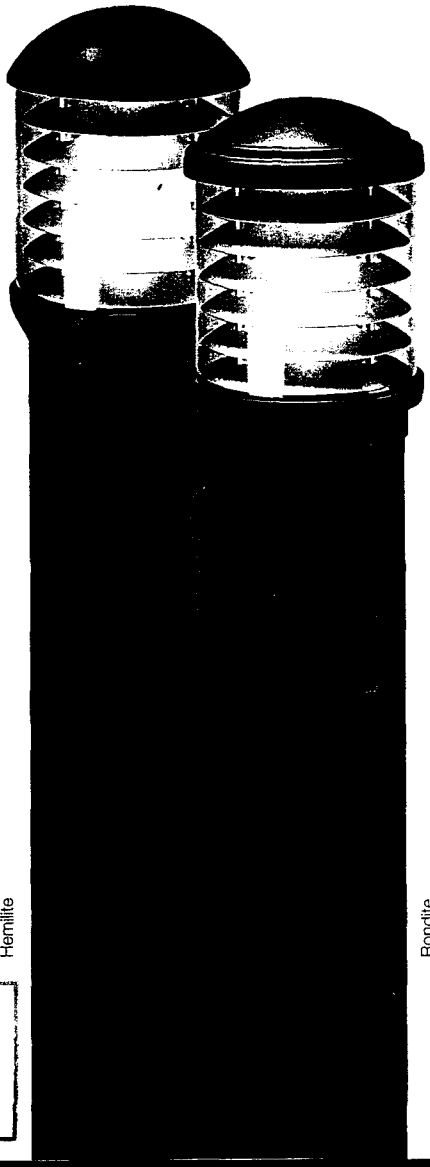
THORN



rondite and hemilite



Hemilite

Rondite

new

DETERMINED
PLAN

A range of low level illuminated bollards for pedestrian areas

SOUTH [illegible] DC
HOUSING [illegible]
- 8 MAY 2000
Ref: 0564/00

rondite and hemilite

Choosing the right bollard for low level lighting situations has always involved a compromise. Are the criteria of style and appearance more important than those of vandal resistance and performance? Or can the two be united?
THORN Lighting believes its designers have resolved this problem with their new Rondite and Hemilite bollards. To start with, two distinctive designs have been released, offering new opportunities to the architect and designer. Rondite's design features a stepped detail running around the head with a gently curving top while Hemilite has clean lines and a hemispherical shaped head. Vandal resistance is assured by the thick, solid aluminium castings and the polycarbonate sleeve protecting the optical system and lamp. A series of polished aluminium louvre blades sparkle under sunlight as well as artificial light and they also protect the pedestrian and driver from unnecessary glare by blocking a direct view of the light source.

