS @ 250 CTS

COLUMN 9-E 500 x 215

LOADING - BEAM	= 46.8 x 9.3 / 2	= 217.8
COL		= 10.0
		227.8 kN

Try 4T20

CAPACITY = (0.35 x 35 x 500 x 215) / 10³ + 388 = 1705 kN o.k.

4T20 R10 LINKS @ 250 CTS

PIER F6 1650 x 215

CRITICAL LOAD CASE IS WIND LOADING:

BM	= 56.7 + 1.4	= 79.4 kNm
d	= 1650 - 40 - 10 - 10	= 1590 mm
As	= 79.4 x 10⁶ / 460 x 0.87 x 1590 x 0.9	= 139 mm

NOM REINF.

14T16 @ 250 CTS

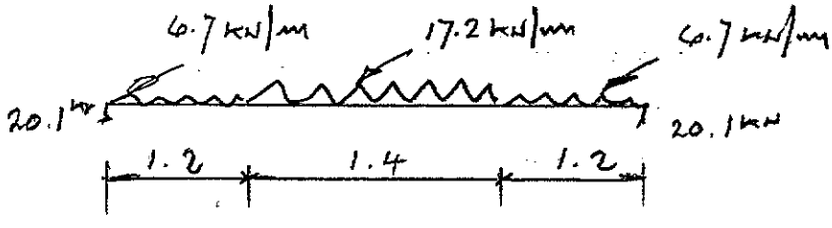
GTS

STAIRS

			kN/m²
LOADINGS:	FLIGHTS	DEAD	= 7.7
		LIVE	= 4.0
			11.7
	DESIGN LOAD		= 17.2 kN/m²
	LANDINGS	DEAD	= 5.0
		LIVE	= 4.0
			9.0
	DESIGN LOAD		= 13.4 kN/m²

$f_{cu} = 35$
$d = 119$

150 WAIST, $d = 150 - 25 - 6 = 119$ mm



$M = 20.1 \times 1.9 - 6.7 \times 1.2 \times 1.3 - 17.2 \times 0.7^2/2 = 23.5$ kNm

$A_s = 23.5 \times 10^6 / (460 \times 0.87) \times 119 \times 0.95 = 520$ mm²

Try T12 @ 200, A_s prov = 566 mm²

T12 @ 200

SITE INVESTIGATION REPORT

JOB : Tallaght Leisure/Retail Development Phase III

CLIENT : Southside Taverns

HORGAN LYNCH & PARTNERS
Consulting Engineers,
58 Nth Gt Charles St.,
Mountjoy Square,
Dublin 1.

ENGINEER : A. W. Holmes

1.0 Site Name and Location

Tallaght Sportsbowl site at Old Bawn Road, Tallaght, Dublin.

2.0 Proposed Development

2 No. single storey and 1 No. two storey retail/office units.

3.0 Topography

Gently sloping area without trees. Mostly covered with long grass and weeds.

4.0 Date Trial Holes Made

25th September 1991.

5.0 Weather Conditions

Dry following about two months of low rainfall.

6.0 Trial Pit Records / Location

See attached trial pit logs and extract of site plan.

7.0 Summary of Site Conditions

0 - 450	Hardcore/clay fill containing some rubbish and rubble.
450 - 550	Old sod line (original ground level)
550 - 1000	Black clay with small stones and roots. Some brick and glass contamination at high level.
1000 - Base	Grey-brown stoney clay (Boulder clay).

8.0 Ground Water

Water seeped from boulder clay stratum after about 15 mins. Data from previous survey carried out on the site in the Spring of the year indicates that water will also be present in the upper clay (Topsoil) stratum during/after wet weather.

9.0 Recommendations

(a) Foundations

The grey-brown boulder clay is considered adequate to receive footings at an average depth of about 1400mm below existing ground level. Excavations should be blinded to prevent softening of the clay. Foundations may be either reinforced ground beams on pads or reinforced strip footings.

A design G.B.P. of 150 kN/m^2 is recommended.

(b) Ground Floor

A ground bearing slab can be adopted following removal of vegetable soil (containing roots) to an estimated average depth of 750mm.

10.0 Trenching

Foundation trenches may require support to sides due to instability caused by water seepage, dependent on weather conditions prevailing at time of construction.

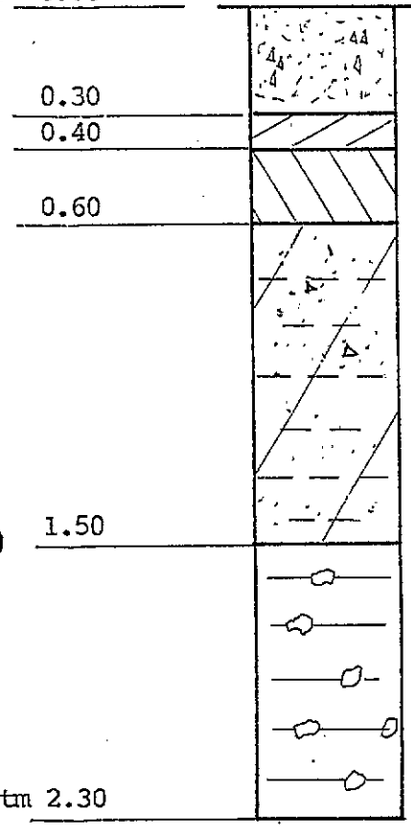
Whilst every effort has been made to ensure the accuracy of the data supplied and the analysis derived from it, the possibility exists of variations in ground conditions around and between the trial pits. No liability can be accepted for such variations.

SITE INVESTIGATION REPORT

JOB : Tallaght Leisure/Retail Development Phase III

TRIAL HOLE NO. 1 SHEET NO. 1 OF 4

HORGAN LYNCH & PARTNERS,
Consulting Engineers,
58 Nth Gt Charles St.,
Mountjoy Square,
Dublin 1.
Phone : (01) 728588



0.00	
	Hardcore Fill
0.30	
0.40	Old sod/original ground level
	Black vegetable clay (Topsoil) with stones and fine roots
0.60	
	Black clay contaminated with some brick and glass fragments becoming firmer and cleaner with depth
1.50	
	Very moist light brown/grey stoney clay (Boulder Clay)
Btm 2.30	

OBSERVATIONS

Water seepage in Boulder Clay

TYPE OF MACHINE USED JCB

DATA RECORDED BY A. W. Holmes

DATE 25th September 1991

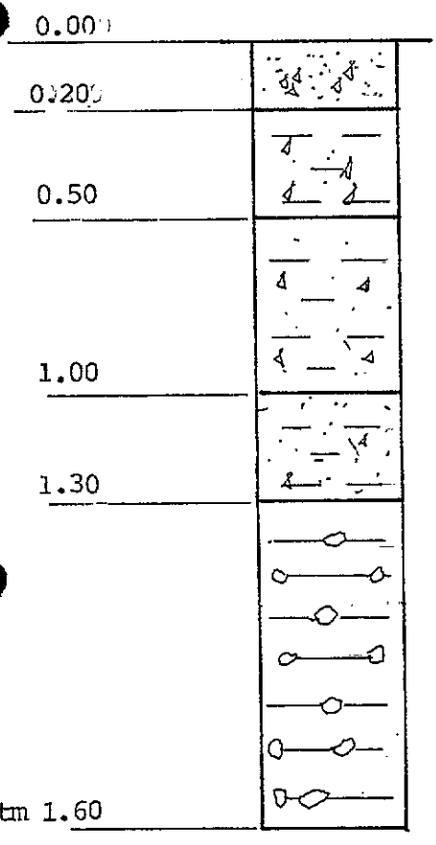
WATER RECORDED AT DEPTH

SITE INVESTIGATION REPORT

JOB : Tallaght Leisure/Retail Development Phase III

TRIAL HOLE NO. 4 SHEET NO. 4 OF 4

HORGAN LYNCH & PARTNERS,
Consulting Engineers,
58 Nth Gt Charles St.,
Mountjoy Square,
Dublin 1.
Phone : (01) 728588



Hardcore and clay

Black clay with fine roots (Topsoil)

Black stoney clay

Light brown sandy clay in pockets

Grey-brown stoney clay (Boulder clay)

OBSERVATIONS

Water seepage at bottom of pit (from boulder clay stratum)

TYPE OF MACHINE USED JCB

DATA RECORDED by A. W. Holmes

DATE 25th September 1991

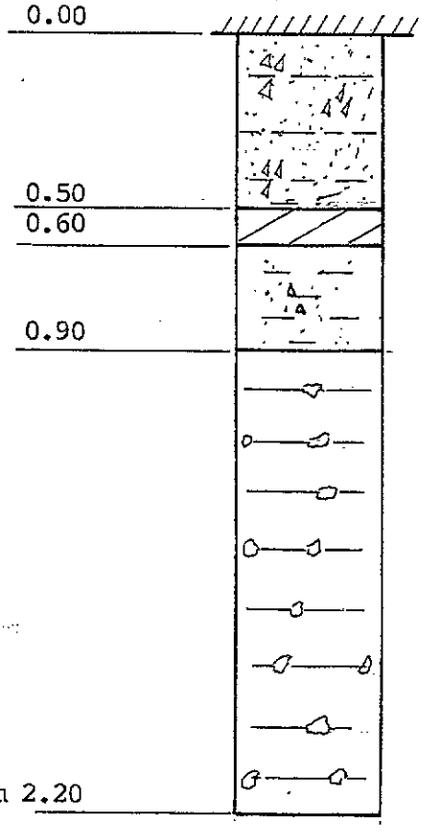
WATER RECORDED AT DEPTH

SITE INVESTIGATION REPORT

JOB : Tallaght Leisure/Retail Development Phase III

TRIAL HOLE NO. 2 SHEET NO. 2 OF 4

HORGAN LYNCH & PARTNERS,
Consulting Engineers,
58 Nth Gt Charles St.,
Mountjoy Square,
Dublin 1.
Phone : (01) 728588



Long grass and weeds

Hardcore and clay mix

Old sod/original ground level

Firm black stoney clay

Grey-brown stoney clay
(Boulder clay)

OBSERVATIONS

Water seepage from Boulder clay

TYPE OF MACHINE USED JCB

DATA RECORDED BY A. W. Holmes

DATE 25th September 1991

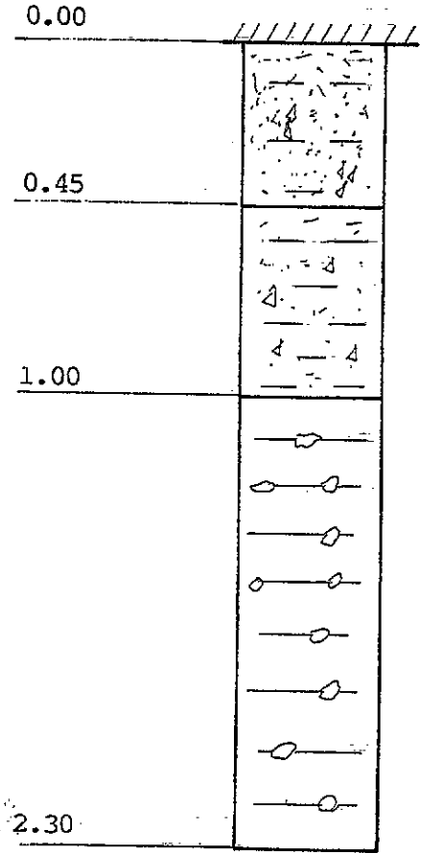
WATER RECORDED AT DEPTH

SITE INVESTIGATION REPORT

JOB : Tallaght Leisure/Retail Development Phase III

TRIAL HOLE NO. 3 SHEET NO. 3 OF 4

HORGAN LYNCH & PARTNERS,
Consulting Engineers,
58 Nth Gt Charles St.,
Mountjoy Square,
Dublin 1.
Phone : (01) 728588



Long grass and weeds

Top soil and hardcore mix with rubbish contamination, plastic, etc.

Black clay with stones (Topsoil)

Grey-brown stoney clay (Boulder clay)

OBSERVATIONS

Water seepage from boulder clay stratum.
Rubbish and builders rubble dumped on surface.