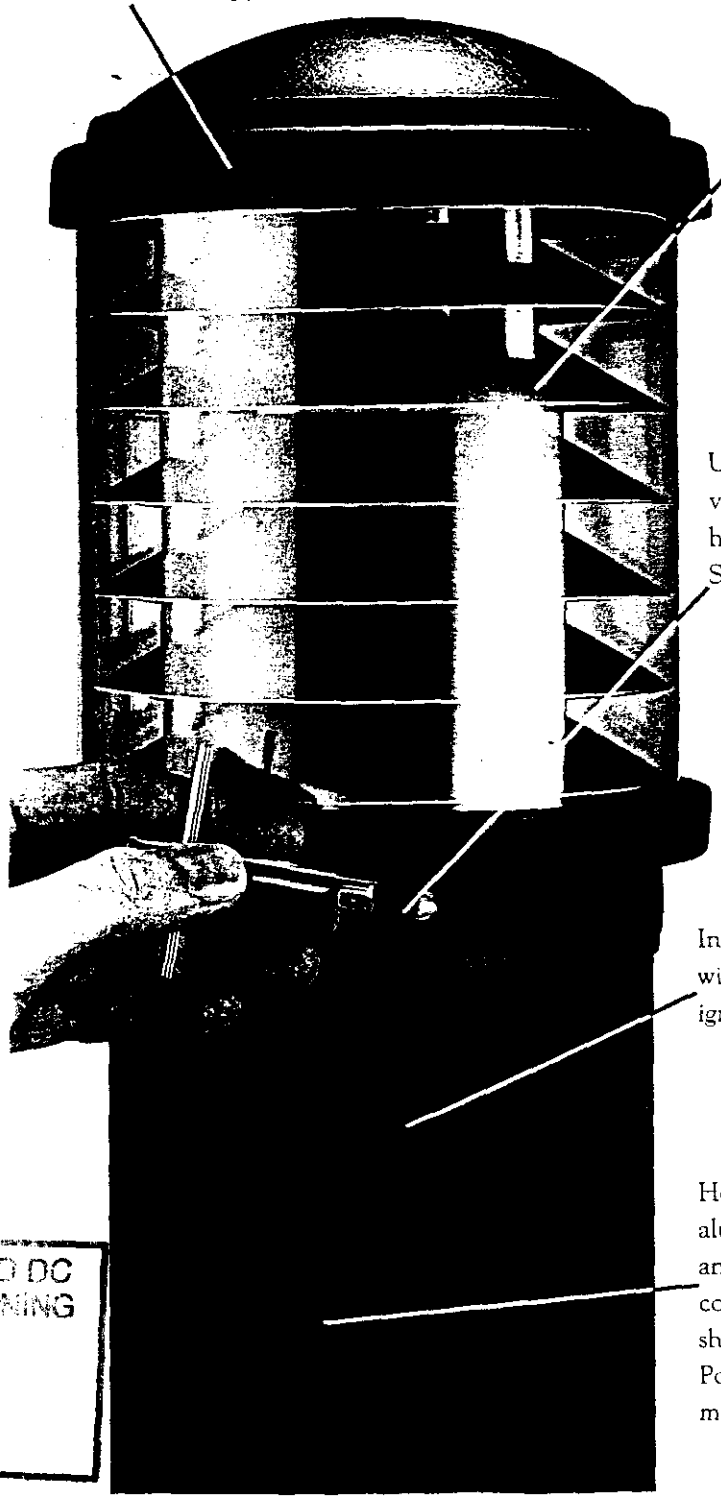
Both bollards are ideal for illuminating pathways, parks and gardens; highlighting entrances, steps and forecourts. They are equally at home indoors for instance in shopping malls. The new design incorporates a small recessed triangular bolt for tamper resistant locking and easy maintenance. This can only be released with a special kind of key provided.

lighting design

Rondite and Hemilites visually appealing designs help to make a positive contribution to the daytime quality of the environment in which they are located. By night they contribute safety, security, scale, emphasis and rhythm to a space. Their low height adds an intimate and friendly element and as a result they bring lighting down to the human scale by creating warm pools of guiding light through significant areas like pedestrian routes and walkways. Apart from this functional aspect, bollards are also ideal for announcing the presence of hotel and office entrances and for drawing attention to other decorative features or danger points such as roadsides, steps and water edges.
The choice of light source is also critical in creating atmosphere and mood. High pressure sodium (SON) gives a golden warm white light which enhances reds, oranges and yellows and frequently improves the appearance of stone and brickwork. Mercury (MBF) lamps produce a cool white light suited to blues and greens and are often used to emphasise polished steel structures or ultra high-tech architecture.

product features

Choice of two cast aluminium head designs. Shown is the stepped Rondite.



Anodised high purity aluminium concentric louvres protected by UV stabilised polycarbonate sleeve.

Unobtrusive, recessed, vandal resistant, triangular headed retaining bolt. Special key supplied.

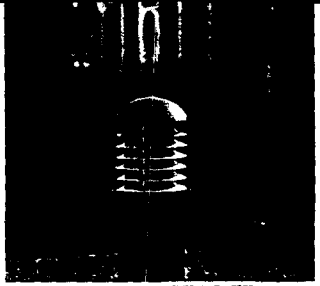
Integral control gear, fused with special anti-cycling ignitor.

Heavy duty marine grade aluminium tubular shaft and head which will not corrode or cause paint to sheet off even if damaged. Polyester powder coating in micro textured black.

LAND DC
NING
8 MAY 2000
Ref:

quality

Against ingress of moisture or dust: IP54 dust proof and splash proof. The optic stays clean thus maintaining both performance and appearance. Against electric shock: Class 1 earthed metalwork. Complies with BS 4533. Manufactured in BS5750 Part 2 (ISO 9002) factory.