TYPE OF MACHINE USED JCB

DATA RECORDED BY A. W. Holmes

DATE 25th September 1991

WATER RECORDED AT DEPTH

HORGAN LYNCH PARTNERS
CONSULTING ENGINEERS

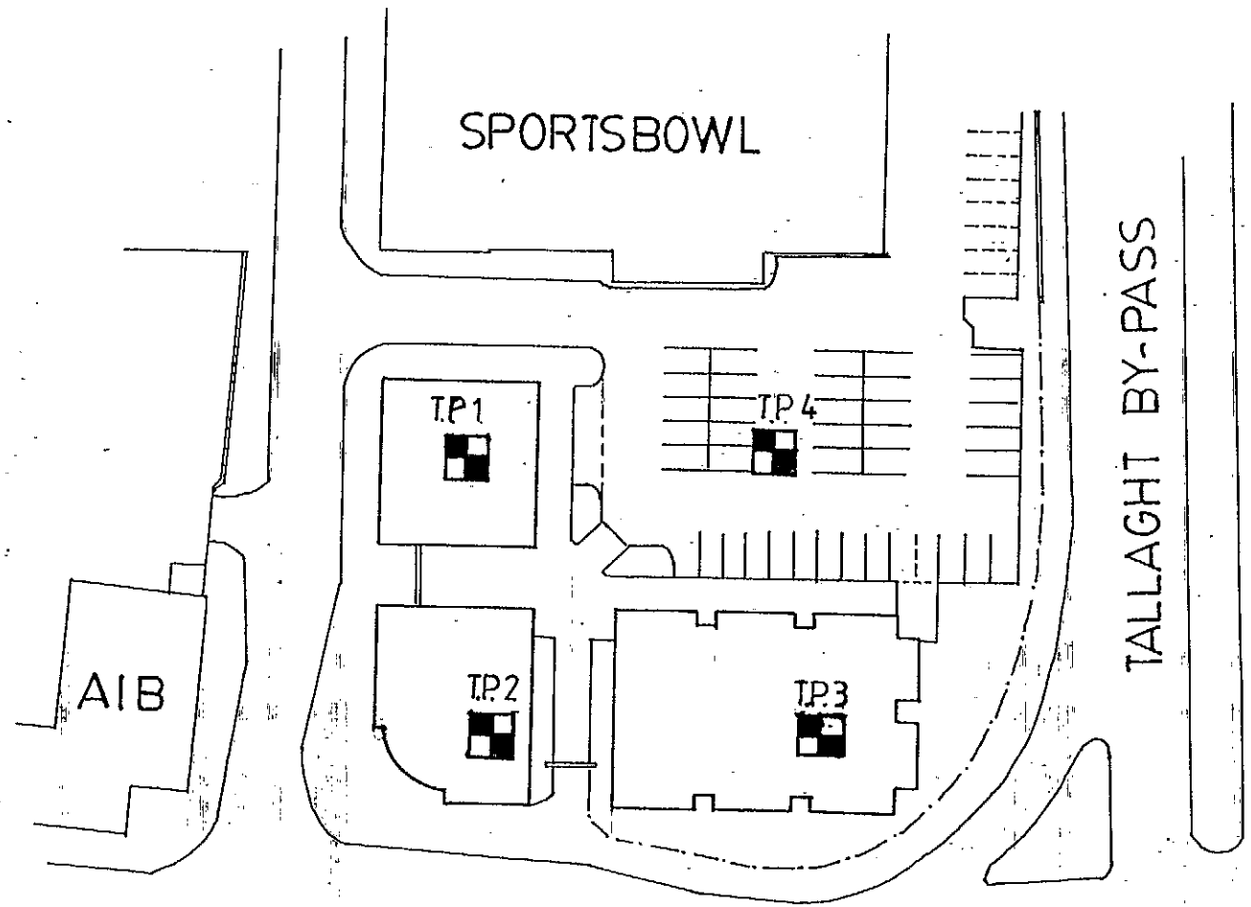
CLIENT

PROJECT
TALLAGHT PHASE III

TITLE
TRIAL PIT LOCATIONS

SCALE	PAGE
DRAWN A.R.	
DATE Sept. 91	
CHKD	

REV	DATE	BY



DRG. No. KM/04/TPL1

GTS 12374

HORGAN LYNCH & PARTNERS

STRUCTURAL SPECIFICATION

TALLAGHT LEISURE/RETAIL DEVELOPMENT

PHASE III

KM/04

CONCRETE SPECIFICATION

TALLAGHT LEISURE/RETAIL DEVELOPMENT
PHASE III

KM/04

1.0 Concrete Work

The materials, labour and workmanship in and connected with the execution of the concrete work shall be the best of their kind without regard to any trade terms and the contractor shall employ a duly qualified person experienced in reinforced concrete construction to supervise the work. The quality of materials and the standard of workmanship for the reinforced concrete shall comply with the relevant clauses of BS 8110 Part 1 in regard to all requirements not otherwise described in this Specification.

2.0 Materials for Concrete

Fine and course aggregates shall conform to Irish Standard Specification No. 4 'Coarse & Fine Aggregates from Natural Sources for Concrete' except that the use of 'all-in' aggregates will not be permitted.

Coarse aggregate shall be washed gravel or crushed stone of 40mm or 20mm max. size.

Fine aggregate shall be washed sand of 4.5mm max size which can be combined with the coarse aggregate so as to give a combined aggregate grading which lies in the relevant grading zone of Road Note 4 (issued by the Road Research Laboratory).

Cement
"Portland cement used in concrete, shall be certified as complying with I.S.1:1963 as amended, in accordance with the Irish Standard Mark Licensing Scheme or approved equal Manufacturers' or suppliers' certificates of compliance with the Standard shall be provided when requested by the architect.

Water
Water for the work shall be of Potable quality.

The amount of water shall be measured by volume or by weight. Any solid admixtures to be added shall be measured by weight only, but liquid or paste admixtures shall be measured by volume or by weight.

The batch weights of aggregates shall be adjusted for the moisture content of the aggregates being used. The quantity of water contained in the aggregates shall be determined by the contractor in accordance with a method approved by the Architect, and the quantity of water contained in the aggregates being used.

The accuracy of all measuring equipment shall be within 3% of the quantity of cement, water or total aggregates being measured and with 5% of the quantity of any admixture being used. All measuring equipment shall be maintained by the Contractor in a clean, serviceable condition.

The mixer shall comply with the requirements of BS 1305 or BS 4251 where applicable. The mixing time shall not be less than two minutes or the time necessary to ensure compliance with the required strength. When the mixer complies with BS 4251 no water shall be added at the batching plant or in transit to site.

3.0 Transporting & Pumping Concrete

The concrete shall be transported from the mixer to the formwork or place of deposit as rapidly as practicable by method which shall prevent the segregation or loss of any of the ingredients and shall maintain the required workability.

4.0 Placing & Compaction of Concrete

The concrete shall be evenly placed in its final position and shall not be worked or allowed to flow in a horizontal direction. The concrete shall be deposited in layers to a compacted depth not exceeding 450mm where internal vibrators are used or 300mm in all other cases. The concrete required for one construction unit shall be placed in one continuous operation.

The concrete shall not be dropped from a height exceeding 1800mm unless approved by the Architect.

The concrete shall be thoroughly compacted and worked around the reinforcement and embedded fixtures, and into corners of the formwork to form a solid dense mass, free from voids, and which shall have the required surface finish when the formwork is removed. Unless otherwise approved by the Architect compaction shall be achieved using vibrators.

The number and method of use of vibrators shall be such as to ensure uniform compaction.

The heads of immersion vibrators shall be sufficiently small to pass freely between the reinforcing bars. Vibrators shall not be applied via the reinforcement or embedded fixtures.

External vibrators shall be used in such a manner as to ensure efficient compaction without surface blemishes, hollows or bulges.

The concrete shall not be vibrated after setting has commenced and shall not be subsequently disturbed.

5.0 Construction Joints

Construction joints shall be located in the positions shown on the drawings and the position and detail of any construction joints not described in the contract shall be subject to the approval of the Architect.

Longitudinal joints shall be provided by means of steel roar forms braced in true vertical alignment, with provision made for the dowels between pours.

In no case shall concrete be formed or run to a feather edge.

6.0 Concreting in Cold Weather

All concreting work shall be entirely suspended when the temperature in the shade is below 2°C, and concrete shall not be mixed when the temperature in the shade is below 4°C.

The Contractor shall provide a maximum and minimum thermometer of approved design for the purpose of measuring the shade temperature of the outside air.

The temperature of concrete measured at the surface at the most unfavourable position shall not be less than 5°C at the time of placing. Any batch of concrete whose temperature as measured above falls below 5°C shall be removed from the site.

Subsequent to or during cold weather the water and aggregates used in the mix shall be free from snow, ice and frost. Formwork, reinforcement and any other surfaces against which fresh concrete is to be poured shall be free from snow, ice and frost and have a temperature within 2°C of the temperature of the fresh concrete.

Concrete placed in cold weather shall be protected from damage by frost with a covering of suitable insulation material.

All concrete damaged by frost or other weather conditions shall be cut out and replaced with fresh concrete at the contractor's expense.

6.1 Concrete in Hot Weather

During hot weather the contractor shall ensure that the constituent materials are sufficiently cool to prevent the concrete from stiffening prematurely. The temperature of mixing water shall be less than 60°C.

7.0 Protection of Concrete Foundations

Reinforced concrete foundations, up to a thickness of 300mm shall not require formwork, the concrete being cast against the sides of the excavations. The contractor shall ensure that the footings be kept clear of loose materials from the sides of the excavations. Particular care shall be taken to keep footings clean during the operation of fixing reinforcement and pouring concrete. Subject to the approval of the Architect reinforced concrete foundations of thickness greater than 300mm shall not require formwork.

8.0 Curing

The method and duration of curing shall be such that the concrete has satisfactory durability and strength and the member suffers a minimum of distortion, is free of excess efflorescence and does not cause, by its shrinkage, cracking in the structures.

Similar components shall be cured under the same conditions.

The concrete during the curing period shall be protected to prevent rapid changes in temperature at the surface, sudden temperature variations across the section, and excessive loss of water by evaporation due to drying winds or sunshine.

The method of curing and protection shall be approved by the Architect.

The use of accelerating or retarding curing agents or compounds shall be with the written consent of the Architect only.

9.0 Loadings

Concrete shall at no time be subjected to loading, including its own weight which will induce a compressive stress in it greater than one-third of the characteristic strength. The assessment of the strength of the concrete and the stresses produced by the load shall be subject to the agreement of the Architect.

10.0 Openings

No tampering with the concrete whether by cutting holes or otherwise by other trades shall be allowed without the written consent of the Architect.

All pipes passing through the concrete shall be provided with an approved fibre tube and shall be concreted in position during the course of the work.

11.0 Designed Mix

The Contractor shall be responsible for selecting the mix proportions to achieve the specific strength workability and durability.

Before commencement concreting the Contractor shall produce at his own expense, evidence for each grade of concrete showing that the mix proportions and manufacturing method produce concrete of the specific quality.

The following information shall be submitted to the Architect before any mix is supplied or used:-

1. Nature and Source of material

2. Either:-

   (a) Appropriate existing data as evidence of satisfactory previous performances for target mean strength, current margin, workability and water/cement ratio:

   (b) Full details of tests of each ingredient per cubic metre of fully compacted concrete.

The Contractor shall notify the Architect in writing of any change in source of materials and any change in cement content which results in a difference greater than 20 Kg/m^3 from the cement content previously used.

11.1 Strength of Concrete

The grades of concrete shall be as follows:-

Grade	Characteristic Strength Mix N/mm²	Compliance Strength in N/mm² assuming a current margin of 15 N/mm² at :	
		7 days	28 days
Leanmix			
C10	10	11.5	17.5
C20	20	18.0	27.5
C25	25	21.5	32.5
C30	30	25.0	37.5
C37.5	37.5	30.0	45.0

Compliance with the specified characteristic strength shall be judged by test made on cubes at 7 days and at 28 days.

The rate of sampling shall be one sample from a randomly selected batch representing an average volume of not more than 7 M^3 or 7 batches whichever is smaller for suspended slabs, beams and exposed architectural concrete: the lesser of 15 M^3 or 15 batches for walls and floating slabs. Higher rates of sampling and testing shall be carried out on the Architects instructions.

Each cube shall be made from a single sample taken from a randomly selected batch of concrete.

Compliance with the specified characteristic strength shall be assumed only if :

1. The average strength determined from any group of four consecutive test cubes exceeds the specified character strength by not less than 0.5 times the current margin, and

2. Each individual test result is greater than 85% of the specified characteristic strength.

The current margin shall be taken as 15 N/mm² unless a smaller margin has been established (under 6.7.6.2 of CP 119 Part 1: 1972) to the satisfaction of the Architect.

11.2 Test Cubes

The strength of the concrete shall be verified by means of 150mm test cubes, made under the supervision of the Clerk of Works.

The cubes shall be made, compacted by hand and stored in the manner specified in BS Code of Practice 8110. The concrete sample for the making of the test cube shall be obtained at the place of deposition of the concrete. The cubes shall be given an identification mark and an accurate register of the location and dates of each cube sample shall be kept on site, so that the location of the concrete from which the cube was made may be ascertained at any time.

The Contractor shall provide a sufficient number of machined steel or cast iron cube moulds to carry out the sampling required by the specified method of quality control.

The action to be taken in respect of concrete which is represented by test cubes which fail to meet either of the compliance criterion shall be determined by the Architect.

12.0 Striking of Formwork

The minimum period for retaining formwork in position before striking shall not be less than indicated in the following table.

Type of Formwork	Cement Type			
	Normal Portland Cement		Rapid Hardening Portland Cement	
	Mean Air Shade Temperature		Mean Air Shade Temperature	
	7°C	16°C	7°C	16°
Vertical facing to columns, walls and beams	12 hrs	12 hrs	12 hrs	12 hrs
Soffit facing to slabs	5 days	3 days	4 days	2 days
Supports to slabs	12 days	10 days	10 days	8 days
Soffit facing to beams	5 days	3 days	4 days	2 days
Supports to beams	18 days	15 days	15 days	12 days

Periods during which the air shade temperature remains below 3°C shall not be taken into account. Provided always that the minimum periods before striking are as in the above table, the actual times of striking shall remain the responsibility of the Contractor.

Where the Contractor can submit evidence that the performance of the structure will not be adversely affected by reducing the specified periods before striking, reduced striking times may be approved.

Re-propping shall not be permitted unless approval is obtained.

13.0 Classes of Concrete

Mixes for the various classes shall be denoted by the grade in N/mm² and maximum aggregate sized in mm, e.g. 30/20 denotes a grade 30 concrete with 20mm maximum aggregate size.

13.1 Minimum Cement Content for reinforced concrete.

The nominal cover to all reinforcement (including links) and minimum cement content to meet durability requirements shall be as follows :-

	Nominal Cover (to all Reinforcement)				
	mm	mm	mm	mm	mm
Mild	20	20	20	20	20
Moderate	-	40	30	25	20
Severe	-	-	40	30	25
Very Severe	-	-	50	40	30
Extreme	-	-	-	60	50
Concrete Properties					
Maximum free water/cement ratio	0.65	0.60	0.55	0.50	0.45
Minimum cement content (kg/m3)	275	300	325	350	400
Characteristic strength N/mm2	30	35	37.5	40	42.5

This table relates to normal weight aggregate of 20mm nominal maximum size.

Mildly exposed concrete shall be completely protected against weather, or aggressive conditions.

Moderately exposed concrete is defined as concrete sheltered from severe rain and against freezing whilst saturated with water. Buried concrete and concrete continuously under water shall be deemed moderately exposed.

Severe exposure is defined as exposure to driving rain, alternate wetting and drying and to freezing whilst wet, and subject to heavy condensation or corrosive fumes.

13.2 Maximum Cement Content

The cement content of concrete shall not be greater than 550 kg/m^3

14.0 Placing Bending Reinforcement

All bar reinforcement shall be bent and cut in accordance with BS 4466. Particular care shall be taken to ensure that the radius of bend of reinforcement projects from concrete is not less than that specified in BS 4466.

Bars shall not be reshaped or rebent without the written permission of the Architect.