BOROUGH OF BROXBOURNE OFFICES, CHESHUNT, HERTS (shown is the Herfrite)

lamps

Rondite and Hemilite are suitable for a range of discharge lamp types and wattages. Either 80W mercury for a cool white appearance or with 50W or 70W high pressure sodium - a golden white light combining high efficiency with long life and good lumen maintenance. These lamps are controlled by a special anti-cycling ignitor to prevent failed lamps attempting to restart which can lead to premature control gear failure.

performance

The high performance, high purity aluminium louvre reflector system is designed to control glare, stop direct upward light and be visually appealing when lit. Detailed photometric performance is published in Data Sheet 3.3.1 available on request. This includes utilisation factors and isolux data in order to enable the quantity of bollards to be calculated to provide a given level of light.

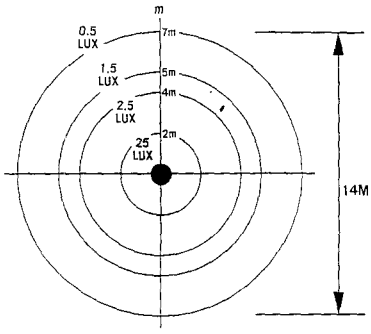
However, as a quick guide, bollards can be used as follows:-

-lighting a 1.8m wide footpath to 10 lux average, 5 lux minimum and to light the surrounding 4m wide strip each side of the path to 3.5 lux average, 1 lux minimum (required by BS 5489 Part 9). Bollards should be spaced at 7m centres along one edge of the footpath.

-lighting steps to 50 lux. Position bollards each side of steps at no more than 4m centres in both directions.

-spacing performance along a line between two bollards:-

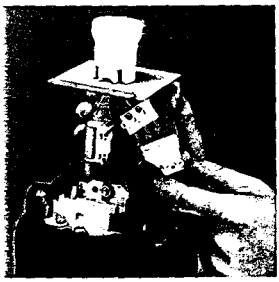
14m centres give 1 lux minimum
10m centres give 2.5 lux minimum
8m centres give 5 lux minimum
4m centres give 50 lux minimum

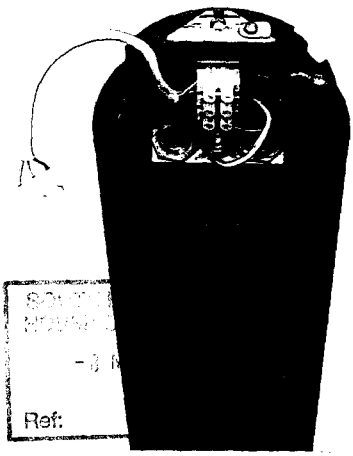


values are rounded down for clarity

Note: All values are for 70W SON-E lamp versions with 2000hr lumens and 0.88 maintenance factors.

- 9 MAY 2000





Ref:

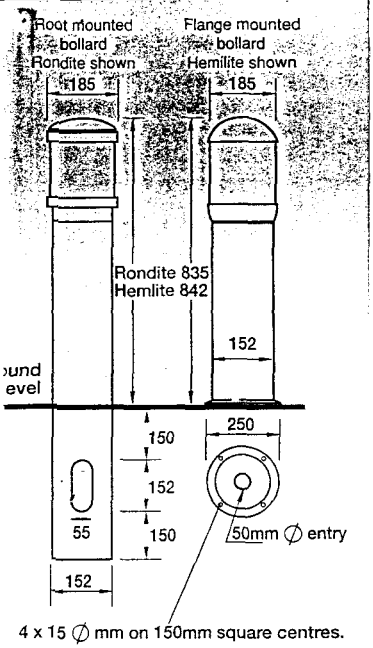
Installation

Installation and wiring is straightforward.

1.Install the base tube by digging a hole and backfilling with compacted earth or hardcore or concrete for vandal-prone areas. Place a suitable duct or pipe to allow the cable to enter via the underground entry slot provided. Flange mounted versions are available to order and should be bolted down onto a pre-cast concrete base fitted with cable duct.