Reinforcement shall be accurately placed as shown on the drawings and secured against displacement by tying wire and shall be supported on an adequate number of small precast concrete blocks with tying wire cast in, or metal spacers or plastic spacers, or metal hangers.

All joints in round mild bar reinforcement shall have overlaps of at least 50 diameters of the smallest of the overlapping bars and in deformed high tensile bar reinforcement lapps of at least 40 diameters of the smaller of the overlapping bars.

Laps in fabric reinforcement shall be as follows:-

Oblong mesh : 450mm along longitudinal wires and 75mm along transverse wire.

Square mesh : 300mm both ways

Reinforcement shall not be surrounded by concrete unless it is free from mud, oil, paint, retarders, loose rust, loose mill scale, snow, ice, grease or any other substance which will affect adversely the steel or concrete chemically, or reduce the bond between steel and concrete.

All reinforcement shall be bent cold and no heating or welding will be permitted. When the temperature of the steel is less than 5°C, the speed of bending shall be reduced.

15.0 Workability

Workability shall be determined by means of the slump test, compacting factor test or VB consistometer test. The contractor shall keep on site the necessary equipment in good working order for carrying out one of these.

A plasticizer additive shall not be used without the approval of the Architect.

Concrete with slumps greater than 50mm or a reading greater than 0.91 in the compacting factor test shall not be permitted.

16.0 Formwork

All formwork whether of wood, metal or glass reinforced plastic shall in every respect be adapted to the structure and to the surface finish of the concrete. All formwork shall be fixed in perfect alignment and be securely braced to withstand displacement, deflection or movement of any kind, the weight of forces exerted by the wet concrete, the movement of persons, material or plant and the effects of mechanical vibrators. Notwithstanding approval by the Architect the strength and adequacy of the shuttering shall remain the responsibility of the Contractor.

Formwork defined as wrought shall be lined with an approved smooth non-absorbent lining, or rendered non-absorbent by means of polyurethane based paint or varnish.

All pipes, angles and inserts of any kind shall be firmly fixed to the formwork which shall be neatly and accurately cut around them.

16.1 Joints in formwork

All joints shall be sufficiently close and tight to prevent the leakage of grout.

Joints in forms shall be horizontal or vertical, and perfect alignment of joint pattern shall be maintained consistent with the first pour of concrete. Where concrete is vibrated all joints are to be tongued and grooved or the boards shall have straight parallel edges planed perpendicularly to the board edge. If necessary joints are to be caulked or sealed with approved compound or material.

Where steel or glass reinforced plastic formwork is used all joints and holes in the formwork shall be sealed with tape and approved adhesive.

17.0 Cast in Items and Holes

Anchor bolts for roof trusses and holding down bolts for portal frames shall be set accurately and templated and held firmly in position. During the placing of concrete the positions of all embedded shall be fully checked by an approved means to ensure the correct location. Holding down bolts in foundations shall be set with sleeves in accordance with the drawings to allow for minor adjustments.

All sleeves for pipes or other materials that pass through concrete shall be accurately set and securely held in position. Reinforcement shall not be relocated or cut. If reinforcement is found to clash with the position of any hole or sleeve the Architect shall be consulted. Sleeves shall be adequately blocked or filled with sand to prevent concrete from entering. No sleeve, pipe or chase shall intercept a structural member unless the member has been specifically designed therefore.

18.0 Ground Floor Grade Slabs

Blinded hardcore shall be placed and compacted under floor slabs in thicknesses as detailed on drawings.

18.1 Damp Proof Membrane

Before concreting begins blinding shall be cleaned down and levelled and covered with a layer of 1000 gauge polythene roll jointed at the edges.

Polythene shall be protected when laid and shall not be incorporated in the works if perforated in any way.

Polythene shall be turned up at the edges of slabs and placed under wall D.P.C.

Joints in floor slabs shall be constructed in accordance with the drawings. Joint fillers in isolation joints shall be synthetic inorganic rigid board.

Specified reinforcement meshes shall be placed so that they lie 50mm under the finished floor level when cast.

18.2 Finish to Slab

Concrete floors shall be power float finished. Variations in level measured with a 2 metre long steel "Straight edge" shall not exceed 3mm.

Floors shall be laid and finished within rooms in a single operation so that an integral finish is achieved.

The slab shall be levelled, between screeds to a true level plane surface by means of screeding beams immediately after laying.

STRUCTURAL STEELWORK SPECIFICATION

TALLAGHT LEISURE/RETAIL DEVELOPMENT

PHASE III

KM/04

1.0 General

1.1 Standards

Where standards are referred to the most recent editions of the standards shall be deemed to apply. Where a standard has been superseded the new standard shall be deemed to apply.

1.2 Notwithstanding the following, all steelwork shall be fabricated and erected in accordance with the National Structural Steelwork Specification for Building Construction published by the B.C.S.A.

2.0 Materials

2.1 Steelwork

Materials shall be mild steel to conform to BS 4360 or approved equal.

2.2 Welding

Metal arc welding shall be in accordance with BS 5135 or approved equal.

2.3 Electrodes for welding shall comply with BS 639.

2.4 Nuts and Bolts

Unless otherwise shown Bolts and Nuts shall be black bolts and nuts to BS 4190 or approved equal. Bolts with designation 8.8 shall be used. Tapered washers to tapered surfaces shall comply with BS 3410 or approved equal.

2.5 Steelwork Rolled Sections shall conform to BS 4.

2.6 Grade 43 steel shall be used throughout.

2.7 All steelwork shall be free from laminations edge defects and inclusions.

3.0 Workmanship

3.1 Shop Drawings

The steelwork contractor shall prepare and submit two copies of shop drawings for approval at least three weeks before required fabrication work is due to commence.

3.2 Erection Programme

A programme for the erection of the works shall be prepared and submitted by the contractor on appointment for the execution of the work.

3.3 Tolerances (To be in accordance with B.C.S.A. publication listed in 1.2)

The permissible dimensional deviations for structural steel elements above foundations are summarised as follows:

For any nominally horizontal surface measured from the nearest reference level $^{+}/_{-}$ 10mm.

For any nominally vertical surface measured from the nearest level $^{+}/_{-}$ 10mm, maximum allowable deviation of the top of column relative to base (out of plumb) is storey height/600.

3.4 Quality Control

A provisional sum is included for testing and such tests as are required shall be carried out by an approved body. The contractor will be required to provide attendances for testing.

3.5 All steel is to be fabricated in accordance with BS 449.

3.6 The contractor shall give one week's notice of commencement of steelwork fabrication.

3.7 Cleat Projections

Cleats shall be fixed to project 3mm beyond the end of simply supported members.

3.8 De-Burring

All burrs and sharp arises shall be removed.

3.9 Splicing

Splices shall not be used except where shown on the drawings.

3.10 Each element of fabricated steelwork shall be marked in accordance with an assembly drawing before delivery to site.

4.0 Erection

4.1 All structural steelwork shall be erected in accordance with BS 449.

4.2 Flame Cutting

Flame cut edges which will be subjected to substantial stress or which are to have weld metal deposited on them shall be reasonably free from gouges. Occasional notches or gouges not more than 3mm deep shall be permitted. Gouge marks greater than 3mm that remain from cutting shall be removed by grinding. All re-entrant corners shall be shaped to a radius of at least 15mm. Flame cutting equipment shall not be used on site without prior approval.

4.3 The lengths of tack welds which shall be incorporated in the finished work shall be not less than four times the thickness of the thicker plate or 50mm, whichever is the smaller.

4.4 Qualification of Welders

All welders shall hold an approved proficiency certificate or approved qualification, appropriate to the class of work on which they are to be engaged. Copies of proficiency tests shall be supplied on request. Where proficiency certificates are not available a welder's competence shall be ascertained by some other agreed method.

4.5 Bolting

Drift holes which are one third diameter or more off centre shall not be used.

4.6 Washers

Washers are to be placed under black bolts and nuts of all bolts connecting metal coated steel.

5.0 Protection of Steelwork

5.1 Generally

The references in brackets in clauses in this specification are to numbers of clauses and sub-clauses in British Standard Code of Practice BS5493 - Protective Coating of Iron and Steel Structures against corrosion. The recommendations of any clause or sub-clause so referred to are requirements of this specification.

All stages of preparation and protection of the works shall be carried out in workshops with suitable lighting, heating and ventilation and in accordance with Cl. 22.26.

All steelwork surfaces shall be blast cleaned to remove all millscale, rust and other contaminations to a minimum standard of SA2-1/2 according to Swedish Standard STS055900.

The abrasive used during blast cleaning shall be steel, malleable iron or chilled iron shot of a grading suitable to give a maximum surface amplitude of 100 microns.

All surface defects likely to be detrimental to the protective system, such as cracks, surface laminations and deep pitting, shall be removed in accordance with BS 4360. Fabrication surface defects, such as fins at saw cuts and burrs, shall be similarly removed.

All dirt and debris shall be removed from surfaces after blasting by vacuum cleaner, airline or brush. If any residues are trapped in the paint, the affected area shall be reblasted and recoated.

After blast cleaning, tests shall be made to detect soluble rust-producing salts, in accordance with Appendix 'G' BS5493 and, if found to be positive, the steel shall be cleaned with a suitable solvent and washed with clean warm water and then dried immediately using hot air.

All shop weld areas and shop bolted or riveted connections shall be blast cleaned to the same standard as adjacent steel. All weld slag and spatter shall be removed.

Blast cleaned surfaces shall be overcoated as soon as possible after cleaning, but in any event within four hours from the start of cleaning, and the steel shall be kept indoors in a clean, dry, controlled environment during this period.

5.2 Secondary Painting Preparation

Any contamination of the treated steelwork surface shall be removed before further protective coatings are applied. Where spirit or naphtha may be used to clean the steelwork followed by scrubbing with a 22% solution of Teepol and a thorough rinsing with clean water.

Where the contamination (e.g. oil or grease) cannot be removed completely by white spirit or naphtha, a suitable solvent shall be obtained from the paint manufacturer and used, followed by scrubbing and washing as above.

Where the surface has become dirty, as opposed to contaminated, or has been exposed in the open for more than two days, it shall be scrubbed down with a 2% solution of Teepol and hosed with clean water.

5.3 Removal of Zinc Salts

Where zinc coatings, whether flame-sprayed, hot-dip galvanised or zinc-rich paints, have been exposed to the weather for more than one week they shall be wired brushed and washed with clean, warm water to remove the zinc salts formed, before coatings.

5.4 Drying

Paint shall not be applied to wet or damp surfaces.

5.5 Ambient Conditions (23.2) (23.3) (23.4)

The ambient conditions during painting shall be such as to ensure that there is no condensation on the steel and that the temperature and humidity are suitable for the application of the particular paint (see manufacturer's instructions).

5.6 Inaccessible Areas

Areas of steel inaccessible after erection shall be treated during fabrication and erection so that they receive the full treatment specified.

5.7 Paint Application (22.2.6)

Paints shall be applied by the methods stated in accordance with the manufacturers instructions, so as to give an even, uniform coating.

5.8 Strip Coats (18)

An extra strip coat of primer shall be applied to all edges and corners of steelwork which will be exposed externally in the finished structure.

5.9 Minimum Dry Film Thickness (19)

Each coat of paint shall be applied at a spreading rate to give the required minimum dry film thickness.

5.10 Drying & Overcoating Period

The maximum and minimum overcoating period and drying periods before exposure to weather or to being transported shall be those stated by the paint manufacturer.

5.11 Remedial Work (32)

Any damaged areas of paint shall be cleaned and made good within 14 days, to a standard equivalent to that of the adjacent paintwork. If damage has exposed parent metal local reblasting may be required to prepare the steel for remedial painting. The maximum time lag between cleaning steel and applying primer shall be not more than two hours.

5.12 Standard of Protection to Connections

Joints shall be painted with the specified materials to give the standard of protection achieved on adjacent steel. Strip coats shall be used, particularly to seal all edges of steel and gaps between adjacent steel surfaces.

Preparation Specification A

5.13 Concrete Encased Steelwork & Steelwork to be Fire Encased

All steelwork which is to be encased in concrete shall be blast cleaned and left unpainted.

5.14 Site Welds (25.4)

Site welds, if used, and adjacent areas shall be cleaned to remove all welding slag, spatter and flux residues by chipping, blast cleaning and washing before painting commences.

5.15 Cleaning of Jointing Bolts (25.2)

Bolted joints shall be thoroughly cleaned to remove all oils and grease, before painting.

Plated bolts and nuts shall be primed with an etch primer suitable for use on the particular type of surface.

Preparation Specification A

5.16 Steelwork Generally

The whole shall be dusted down and immediately painted with two coats of Berger Paints MP199 High Build Zinc Phosphate Primer at 100 microns d.f.t. or HGW approved alternative at works. Contact surfaces using high strength friction grip bolted connections should not be painted or oiled.

Surfaces in permanent contact before delivery shall be brought into permanent contact whilst the paint is still wet.

Following completion of erection, all steelwork shall be thoroughly inspected and all damaged paint and rust removed down to bright metal by the Contractor, and repainted with primer to the Engineer's satisfaction. All site connections including site bolts shall be thoroughly cleaned and repainted with one coat MP100 primer by the Contractor.

Where steelwork is to be temporarily subjected to external exposure conditions after erection, one coat of Berger M.1.0 Phenolic High Build AL180 at 75 microns d.f.t. shall be applied on site by the Contractor.

Following completion of erection all steelwork shall be thoroughly cleaned down.

Where steelwork is to be encased in brickwork, all concealed surfaces should receive a protective finishing coat of bitumen-based paint applied by the Contractor.

Where steelwork is to be encased in concrete all painting should be deleted.

BLOCKWORK SPECIFICATION

TALLAGHT LEISURE /RETAIL DEVELOPMENT

PHASE III

LL/15

1.0 Materials

1.1 All blocks shall comply with the requirements of the Irish Standard for blockwork IS 20.

1.2 Blocks shall generally be Type A Block 5 kn/mm² compressive strength as defined in IS 20.

1.3 Blocks shall be fair face finish where indicated by the Architect, otherwise they shall have standard finish.

1.4 Mortar Materials.

1.4.1 Cement for mortar shall comply with the Irish Standard for Cement I.S. 1 or approved equal.

1.4.2 Lime used in mortar shall be non-hydraulic (calcium) limes or semi-hydraulic limes and magnesium limes to conform to the requirements of B.S. 890.

1.5 Admixtures.

Admixtures may be used subject to the Architect's approval in writing.

2.0 Preparation of Mortars

2.1 Recommended Mortars

Mortar for the work shall be 1:1:6 by volume of dry materials.

2.2 Equivalent Mortar Mixes

Alternative mortar mixes may be used subject to the Architect's approval in writing.

2.3 Batching of Mortars

The materials for the mortar shall be measured accurately to conform with the specified mix proportions either by weight batching or by the use of gauge boxes.

2.4 Mixing of Mortars

The mortar shall be mixed by machine. Mortars containing cements shall be used within two hours of the mixing of the cement and water and any mortar not then used shall be discarded and not retempered.

3.0 Reinforcement, Wall and Bonding Ties

3.1 Bed Joint Reinforcement

The bed joint reinforcement for twin leaf 215 wide walls shall be brickforce or similar approved.

3.2 Wall Ties

Wall ties shall be galvanised mild steel or type 304 stainless steel and conform to the requirements of B.S. 1243, as specified by the Architect.

4.0 Handling and Storage of Materials

4.1 Cement

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

4.2 Sand

Sands shall be stored separately according to type where they will not be contaminated.

4.3 Metals

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

4.4 Blocks

Facing 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.

5.0 Testing

5.1 General

Independent testing of blocks shall be carried out in accordance with Clause 17 of BS 2028.

6.0 Workmanship

6.1 Dimensions

All blockwork shall be set out and built to the respective dimensions, thickness and heights shown upon the drawings.

When detailing, consideration should be given to the size and position of openings so as to allow for a full block to be positioned directly beneath a lintel bearing.

6.2 Uniformity

All perpends, quoins, joints, etc., shall be kept strictly true and square, other angles shall be plumbed and the whole properly bonded or tied together and the bed joints levelled as the work proceeds.

6.3 Bond

The blockwork shall be built to the bond indicated on the 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.

6.4 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.

6.5 Chases

The positions and size of the chasings shall be as indicated on the drawings and shall be carried out neatly using a chasing tool.

6.6 Weather

No block laying shall be carried out when the temperature is at or below 3°C unless precautions are taken to ensure a minimum temperature of 4°C in the work when laid and thereafter to maintain the temperature above freezing point until the mortar has hardened. Should any block wall be damaged by frost it shall be pulled down and made good at the contractor's expense. Walls shall, where necessary, be adequately braced during construction to prevent damage by winds or other causes.

6.7 Laying

Each block shall be laid and adjusted to its final position while the mortar is still plastic.

6.8 Mortar Joints

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

6.9 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.

6.10 Control Joints

Control joints shall be constructed as indicated on the drawings. Expansion joints shall be cleaned out to ensure that mortar does not bridge the joint.

6.11 Double Leaf (Cavity) walls

6.11.1 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 otherwise detailed the ties shall be staggered in alternate courses and spaced in accordance with the following table.

Least Leaf Thickness	Cavity width (mm)	Spacing of Ties	
		Horizontally (mm)	Vertically (mm)
75	50-75	450	450
90 or more	50-75	900	450
90 or more	75-100	750	450
90 or more	100-150	450	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 openings and on each side of control joints. Ties shall be laid falling to the external leaf.

6.11.2 Cavities

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

6.11.3 Weepholes (cavity walls)

Weepholes 10mm wide X 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 and at locations indicated on the drawings.

6.11.4 Vent Holes

Vent holes shall be of the dimensions as for weepholes and shall be positioned at locations indicated on the drawings.

6.12 Protection

6.12.1 Stability

Precautions shall be taken to ensure stability of walls during backfilling and concreting operations.

6.12.2 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.

6.13 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 blockwork shall be repaired with approved materials or replaced to the satisfaction of the architect.

6.14 Backfilling

Backfilling shall not be placed against concrete masonry walls within 14 days of completion of the construction. Vehicles shall not be operated closer to the wall than a distance equal to the height of the wall.

DRAINAGE SPECIFICATION

TALLAGHT LEISURE/RETAIL DEVELOPMENT

PHASE III

KM/04

Generally :

Drains generally shall be carried out in accordance with B.S. 8301 and B.S. 8000 Part 14.

Drains shall be laid to true and even gradients to falls approved by the Architects and excavations shall not be filled in until drainage system has been tested and approved by the Architects and Local Authority.

Setting Out :

The Contractor shall be responsible for the true and proper setting out of the Works, for the correctness of the position, levels, dimensions and alignment of all parts of the Works and for the provision of all necessary instruments, appliances and labour in connection therewith. The checking of any setting out or any line or level by the Architect or the Architects representative shall not in any way relieve the Contractor of his responsibility for the correctness thereof and the Contractor shall carefully protect and preserve all bench marks, site rails, pegs and other things used in the setting out of the Works.

Laying and Joining of Pipes :

The contractor shall set up and maintain bench marks on the site. Sight rails shall be set up for all lines of drains. Sight rails shall be of wrought deal at least 150 X 25 securely fixed to two substantial uprights firmly driven into the ground. Sight rails shall be erected not more than 50m apart and at each change of gradient line and level.

Pipes shall be laid true to line and level, each pipe being separately boned between sight rails.

All pipes shall be laid with the whole of the barrel of the pipe evenly and solidly supported by the bedding material with shaped holes to receive sockets or jointing collars.

Pipes shall be bedded, haunched and surrounded in Grade 20 concrete where shown on the drawings or directed by the Architect.

Completed pipelines shall have a smooth internal bore free from lipped joints, jointing or other material. Concrete stormwater pipes shall comply with B.S. 556 spigot and socket.

Cast iron foul sewer pipes shall comply with B.S. 4622.

P.V.C. Pipes & Fittings :

P.V.C. pipes shall be unplasticised P.V.C. pipes and shall comply with B.S. 4660.

Access Covers & Frames :

Access covers and frames shall comply with B.S. 497.

Refilling Trenches :

Except where special backfill material is specified trenches shall be refilled with approved excavation material.

The initial layer of backfill material shall be free from stones, shall not be thrown directly onto the pipes but shall be carefully placed and compacted in thin layers by hand up to 300mm above the top of the pipe or special surround.

Backfill around pipes, including concrete or other special materials, shall be carefully packed under and around the pipes.

Filling above the initial layer shall be deposited and compacted in layers not exceeding 230mm loose depth to a dry density not less than that of the adjoining soil.

Mechanical appliances may be used for compaction of the backfill above the initial layer, providing the appliance is suitable for the conditions and will not damage or displace the pipes.

Maintenance of Drainage during construction :

During construction and on completion all drains, manholes, catchpits and gullies shall be kept clean and free from accumulation of silt etc. Any drain, pipe, manhole, catchpit or gully which cannot be cleaned shall be replaced at the Contractors cost.

Connections to Existing Sewers and Drains :

Where pipes are to be connected to existing manholes, channels shall be formed in benching, the chamber walls cut at the correct levels and the new pipes built in together with any backdrops necessitated by the difference in level of the existing and new pipes.

Where a new manhole is to be constructed on an existing sewer the Contractor shall allow for locating the sewer and checking its level before commencing to construct the drain run to be connected thereto.

When working in existing drains and watercourses the Contractor shall provide for dealing with existing flows to enable the new work to be properly completed.

General Excavation for Pipe lines, Manholes Chambers etc.

Except where headings are specified, permitted or otherwise ordered, the ground shall be excavated to the lines and depths shown on the drawings or to other such lines and depths directed in writing by the Architect.

Trenches shall be of sufficient width to enable the pipes to be properly laid and jointed. Excavations taken out to a grater depth than necessary shall be filled to the required level with Grade 14 mix concrete at the Contactors expense. When a concrete bed or surround is required to the pipeline, manhole etc. the excavation shall be taken out to the overall dimensions of the bed or surround in the case of pipelines up to a level of 300mm above the top of the pipe, in case of a manhole etc., up to finished ground level.

Supports for Excavation :

The sides of the pits, trenches and other excavations shall be adequately supported by timber and other approved means where necessary. The excavations shall be of sizes sufficient to provide the required space inside the supports.

The contractor shall take all precautions including any necessary shoring and propping etc., to endure the safety of adjoining structures and property of all kinds.

Water in Trenches :

Trenches shall be kept free from water and shall be shaped to prevent any accumulation of water either in or adjoining the excavations or the spoil there from. The contractor shall provide any temporary drains, sumps, pumps, etc., that may be necessary and shall at all times during the contract prevent silt, oil or other contaminating material being discharged into existing or completed drains watercourses or soakaways. Catchpits or other means necessary to comply with this requirement shall be provided and kept clean by the contractor at his own cost.

Drains under building :

Drains laid under buildings shall have at least three flexible joints between each point where the pipeline is built into and supported by the structure. Concrete surround shall be formed to permit flexible joints.

Temporary Stoppers :

The open ends of drain runs and junctions shall, unless work is proceeding, be fitted with expanding stoppers. The position of all such ends of pipes shall be clearly defined by stakes and labelled.

Temporary drainage on the site shall not be connected to new sewers unless adequate measures have been taken to prevent the discharge of silt, oil or other contaminating material.

Testing of Jointed Pipes :

A water test shall be applied to all jointed pipe runs before the pipes are covered, and again after completion of all works. Any defect at either test shall be located and made good at the Contractors expense.

Each length shall maintain a minimum of 1.5m head at the highest point for a minimum of ten minutes.

Specification for P.V.C. Waterstops :

All joints so designated on the drawings are to incorporate Expandite Polyvinyl Chloride Waterstops type 250mm supercast Hydrofoil at all expansion joints and type 250mm supercast Watafoil at all construction joints, complete with all necessary moulded or pre-instructions. Jointing other than be welding will not be permitted.

The waterstops are to be installed so that they are securely held in their correct position whilst the concrete is placed. The concrete must be fully and properly compacted around the waterstops to ensure that no voids or porous areas remain. Where reinforcement is present, adequate clearances are to be left between this and all waterstops to permit proper compaction of the concrete. No holes are to be made through any waterstop. Waterstop to be tied up to reinforcement using the eyelets provided, with galvanised gying wire.

DEVELOPMENT AT CORNER OF OLD BAWN ROAD AND TALLAGHT BY-PASS FOR SOUTHSIDE TAVERNS LTD.

OUTLINE SPECIFICATION.

1. **GENERAL:**

The development is approximately 1200m² in floor area and comprises three separate buildings which will be completed as shells, including shop fronts, for subsequent fitting out by tenants.

2. **SUB-STRUCTURE:**

The sub-structure consists of reinforced concrete ground beams on reinforced concrete stub columns and pads.

3. **FLOOR:**

The Ground Floor is an in-situ reinforced concrete slab with power-floated finish. First Floor is precast concrete.

4. **WALLS:**

External walls are cavity construction with clay brick outer leaf and solid concrete block inner leaf. Shopfronts and windows are constructed of coloured aluminium frames.

Internal partitions are constructed of solid concrete block.

5. **ROOF:**

The roofs are generally pitched roofs covered with concrete tiles on combined timber and steel structure, supported on concrete block walls and R.C. columns.

6. **SERVICES:**

Mains electricity, mains gas, mains water and telephone services are provided in the building. Where necessary, mechanical ventilation is provided in the toilets and toilet lobbies.

7. **DRAINAGE:**

All drainage associated with the building and site is connected to the existing drainage system on site and thence to the public sewer. Upstand pipes for foul drainage are provided within the building for subsequent connection by the tenants.

8. **SITEWORKS:**

The Car Park is surfaced in tarmacadam. Footpaths are finished in paviors generally to match existing. Planting is provided along the southern and western boundaries of the site. External lighting is provided in the Car Park and around the building. The existing wall at the southern boundary will be demolished and replaced with a steel railing in agreement with the Local Authority.

KEANE MURPHY DUFF — SEPTEMBER 1991

GENERAL DESCRIPTION OF MATERIALS AND WORKMANSHIP

CONCRETE

See Structural Engineer's Specification

BRICKWORK AND BLOCKWORK

Concrete Blocks

All concrete blocks shall be approved factory manufactured and shall comply with Irish Standard Specification 20:1974 and shall be supplied by an approved manufacturer. NOTE: The use of damaged blocks will not be permitted and special attention should be given to storing, stacking and placing blocks.

The blockwork throughout shall be properly bonded with all necessary closers and shall be toothed and bonded to cross walls, etc. The walls are to be carried up evenly all round, no part exceeding the general level by more than 1200 mm.

Facing Bricks

The facing bricks shall be clay bricks as manufactured by an approved manufacturer. All bricks shall have sharp edges and clean corners and no broken or mis-shapen bricks shall be permitted.

Samples

The Contractor shall supply the Architect with samples of the various concrete blocks and bricks.

Mortars

Gauged mortar shall consist of one part cement, one part hydrated lime or lime putty prepared from non-hydraulic lime and six parts sand.

Cement mortar shall consist of one part Portland cement to three parts of sand.

Alternatively, mortar for brickwork and blockwork shall incorporate an approved plasticiser used strictly in accordance with the manufacturer's instructions. Mortar for external brickwork and blockwork shall be in the proportions of one part cement to six parts sand. The proportions for internal work shall be one part cement to nine parts sand.

All mortar containing cement shall be used immediately. None shall be re-worked once initial set has commenced.

Bond

Unless otherwise stated, bricks and blocks shall be laid in stretcher bond.

Recessed Jointing. Jointing shall be formed with the edge of a 9 mm. round steel bar along a straight edge, pressed in to give a 6 mm. deep recessed joint.

Damp-Proof Course Bitumen damp-proof courses shall be first quality of pure bitumen on jute fabric base (B.S.743 : 1966) lapped 225 mm. at all joints and properly solutioned.

Protection Exposed brickwork and blockwork shall be protected as necessary to avoid staining or splashing.

CARPENTRY AND JOINERY.

Timber All timber shall be prime selected first quality, sound and well seasoned, free from sap, shakes, waney edges, large loose or dead knots and any other defects.

The timber shall be cut into the scantlings as required immediately after signing the Contract, so that any shrinkage may take place before being fixed in the building.

Red Deal Timber for Joiner's work shall be first quality red deal, unless otherwise specified and obtained from an approved merchant. The timber shall be specially selected.

White Deal All timber for carpentry shall be best quality selected white Norway unless otherwise specified.

Ash Ash shall be best quality, free from defects and from an approved merchant.

Plywood All plywood shall be obtained from a manufacturer approved by the Architect, WBP standard, resin bonded and must be guaranteed.

Joinery All work described as 'framed' shall be framed up in the best possible manner.

Joinery shall be put in hand immediately on signing the Contract and left for seasoning before being wedged up.

Any work which warps, shrinks, develops shakes or other defects shall be removed and replaced with new. All external joinery shall be framed and jointed with a mixture of white and red lead and boiled oil.

No woodwork shall be stopped or primed until it has been delivered on the job and passed by the Architect.

Mouldings — No stock mouldings will be allowed. All mouldings shall be in accordance with the detail drawings.

Fixing Grounds — Where timber is described hereinafter as being fixed to concrete or concrete blockwork the Contractor shall include in his prices for all necessary hardwood grounds or plugs, or for fixing with 'Hilti' or approved percussion driven masonry nails.

Treated Timber — All timber for carpentry work and for joinery in contact with walls shall be pressure tanalised in accordance with the manufacturer's instructions. The timber shall be purchased in a treated condition and all cut and tenoned ends, mortices, etc. subsequently formed must be retreated before the timber is fixed or assembled.

Secret Fixings — Where items are described as being 'secretly fixed' the fixings must be countersunk and neatly pellated.

MECHANICAL (TO INCLUDE PLUMBING AND HEATING) AND ELECTRICAL INSTALLATIONS

See Service's Engineers Specification

STEELWORK

See Structural Engineers Specification

PLASTERWORK

Cement — Cement to be as described for concrete work.

Gypsum Plasters — Gypsum plasters shall be from an approved manufacturer and shall comply with I.S. 27.

Sand

Sand for all plastering shall be clean sharp and washed, free from loam and other impurities. Sand shall be riddled through 6 mm. mesh, but it must not pass a 3 mm sieve. It is the intention to include the larger grains which pass the 6 mm. mesh but which would be excluded by the 3 mm sieve. If the sand is initially deficient in these coarse grains, the deficiency shall be made up with fine stuff to pass 6 mm. mesh from coarser silicious aggregate.

Finish

Plastering shall be executed in such a manner as to avoid any irregularity occurring at the point or place where one section is joined to another, particularly where it occurs at scaffold heights on walls. The whole of the plastering shall be finished to a perfectly true and level surface and shall be to uniform colour throughout.

Sample Patches

The Architect may require sample patches of plastering and wall finishes to be executed.

Scudding

All walls to be plastered shall be scudded with material composed of small pebbles and cement gauged four-to-one, before any plastering is done.

Cement Plastering

Rendering, floated and setting coats shall be composed of one part cement to three parts sand.

ROOFING

Trussed Rafters

Trussed rafters to be pre-fabricated and erected in accordance with I.S. 193.

Sarking Felt

Untearable sarking felt to I.S. 36 shall be laid under all slates and tiles, lapped horizontally not less than 75mm for pitches greater than 25° and 150mm for lesser pitches, carried down into eave gutters. Side lap shall not be less than 150mm for pitches over 25° and 500mm for lesser pitches. Felt to be carried fully over ridge board.

Laths or Battens

Laths or battens shall be 44mm for rafter spacings not greater than 400mm. For spacing up to 600mm battens not less than 44mm x 44mm shall be used. Tilting fillet to be provided at eaves where necessary.

Concrete tiles (low pitch - under 30°)

Low pitch concrete tiles shall be laid in accordance with Manufacturers instructions and to the minimum pitches.

General

Slates and tiles to be neatly trimmed where necessary. Part tiles and slates to be adequately secured.

Drip overhang to be provided at eave and valley gutters.

At verges slates or tiles shall oversail wall face or barge, by at least 25mm in the case of slates and 50 mm in the case of tiles, and shall be neatly pointed in suitably coloured sand / cement mortar.

Ridge and hip tiles shall be bedded in gauged mortar and pointed with cement mortar, suitably coloured; bedding and pointing to be done in one operation.

Provide suitable hip hooks, screwed to end of hip rafters. In industrial atmospheres special nails may be necessary. Over party walls the space between battens shall be filled with mortar to complete fire stop.

Flashings

Valley gutters, cover flashings and flashings to chimneys shall be

No. 5 lead to B.S. 1178

To chimney, flashing shall consist of aprons, soakers and cover flashings. The latter shall be secured in a chase in concrete block chimneys, wedged and pointed in with cement fillet formed over. To brick chikmneys cover flashings shall be stepped, wedged and pointed into brick joints. Saddle pieces shall be provided at all ridges and roof intersections. Valley gutters shall be laid on felt on 20mm x 225mm wrot boarding treated with wood preservative, and turned up at edges under roof felt tiles or slates.

Eave Gutters and Rain Water Pipes

Eave gutters and rain water pipes shall be to relevant I.S.S. and shall be UPVC 150mm half round gutter with 100mm RWP.

P.V.C. gutters to be supported on suitable brackets at not more than 1m centres and jointed in accordance with manufacturers instructions. Gutters to be set to falls. At least two stacks of rain water pipes shall be provided secured by holder brackets and kept clear of wall. Provide and fit all necessary matching stop ends, angles and drop nozzles, swannecks, hopper heads and toes. Rainwater pipes to be connected to back inlet gulley traps.

DRAINAGE

Trenches

Trenches shall be excavated to the necessary depths, widths and falls to allow the drains to be properly laid. The water service shall be in a separate trench from the drain.

Drain

The main and branch drains shall be 100mm diameter laid to continuous falls of not less than 1 in 60 with bends and junctions, splayed in the

direction of flow, where required, and laid in straight lines from manhole to manhole. The drain shall be U.P.V.C. to B.S. 4660,1973 with patent flexible joint system laid on continuous concrete bed 100mm thick x 300mm wide for full length of each pipe and haunched half way up the pipe after testing.

Back filling Immediately over pipes back fill in fine material and fill remainder of trench in selected excavated material, well rammed and remove surplus spoil.

Drains Under Roads and Buildings Where drains pass under roadways or are likely to be subjected to heavy traffic, they should be fully encased in 150mm concrete. Drains shall not be taken under any buildings unnecessarily, but where this is unavoidable pipes shall be cast iron, or encased in 150mm of concrete or otherwise to local authority requirements and laid in straight lines. Form ducts through rising walls or foundations as necessary to avoid damage to drains.

A.J.s, Manholes, Drop-Manholes Armstrong junctions or manholes as suitable shall be provided at each change in direction or gradient of drain and of such dimensions and spacing as to permit easy cleaning of the system. Manholes shall be built in 225mm concrete walls on 150mm thick concrete floor with glazed channels, bends and braches, suitably benched. Benching and internal walls to be finished smooth in cement mortar. Fit cast iron, reinforced concrete, or hot dipped galvanised steel frame and cover. Covers to have provision for lifting. Where required by local authority, outall manholes shall be formed, with interceptor trap, stoppered cleaning eye and air inlet.

Gullies & A.J.s Gullies and Armstrong junctions to be set level, supported on 150mm concrete bed, and connected to drain as previously specified. Armstrong junctions shall have frame and cover of cast iron, aluminium or galvanised steel.

Gully Traps Gully traps shall be back inlet type set in concrete to take wastes from sinks and wash hand basins and discharge from rain water pipes, and shall be fitted with cast iron, aluminium or other suitable grid.

Vent shaft At head of drain, carry up 50mm minimum diameter vent pipe over eave level or to 1m over head of highest window within 4m of vent, secured with proper brackets and fitted with cowl or cage.

Single Stack Drainage

Single stack drainage, where provided, must be in accordance with British Standard Code of Practice No. 304 (1968).

Testing

Test plumbing and drainage on completion to ensure water tightness and efficient working of the system, and as may be required by the local authority.

GLAZING

Glass

The glass throughout to be the best of the kind specified, free from bubbles, specks and other defects and in accordance with the latest edition of B.S.S. 952: 1964.

Glass in timber screens, etc., is to be bedded in approved glazing tape and secured with glazing beads.

All the glass shall be well cleaned down both sides on completion.

PAINTING

Paints

All paints, varnishes, distempers etc., to be best quality used in ccordance with the manufacturer's instructions without the addition of any oil, turpentine or any other materials. Brands of manufacturers and tints shall be selected by the Architect.

All oiling and polishing materials to be of the best quality procurable.

Each cost of paint and distemper is to be of a distinctive tint as selected.

No work shall be primed or painted until such time as it has been inspected and approved by the Architect.

Cleaning down etc.

All work shall be cleaned down properly preparatory to painting etc.

The ironwork shall be scraped, wire brushed and thoroughly cleaned before being painted.

LANDSCAPING

Landscaping

Landscaping shall be carried out by a Nominated Sub-Contractor.

Dublin County Council
Comhairle Chontae Atha Cliath

Planning Application Form/ Bye - Law Application Form

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

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

2. Postal address of site or building (If none, give description sufficient to identify) Oldbawn Road, rear Main Street, Tallaght, Dublin 24

3. Name of applicant (Principal not Agent) Southside Taverns Limited NIL

Address 'The Foxe's Covert', Main Street, Tallaght, D. 24 Tel. No. 515544

4. Name and address of person or firm responsible for preparation of drawings Keane Murphy Duff, Architects, 4 Princes Street South, Dublin 2 Tel. No 770077

5. Name and address to which notifications should be sent Fergal MacCabe, Architect and Town Planner, 40 Fitzwilliam Place, Dublin 2.

6. Brief description of proposed development Three retail units and an office.

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

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 ———

CO DUBLIN Southside Taverns Ltd are applying for permission for 3 retail units and an office at Old Bawn Road, rear Main Street, Tallaght.

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

11.(a) Area of Site 4135.5 sq m

(b) Floor area of proposed development 1200 sq m

(c) Floor area of buildings proposed to be retained within site ———

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:
Only insofar as they can be interpreted. This is not a guarantee that the Regulations have been implemented in full or in any particular aspect in this proposal.

15. List of documents enclosed with application. Outline specification. Location Map, Layout Plan 90067/100/1, Ground Floor Plan /101, First Floor Plan /102, Sections /103, Elevations /104

16. Gross floor space of proposed development (See back) 1200 sq. m.

No of dwellings proposed (if any) ——— Class(es) of Development ———

Fee Payable £ 2,100 Basis of Calculation £1,200 x £1.75

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

Signature of Applicant (or his Agent) [signature] Date 9 May 91

RECEIVED 15 MAY 1990 REG SEC.

FOR OFFICE USE ONLY 15/5

Application Type P
Register Reference 91A/0779
Amount Received £ 2.22.4
Receipt No
Date 21/12

Irish Press 1/5/91

£2100 15/5

RECEIPT NO. N39612

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

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

1. Name and Address of applicant.

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

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

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

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

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

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

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

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

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

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

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

INDUSTRIAL DEVELOPMENT:

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

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

PLANNING APPLICATIONS

CLASS NO.	DESCRIPTION	FEE
1.	Provision of dwelling — House/Flat.	£32.00 each
2.	Domestic extensions/other improvements.	£16.00
3.	Provision of agricultural buildings (See Regs.)	£40.00 minimum
4.	Other buildings (i.e. offices, commercial, etc.)	£1.75 per sq. metre (Min. £40.00)
5.	Use of land (Mining, deposit or waste)	£25.00 per 0.1 ha (Min £250.00)
6.	Use of land (Camping, parking, storage)	£25.00 per 0.1 ha (Min. £40.00)
7.	Provision of plant/machinery/tank or other structure for storage purposes.	£25.00 per 0.1 ha (Min. £100.00)
8.	Petrol Filling Station.	£100.00
9.	Advertising Structures.	£10.00 per m² (min £40.00)
10.	Electricity transmission lines.	£25.00 per 1,000m (Min. £40.00)
11.	Any other development.	£5.00 per 0.1 ha (Min. £40.00)

BUILDING BYE-LAW APPLICATIONS

CLASS NO.	DESCRIPTION	FEE
A	Dwelling (House/Flat)	£55.00 each
B	Domestic Extension (improvement/alteration)	£30.00 each
C	Building — Office/ Commercial Purposes	£3.50 per m² (min. £70.00)
D	Agricultural Buildings/Structures	£1.00 per m² in excess of 300 sq. metres (min. - £70.00) (Max. - £300.00)
E	Petrol Filling Station	£200.00
F	Development or Proposals not coming within any of the foregoing classes.	£9.00 per 0.1 ha (£70.00 min.)
		Min. Fee £30.00
		Max. Fee £20,000

etc. should be made payable to: Dublin County Council.

bor space is to be taken as the total floor space on each floor measured from the inside of the external walls.

all details of Fees and Exemptions see Local Government (Planning and Development) (Fees) Regulations 1984.

RECEIPT CODE

COMHAIRLE CHONTAE ÁTHA CLIATH

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

Issue of this receipt is not an acknowledgement that the fee tendered is the prescribed application fee. No. 39612

PAID BY —

CASH
CHEQUE ●
M.O.
B.L.
I.T.

£2100.00

Received this 15th day of Mar 19 91

from Southside Taverns Ltd
The Foxes Covert,
Main St. Tallaght

the sum of two thousand one hundred Pounds

Pence, being

planning application at rear Main St.
Tallaght
Model Board

S. CAREY
Principal Officer

Cashier

Cost 4

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

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

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

Register Reference : 91A/0779 Date : 16th May 1991

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

Dear Sir/Madam,

DEVELOPMENT : 3 retail units and an office

LOCATION : Old Bawn Road, rear Main Street, Tallaght.

APPLICANT : Southside Taverns Limited

APP. TYPE : PERMISSION

With reference to above, I acknowledge receipt of your application received on 15th May 1991.

Yours faithfully,

.....

PRINCIPAL OFFICER

Fergal MacCabe,
Architect and Town Planner,
40 Fitzwilliam Place,
Dublin 2.

40 Fitzwilliam Place
Dublin 2 Ireland
Telephone (01) 762594
Fax (01) 762310

Architect
and Town Planner
Fergal MacCabe
BArch DipTp MRIAI MIPI

The Planning Officer,
Dublin County Council,
Planning Department,
Irish Life Centre,
Lower Abbey Street,
DUBLIN 1

RE Proposed 3 no retail units and offices at Oldbawn Road, rear Main Street, Tallaght, Co Dublin

Date 8th May 1991 Ref FMacC/613

Dear Sir

On behalf of my clients Southside Taverns Limited, the freehold owners of the land, I enclose herewith documents in connection with my application for permission for the above development.

The opening of 'The Square' has constrained the nature and type of development which might be attracted to the subject site and a re-assessment of the make-up of the development was necessary. Restaurants have not proved as appropriate as it might have seemed when 87A/658 was prepared. The local office element will now be provided on foot of 90A/1198, on the assumption that the decision of the Local Authority is upheld by An Bord Pleanala.

The proposal, the subject of this application, will be purpose built to provide a wine shop for the Molloy Group, a late night convenience store and a video store. The video store will be managed by Blockbuster Limited which is the largest family video store in the USA. There are 1500 stores worldwide. Emphasis is on family entertainment for enjoyment at home and childrens videos are a major part of the operation. Services include both rental and sale of videos. Stores are completed to the highest standards, internally and externally and Blockbusters are very similar to McDonalds in their approach to quality and finishes. Landscaping with a high degree of planting is desirable and site layout and appearance are particularly important. Signage on the building is required and a pylon sign on the site is also proposed.

The floor area of the individual units is as follows:-

Fergal MacCabe
B Arch Dip Tp MRIAI MIPI

Unit 1	(possible wine shop)	220m²
Unit 2	(local convenience shop)	222m²
Unit 3	(video store)	522m²
Office	(local professional firm)	236m²
TOTAL		1200m²

However in the design and layout of the proposal, the architectural principles established by previous permissions have been adhered to, particularly the provision of a dominant building at the corner of the access road and Oldbawn Road. The external walls of the buildings are finished in brickwork and white dry-rough cast generally in keeping with the Tallaght Sportsbowl. It is intended to demolish the existing boundary wall along the by-pass, in agreement with Dublin County Council.

The floor area of the overall dvelopment (1200 sq m) contrasts with the 1449.5 sq m approved under 90A/264. This presumably will make less of an impact on off-street car parking needs. Recent studies however suggest there is a substantial over supply of existing car parking. I attach a copy of a survey at the 'Foxe's Covert' car park carried out between the 9th and 15th April which indicates substantial under-utilisation and at no time, were the available spaces ever entirely filled. The most intensive period of useage occured only in the upper car park relating to the 'Foxe's Covert' on Wednesday 10th April during a competition. This was a rather unusual event and as may be seen, wasn't repeated. The lower car park on the other hand, even at peak, never reached 50% occupancy.

My client observes that his customers are almost exclusively from the adjoining neighbourhood and don't travel by car. I imagine that this pattern will be repeated for at least two of the retail units.

A grant of permission will ensure that this development, which is being built on foot of contracted tenants, will be speedily completed, and I would be grateful therefore for the permission sought.

Yours faithfully

Fergal MacCabe

DEVELOPMENT AT CORNER OF OLD BAWN ROAD AND TALLAGHT BY-PASS FOR SOUTHSIDE TAVERNS LTD.,

OUTLINE SPECIFICATION.

1. **GENERAL:**

The development is approximately 1200m² in floor area, and comprises three separate buildings which will be completed as shells, including shop fronts, for subsequent fitting out by tenants.

2. **SUB-STRUCTURE:**

The sub-structure consists of reinforced concrete ground beams on reinforced concrete stub columns and pads.

3. **FLOOR:**

The Ground Floor is an in-situ reinforced concrete slab with power-floated finish. First Floor is precast concrete.

4. **WALLS:**

External walls are cavity construction with clay brick outer leaf and solid concrete block inner leaf. Shopfronts and windows are constructed of coloured aluminium frames.

Internal partitions are constructed of solid concrete block.

5. **ROOF:**

The roofs are generally pitched roofs covered with fibre-reinforced cement slates on combined timber and steel structure, supported on concrete block walls and R.C. columns.

6. **SERVICES:**

Mains electricity, mains gas, mains water and telephone services are provided in the building. Heating and ventilation are provided by the tenants.

7. **DRAINAGE:**

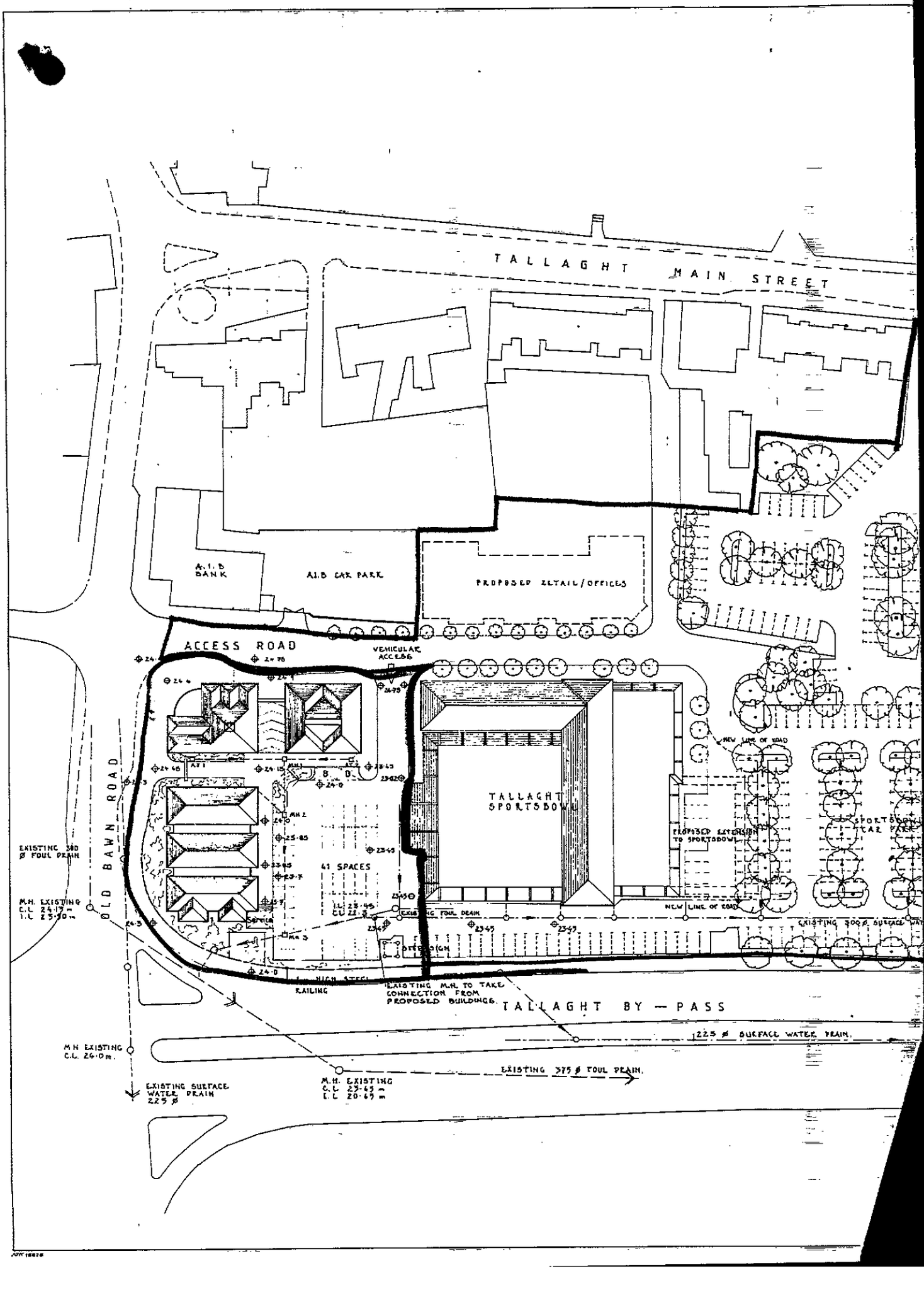
All drainage associated with the building and site is connected to the existing drainage system on site and thence to the public sewer. Upstand pipes for foul drainage are provided within the building for subsequent connection by the tenants.

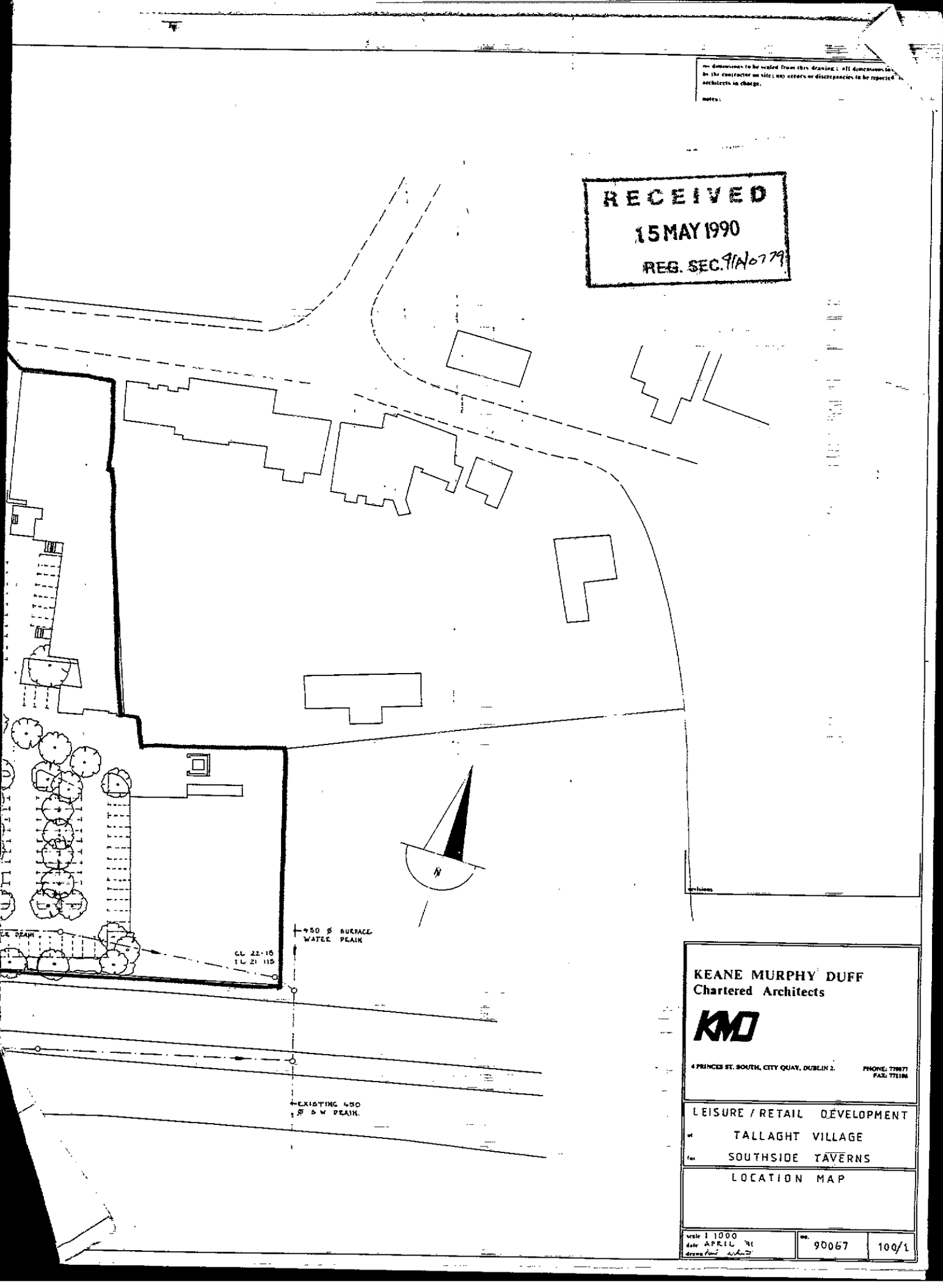
8. **SITEWORKS:**

The Car Park is surfaced in tarmacadam. Footpaths are finished in paviors generally to match existing. Planting is provided along the southern and western boundaries of the site. External lighting is provided in the Car Park and around the building. The existing wall at the southern boundary will be demolished and replaced with a steel railing in agreement with the Local Authority.

KEANE MURPHY DUFF

MAY 1991


TALLAGHT MAIN STREET
A.I.B BANK
A.I.B CAR PARK
PROPOSED RETAIL/OFFICES
ACCESS ROAD
VEHICULAR ACCESS
OLD BAWN ROAD
TALLAGHT SPORTSDOME
PROPOSED EXTENSION TO SPORTSDOME
SPORTSDOME CAR PARK
NEW LINE OF ROAD
41 SPACES
EXISTING 300 Ø FOUL DRAIN
M.H. EXISTING C.L. 24·17 m I.L. 23·90 m
EXISTING 300 Ø FOUL DRAIN
EXISTING 300 Ø SURFACE WATER
HIGH STEEL RAILING
EXISTING M.H. TO TAKE CONNECTION FROM PROPOSED BUILDINGS.
TALLAGHT BY — PASS
225 Ø SURFACE WATER DRAIN.
EXISTING 375 Ø FOUL DRAIN.
M.H. EXISTING C.L. 24·0 m.
EXISTING SURFACE WATER DRAIN 225 Ø
M.H. EXISTING C.L. 23·65 m I.L. 20·69 m


RECEIVED
15 MAY 1990
REG. SEC. 91A/0779
N
450 ø SURFACE WATER PEAIN
CL 22.18
TL 21.115
EXISTING 450 ø S.W. PEAIN.
KEANE MURPHY DUFF
Chartered Architects
KMD
4 PRINCES ST. SOUTH, CITY QUAY, DUBLIN 2.
PHONE: 778877
FAX: 775186
LEISURE / RETAIL DEVELOPMENT
at TALLAGHT VILLAGE
for SOUTHSIDE TAVERNS
LOCATION MAP
scale 1:1000
date APRIL '91
no. 90067
100/1

KEANE MURPHY DUFF
Chartered Architects, Designers & Project Managers

4 Prince's Street South, City Quay, Dublin 2 Telephone: 770077 Facsimile: 771186

Ref: CR/SL

23rd April 1992

91A/779
1.4.0
Lord

Mr. Richard Cremins/
Ms. Rita O'Donnell
Planning Department,
Dublin County Council,
Irish Life Centre,
Lower Abbey Street,
Dublin 1.

Re: Tallaght Phase 3/Reg.Ref.No: 91A/0779 - Conditions no's: 7 & 17

Dear Sirs,

Further to our recent telephone conversation, I enclose one copy each of drawings no's: 90067/208B, 209C, 210C coloured up as promised, together with copy of drawing no: 90067/270 showing detail of boundary railings.

Having considered carefully the colour scheme as a whole, I am satisfied that blue windows frames are appropriate. There is relatively very little brick in the development, particularly in Block 3, and the walls consist of grey (natural) rendered frame and white rendered panels. The roof is finished in black concrete roof tiles. White window frames would give an overly severe monochromatic effect. The blue proposed is a rich dark blue (RAL 5013) and will match the windows in Phase 2 which is nearing completion.

The railings shown on drawing no: 90067/270 will form the boundary along the Tallaght By-Pass and Old Bawn Road. They will be painted a dark colour, black or possibly blue to match the windows.

I trust that the above meets with your approval. If you have any queries, I would be obliged if you would contact me at your earliest convenience.

Finally, I will shortly submit details of proposed paving layout at the above as previously discussed.

Yours sincerely,

Colm Reid
KEANE MURPHY DUFF

G.B usual. A.I. re compliance, Ger – these shutters don't look see through. Richard – 4/9

KEANE MURPHY DUFF
Chartered Architects, Designers & Project Managers
4 Prince's Street South, City Quay, Dublin 2. Telephone: 770077 Facsimile: 771186

Ref: RH/TN

20 August 1992

He assumed me They were. GB 15/9.

Ms. Geraldine Boothman,
Planning Department,
Dublin County Council,
Block 2,
Irish Life Centre,
Lr. Abbey Street,
Dublin 2.

Re: Village Green Centre Phase 3 – Reg. Ref. Nº. 91A/779.

Dear Ms. Boothman,

Further to our telephone conversation last week, I enclose two copies of our drawing Nº. 90067/3/05 showing external roller shutters on Unit 17 at the above.

Due to various incidents of vandalism against glass in shopfronts, we have been asked by our Client to provide roller shutters externally in phase 3 of the above development. We have already fitted external shutters on the timber shopfront in phase 2 which is recently completed. The shutter barrel is concealed behind the sign fascias and we propose a similar detail at shopfronts in phase 3.

You will note from the enclosed drawing that the sign fascia in Unit 17 projects off the face of the wall by approximately 300mm. Due to the low height of shopfront in Unit 17, it was not possible to accommodate the roller shutter barrel within the structural opening.

I trust that this arrangement is satisfactory.

Yours sincerely,

Colm Reid,
KEANE MURPHY DUFF.

Enc.

KMD

TALLAGHT PHASE III

ADDITIONAL STRUCTURAL INFORMATION FOR UNIT NO.3.

DRAWINGS	TITLE
KM/04/101-2d	Foundation layout
KM/04/102D	Ground floor slab
KM/04/103D	First floor plan

Calculation sheets KM/04/10.1, 12.3, 12.4, 12.5, and 13.8

Horgan Lynch & Partners,
Consulting Engineers,
58, North Great Charles Street,
Mountjoy Square,
Dublin 1.

INDEX

ALTERATIONS TO UNIT N° 3

LOADINGS

		kN/m²
1ST FLOOR	IMPOSED + PARTITIONS	= 5.00
	FINISHES, SOFFITE + SERVICES	= 0.40
	250 INSITU CONC SLAB	= 6.00
		11.40

11.40

FACTORED LOAD = 16.96 kN/m²

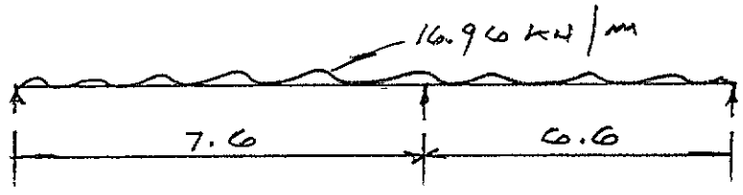
EXTERNAL WALLS = 6.70

FACTORED LOAD = 9.4 kN/m²

PARTITION WALLS = 3.2

FACTORED LOAD = 4.5 kN/m²

1ST FLOOR SLAB



$f_{cu} = 35 N/mm^2$

BM = $16.96 \times 7.6^2 / 10$ = 98.0 kNm

d = 250 − 25 − 8 = 217 mm

d = 217

k = $98.0 \times 10^6 / 1000 \times 217^2 \times 35$ = 0.06

a = 0.93

$A_S = 98.0 \times 10^6 / 460 \times 0.87 \times 217 \times 0.93$ = 1213 mm^2

TRY T16 AT 150 CTS, $A_{S PROV}$ = 1340 mm^2 ok.

CHECK DEFLECTION

$M / bd^2 = 98 \times 10^6 / 1000 \times 217^2$ = 2.08

MODIFICATION FACTOR = 1.08

SPAN / def = 7600 / 217 = 35.0

ALLOWABLE = 26 × 1.08 = 28.1

Too Low

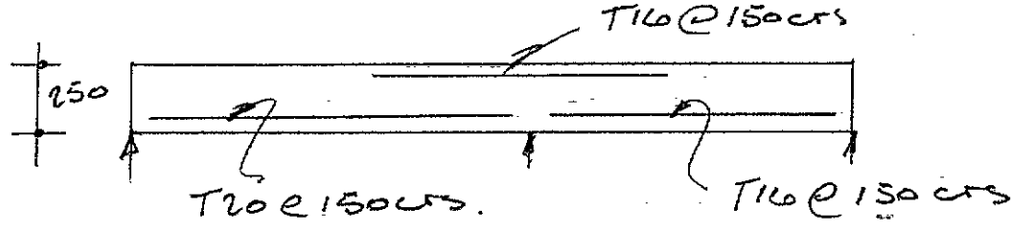
TRY T20 AT 150B FOR 7.6m SPAN

$A_{S PROV}$ = 2040

$f_S = 5 \times 460 \times 1213 / 8 \times 2040$ = 171

MODIFICATION FACTOR = 1.4

ALLOWABLE = 26 × 1.4 = 36.4 > 35.0 o.k.



T16@150T & T16/T20 @150B.

SPINE BEAM (GRID LINE F) SPAN = 4.8m

$f_{cu} = 35$

LOADING:- FLOOR = 14.2/2 × 16.96 = 120.4
BEAM = 5.0
125.4 kN/m

BM = 125.4 × 4.8²/10 = 289.0 kNm
Try 400W × 600 Dp BEAM, d = 548 mm
$K = 289.0 \times 10^6 / 400 \times 548^2 \times 35 = 0.07$, $z = 0.91$
$A_s = 289.0 \times 10^6 / 460 \times 0.87 \times 548 \times 0.91 = 1448 mm^2$
Try 3T25, A_s prov = 1470 mm^2 OK.

$v = 125.4 \times 2.4 \times 10^3 / 400 \times 548 = 1.37 N/mm^2$
$\%$ min = 100 × 1470/400 × 548 = 0.67, $v_c = 0.62$
Try R10 LINKS, 4LEGS, $A_{sv} = 314 mm^2$
$S_v = 314 \times 0.87 \times 250 / 400 \times (1.37 - 0.62) = 228$ mm

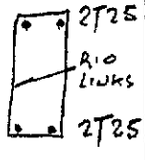
d = 548mm

3T25 T&B
4/R10 LINKS
AT 225 CTS.

EDGE BEAM (GRID LINE G1) SPAN = 4.8m

LOADING:- WALL = 3.8 × 4.8 × 1.4 = 25.5
FLOOR = 56.0/2 × 16.96 = 56.0
BEAM = 5.0
86.5 kN/m

Try 300W × 600 Dp BEAM, d = 548 mm
BM = 86.5 × 4.8²/10 = 199.3 kNm
$A_s = 199.3 \times 10^6 / 460 \times 0.87 \times 548 \times 0.95 = 956 mm^2$
Try 2T25, A_s prov = 982 mm^2 OK.
$v = 79.2 \times 2.4 \times 10^3 / 300 \times 548 = 1.16 N/mm^2$
$\%$ min = 100 × 982/300 × 548 = 0.60, $v_c = 0.59 N/mm^2$
Try R10 LINKS, 2LEGS, $A_{sv} = 157$
$S_v = 157 \times 0.87 \times 250 / 300 \times (1.16 - 0.59) = 200$ mm



2T25 T&B
2/R10 LINKS
AT 200 CTS.

PERIMETER BEAM (GRID LINE E) SPAN = 4.8 m

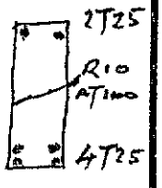
LOADING: ROOF : 3.35 × 8.0/2 = 13.4
WALL : 3.5 × 9.4 = 32.9
BEAM = 4.5
FLOOR : 7.6/2 × 16.96 = 64.4
115.2 kN/m

Try 265W × 600Dp BEAM, d = 548 mm
BM : 115.2 × 4.8²/10 = 265.4 kNm
As : 265.4 × 10⁶/460 × 0.87 × 548 × 0.88 = 1375 mm²
Try 3T25, As prov = 1470 mm²
V = 115.2 × 2.4 × 10³/265 × 548 = 1.9 N/mm²
% reinf = 100 × 1375/265 × 548 = 1.01, Vc = 0.71 N/mm²
Try R10 Links, Asv = 157
SV = 157 × 0.87 × 250/265 × (1.9 − 0.71) = 108 mm

3T25 T&B
R10 LINKS
AT 100 CTS

Try $WL^2/8$
BM = 115.2 × 4.8²/8 = 331.8 kNm
As = 331.8 × 10⁶/460 × 0.87 × 548 × 0.8 = 1891 mm²
Try 4T25, As prov = 1960 mm²

2T25 T
4T25 B
R10 LINKS
AT 100 CTS



STAIRS

SIMILAR TO STAIRS IN UNIT Nº 2.
SEE CALC SHEET 15.0.

FOUNDATIONS

PAD F-9

			kN
LOADING:	ROOF TRUSSES		= 92.8
	BEAMS	= 601.9 / 1.5	= 401.3
	COLUMN		= 17.3
	PAD o.w. etc		= 40.0
			551.4

Try 1900 × 1900 × 400 dp PAD
G.B.P. = 551.4 / 1.9² = 152 kN/m² o.k.

TYPE 4
1900 × 1900
× 400 dp
T16 @ 300 B.

PAD G1-9

LOADING:	BEAMS	= 415.2 / 1.5	= 276.8
	COLUMN		= 8.6
	PAD o.w. etc		= 25.0
			310.4

Try 1500 × 1500 × 400 dp PAD
G.B.P. = 310.4 / 1.5² = 138 kN/m² o.k.

TYPE 2
1500 × 1500
× 400 dp
T16 @ 300 B

PAD E-9

			kN
LOADING:	BEAMS	= 553.0 / 1.5	= 368.6
	COLUMN		= 17.3
	PAD o.w. etc		= 40.0
			425.9

Try 1700 × 1700 × 400 dp PAD
G.B.P. = 425.9 / 1.7² = 147 kN/m² o.k.

TYPE 7
1700 × 1700
× 400 dp
T16 @ 300 B

McDONALDS RESTAURANT -

TALLAGHT

HORGAN LYNCH & PTNS.

CONTENTS

APPENDICES

FOREWORD

Notes on Site Investigation Prooedure

The following notes should be read in conjunction with the Report. Any modifications to the procedures outlined below are indicated in the main text.

GENERAL :

The recommendations made and opinions expressed in the Report are based on the Boring Records, an examination of samples and the results of the site and laboratory tests. No responsibility can be held for conditions which have not been revealed by the boreholes, for example, between borehole positions. Whilst the Report may express an opinion on a possible configuration of strata both between borehole positions and below the maximum depth of the investigation, this is for guidance only and no liability can be accepted for its accuracy.

BORING TECHNIQUE :

Unless otherwise stated, the 'Shell and Auger' technique of soft ground boring has been employed. Whilst this technique allows the maximum data to be obtained on strata conditions, a degree of mixing of some layered soils, (e.g. thin layers of coarse and fine granular material) is inevitable. Specific attention is drawn to this factor where evidence of such a condition is available.

GROUND WATER :

The ground water conditions entered on the Boring Records are those appertaining at the time of the investigation. The normal rate of boring does not usually permit the recording of an equilibrium water level for any one water strike. Moreover, ground water levels are subject to variations caused by seasonal effects or changes in local drainage conditions. The table of each Boring Record shows the ground water level at the quoted borehole and casing depths, usually at the start of the day's work. The word 'None' indicates that ground water was sealed off by the borehole casing.

ROUTINE SAMPLING :

Undisturbed samples of predominantly cohesive soils are obtained in a 102 mm diameter open-drive sampler, complying with the requirements of the British Standard Code of Practice B.S. 5930. Large disturbed samples of granular soils, or of soils in which undisturbed sampling is not possible or appropriate, are taken from the boring tools and sealed into polythene bags. Small disturbed samples are taken at frequent intervals of depth and sealed into 0.5 kg. glass jars or polythene bags for subsequent visual classification. Where encountered in sufficient quantity, samples of ground water are taken.

Unless otherwise stated in the main text, disturbed soil samples may not be at their natural water content.

* * * * * * * *

REPORT ON A SITE INVESTIGATION

AT TALLAGHT, CO. DUBLIN

FOR HORGAN & LYNCH
CONSULTING ENGINEERS

REPORT NO. 1870 JANUARY 1992

I. INTRODUCTION

A site at Tallaght, Co. Dublin is to be developed as a new restaurant for McDonalds.

An investigation of subsoil conditions has been ordered by the consulting engineers for the project, Messrs. Horgan & Lynch & Partners.

The programme of the investigation included the construction of two conventional boreholes and the opening of two trial pits using a mechanical excavator.

This report describes the findings of the investigation and relates these findings to the design of safe and economic foundations for the proposed development.

II. FIELDWORK

Borehole and Trial Pit locations are noted on the site plan enclosed in Appendix III to this report.

Descriptions and depths of the strata encountered in Boreholes and Trial Pits can be found on the detailed records found in Appendices I and IA respectively. These records also give information on samples taken, in-situ tests carried out and groundwater conditions pertaining at the time of the investigation.

The borehole and trial pit records show up to 0.80 metres of fill deposits below ground level with stiff brown silty sandy stony clay below this.

Stiff grey black silty stony clay (Boulder Clay) was then noted, in B.H.1 at 2.60m and in B.H.2 at 2.70m. This black boulder clay was also noted in Pit 2 from 2.80 to 3.00 metres.

Borings were terminated at 5.80m and 6.00m in Boreholes 1 and 2 respectively.

Slight groundwater ingress was noted in the boreholes at 3.40 and 4.60m respectively.

Standard penetration tests were carried out in the boreholes and 'N' values in excess of 20 in the boulder clay indicate stiff conditions.

An increase in 'N' value in the black clays indicates an improvement to very stiff condition.

III. LABORATORY

Chemical Analysis :

Sulphate contents and pH values were determined from two samples taken from the site. Low concentrations of sulphates and near neutral pH values indicate that no special precautions need be taken to protect foundation concrete.

IV. DISCUSSION

The investigation has shown thin surface filling (maximum thickness o.80m) overlying glacial till deposits of brown silty stony clay, overlying black silty clay. Test results indicate that this clay is in a stiff condition and an allowable bearing pressure of 200 kN/m^2 can be taken for design purposes for conventional strip or pad foundations at a depth of about 1.00 to 1.20 m below existing ground level.

Care should be taken to ensure uniformity of founding medium; any soft or suspect areas should be removed and replaced by well compacted hardcore or by lean mix concrete. All excavations should be blinded to prevent deterioration of the clay surface by water contact.

IRISH GEOTECHNICAL SERVICES LTD.

JANUARY 1992

APPENDIX I - Boring Records

Report No. 1870	BORING RECORD	IGSL

Contract: TALLAGHT – McDONALDS	Borehole No. 1 Sheet
Location: BELGARD ROAD	Type and Diameter: Cable Tool 200mm diam.
Client: HORGAN & LYNCH	Ground Level: Date: 2.1.92

Description	Reduced Level	Legend	Depth	Samples Ref. No.	Samples Type	Samples Depth	Field Records And Tests	
MADE GROUND – clay, cobbles, boulders			0.80					
Stiff grey brown silty, sandy gravelly CLAY				4074	D	1.20	1.30	23
							2.30	24
			2.60	4075	D	2.50		
Stiff dark grey very gravelly CLAY with cobbles and boulders and containing some gravelly zones				4076	D	3.30	3.30	36
							4.80	29
Refusal on boulders at 5.80m			5.80	4077	D	5.00	5.80	Refusa

Water Level Observations during Boring

Date	Hole Depth	Casing Depth	Depth to Water	Remarks
2.1.91	3.40	3.40	3.40	Seepage
	5.80	Nil	2.80	End of boring

Remarks
Chiselling : 1½ hrs. on boulders at 5.80m

Sample/Test key
U-Tube Sample
D-Disturbed Sample
W-Water Sample
S-Standard Penetration Test
C-Cone Penetration Test
N-Blows/0.3 metres
R-Refusal
V-Vane

Report No. 1870	BORING RECORD	IGSL

Contract: TALLAGHT – McDONALDS

Borehole No. 2

Sheet –

Location: BELGARD ROAD

Type and Diameter: Cable Tool 200mm diam.

Client: HORGAN & LYNCH

Ground Level –

Date: 3.1.92

Description	Reduced Level	Legend	Depth	Samples Ref. No.	Samples Type	Samples Depth	Field Records And Tests Depth	Field Records And Tests N
MADE GROUND : Topsoil, clay, boulders, brick			0.60					
Stiff brown silty sandy gravelly CLAY with cobbles				4081	D	1.00	1.30	20
				4082	D	2.00		
Stiff to hard grey black very silty very stony CLAY with cobbles			2.70	4083	D	3.00	2.80	36
				4084	D	4.50	4.30	49
				4085	D	5.50	5.80	24/25mm & ref.
Boulders at 5.80 – 6.00			5.80					
			6.00					

Water Level Observations during Boring

Date	Hole Depth	Casing Depth	Depth to Water	Remarks

Remarks

Sample/Test key
U-Tube Sample
D-Disturbed Sample
W-Water Sample
S-Standard Penetration Test
C-Cone Penetration Test
N-Blows/0.3 metres
R-Refusal
V-Vane

APPENDIX IA - TRIAL PIT RECORDS

Report No. 1870	TRIAL PIT RECORD	IGSL
Contract: TALLAGHT – McDONALDS	Sheet No.	Trial Pit No. 1
Location: BELGARD ROAD	Excavation Method: JCB	
Client: HORGAN & LYNCH	Ground Level	
	Date: 3.1.1992	

Description	Depth	Legend	Samples		
			Ref. No.	Type	Depth
MADE GROUND - Clay, stones					
Old TOPSOIL	0.40				
	0.50				
Stiff brown silty sandy gravelly CLAY with cobbles			4078	D	1.50
	2.75				

Ground Water Conditions: Dry

Remarks:

Pit stable
Old land drain crossing pit @ 1.00m deep.

Report No. 1870	TRIAL PIT RECORD	IGSL

Contract	TALLAGHT – McDONALDS	Sheet No.	Trial Pit No. 2
		Excavation Method	JCB
Location	BELGARD ROAD	Ground Level	
Client	HORGAN & LYNCH	Date	3.1.92

Description	Depth	Legend	Samples		
			Ref. No.	Type	Depth
MADE GROUND, clay, stones	0.40				
Old TOPSOIL	0.55				
Stiff brown silty sandy gravelly CLAY			4079	D	1.50
			4080	D	2.50
	2.80				
Black BOULDER CLAY (Hard)	3.00				

Ground Water Conditions

Dry

Remarks

Stable

APPENDIX II - Test Results

APPENDIX III - SIte Plan

APPENDIX III – SIte Plan

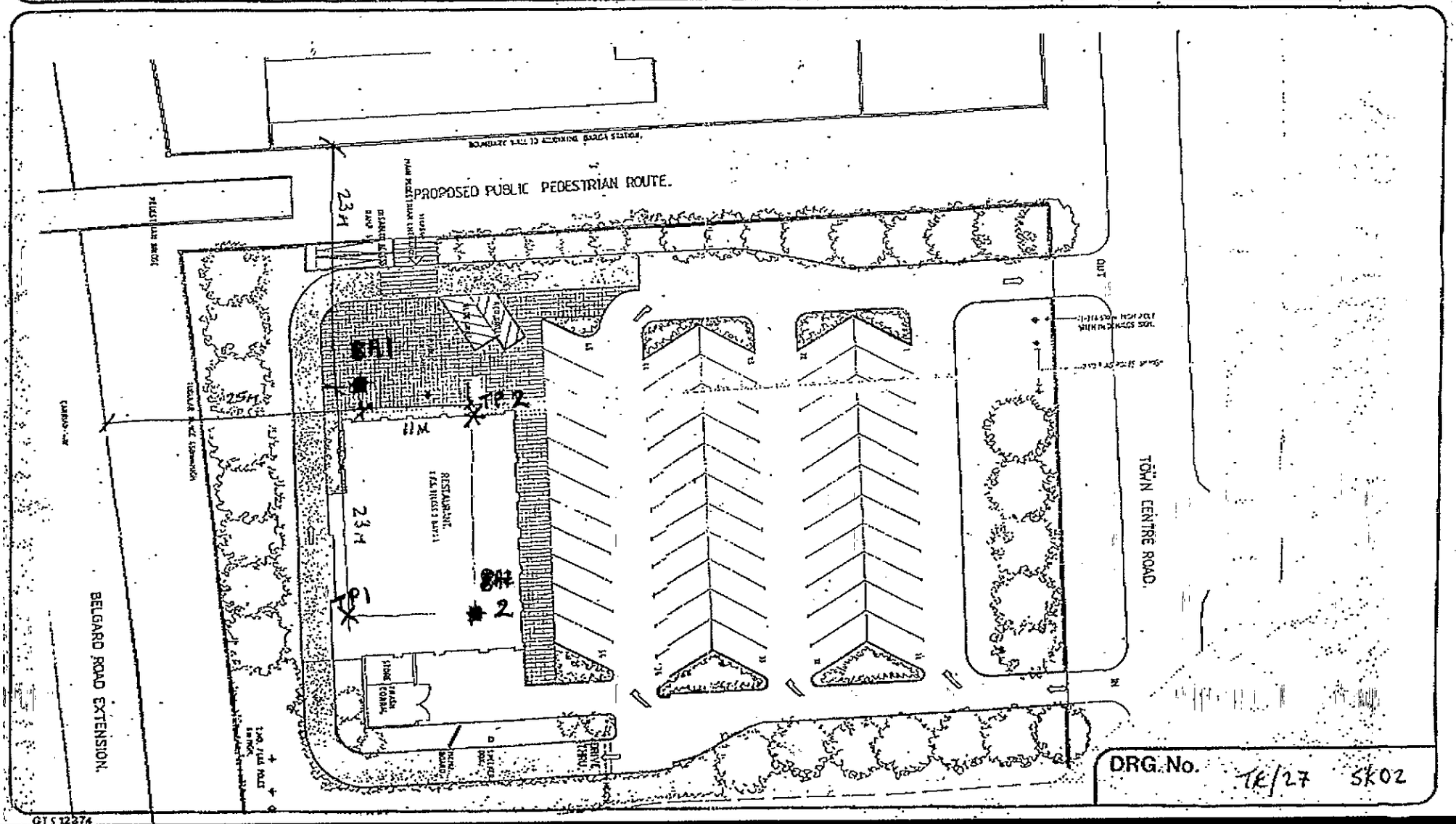
HORGAN LYNCH PARTNERS
CONSULTING ENGINEERS

CLIENT Mc DONALDS.

PROJECT BELGARD ROAD FS TALLAGHT.

TITLE SITE LOCATION
PROPOSED TRIAL PIT LOCATIONS.

SCALE 1:500 APPROX	PAGE
	DRAWN
	DATE 14/11/91
REV DATE BY	CHKD



DRG. No. TE/27 SK02

CONHAIRLE 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

29th January, 1992

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

LOCATION: corner of Old Bawn Road & Tallaght By-Pass

PROPOSED DEVELOPMENT: Sub-divide unit 3 into four retail units

APPLICANT: Southside Taverns

PLANNING REG.REF.: 91A/779

DATE OF RECEIPT OF SUBMISSION: 16th January 1992

A Chara,

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

Building Bye-Law Approval

Mise, le meas

A. Smith

PRINCIPAL OFFICER

Keane Murphy Duff,
4 Prince's Street South,
City Quay,
Dublin 2

KEANE MURPHY DUFF
Chartered Architects, Designers & Project Managers

4 Prince's Street South, City Quay, Dublin 2 Telephone: 770077 Facsimile: 771186

Ref: CR/MQ

13th January, 1992.

Mr. John Kearney,
Building Control Section,
Dublin County Council,
Irish Life Centre,
Lr. Abbey Street,
Dublin 1.

91A/779
1.20.2
BBL

Job No. 90067-1

Re: Development At Corner Of Old Bawn Road & Tallaght By-Pass, Reg. Ref. No. 91A/0779

Dear Sir,

We refer to our recent telephone conversation. Due to changing market conditions, our Client has been obliged to re-consider the layout of Unit 3 at the above development. We have sub-divided the former Unit 3 into four retail units on the ground floor. We have also introduced a first floor to accommodate offices above three of the new retail units. Accordingly we wish to apply for Building Bye-Laws Approval for these alterations to our original application, already approved, submitted to you on 27th September 1991.

We enclose the following:

1. Fee cheque for £1827.00 calculated on the basis of 522 sq.m. at £3.50 per sq.m.
2. Architectural drawing nos. 90067-1/100B, 90067-1/03B, 04A, 05A, 06A, 07, 08.
3. Structural drawings nos. KM/04/101-2D, 102D, 103D (2 copies).
4. Structural calculations (2 copies).

The relevant Specifications for the proposed alterations do not differ from those submitted with the original application and we would refer you to these documents already in your file.

We would greatly appreciate your co-operation in processing this application as quickly as possible, since our programme demands that we instruct the Contractor to start on site before the end of this month. Do not hesitate to contact us, if you require further information or assistance.

Yours faithfully,

Colm Reid,
KEANE MURPHY DUFF.

RECEIVED
16 JAN 1992
Reg. Sec.

16/1/92

BYE LAW APPLICATION
REC. No. N54551
£1827.00

KEANE MURPHY DUFF
Chartered Architects, Designers & Project Managers

4 Prince's Street South, City Quay, Dublin 2 Telephone: 770077 Facsimile: 771186

Ref: CR/MQ

13th January, 1992.

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Dublin County Council,
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KEANE MURPHY DUFF.

RECEIVED
16 JAN 1992
Reg. Sec.

16/1/92

BYE LAW APPLICATION
REC. No. N 54551
£1827.00

RECEIPT CODE

COMHAIRLE CHONTAE ATHA CLIATH

DUBLIN COUNTY COUNCIL

46/49 UPPER O'CONNELL STREET,

DUBLIN 1.

PAID BY

CASH

CHEQUE ✓

P.O.

B.L.

I.T.

BYE LAW APPLICATION

REC. No. N 54551

£ 1827·00

Received this 16 day of January 19 92

from South Side Tavern's Ltd

the sum of One Thousand Eight Hundred & Twenty Seven Pounds

Pence, being

Bye law applications at corner of Brown Road & Talbot St By Post

S. CAREY
Principal Officer

Cashier