2.Feed the supply cable up to the termination bar, which has two 20mm clearance holes to cater for termination and looping of steel wire armoured cable. The large capacity terminal block accepts up to 2 x4mm² conductors per terminal. An earthing point is provided. The pre-wired gear tray, with fuse, is then secured and rapid electrical connection made with the plug and socket arrangement provided.

3.Fit and retain lamp and head unit using the special key provided. Relamping is simply a matter of releasing the captive bolt and removing the head unit.



range

(Lamps to be ordered separately)

Lamp	Rating	Description	Weight (Kg)	Cat. No.
SON-E	50W	Bollard gear tray with anti-cycling ignitor	1.81	BOLGTNB1050.4
SON-E	70W	Bollard gear tray with anti-cycling ignitor	1.95	BOLGTNB1070.4
MBF/MBFSD	80W	Bollard gear tray	1.83	BOLGT B1080.4
		Rondite bollard head, post and key. Root mounted.	7.25	BOLR
		Rondite bollard head, post and key. Flange mounted.	6.40	BOLR FP
		Hemilite bollard head, post and key. Root mounted.	7.75	BOLH
		Hemilite bollard head, post and key. Flange mounted.	6.90	BOLH FP

Note: Bollard and gear tray are ordered separately.

spares

Head unit with louvres for Rondite	BOLR HEAD
Head unit with louvres for Hemilite	BOLH HEAD
Spare key for Rondite/Hemilite Key	BOL KEY

Regional Management, Sales Force, Lighting Engineering

Midlands
14-16 Emmanuel Court
Reddicroft, Sutton Coldfield
Birmingham
B73 6AS
Telephone: 021-355 3200
Fax: 021-355 3492

Northern Ireland
Prince Regent Road
Castlereagh, Belfast
BT5 6QR
Telephone: 0232 401222
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Northern Region East
Unit 5, Clarke Hall Farm
Aberford Road, Wakefield
West Yorkshire WF1 4AL
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Fax: 0924 201237

Northern Region West
The Towers
Wilmslow Road, Didsbury
Manchester M20 8RE
Telephone: 061-445 9988
Fax: Management 061-445 8191
Engineers 061-445 7727

Scotland
Hamilton Business Centre
Caird Park
Hamilton
Lanarkshire ML3 0QB
Tel: Management 0698 423434
Engineers 0698 423494
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Engineers 0698 423562

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Eastern Avenue West
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Telephone: 0708 766733
Fax: 0708 742322

South West
16 Columbus Walk
Atlantic Wharf, Cardiff
Wales CF1 5BY
Telephone: 0222 452233
Fax: 0222 451452

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Telephone: 061-445 1557
Fax: 061-445 8191

North East
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Fax: 061-448 1282

North West
Telephone: 061-445 1233
Fax: 061-445 8191

Scotland
Telephone: 061-445 1259
Fax: 061-445 1276

The Towers
Wilmslow Road
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Manchester M20 8RE

South East
Telephone: 0708 766733
Fax: 0708 742444

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Telephone: 0708 766733
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3 King George Close
Eastern Avenue West
Romford
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Northern Ireland
Telephone: 0232 401222
Fax: 0232 401335

Prince Regent Road
Castlereagh
Belfast BT5 6QR

Spares/Category S Products
Spares Service Centre
Spennymoor
County Durham DL16 7LR
Telephone: 0388 420220/420011
Fax: 0388 811467
Telex: 58165 THORN

Head Office
Elstree Way
Borehamwood
Herts WD6 1FE
Telephone: 081-905 1313
Fax: 081-905 1247

International Sales
3 King George Close
Eastern Avenue West
Romford
Essex RM7 7PP
Telephone: 0708 766733
Fax: 0708 742322
Telex: 897759 THLITE G

Head Office Sales
(Government Contracts, Roads, Arterial, Tunnels and Hazardous Area Lighting)
3 King George Close
Eastern Avenue West
Romford
Essex RM7 7PP
Telephone: 0708 766733
Fax: 0708 742322
Telex: 897759 THLITE G

Overseas Companies in:
Australia, Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Hong Kong, Ireland, Italy, Malaysia, Netherlands, New Zealand, Norway, Portugal, Singapore, South Africa, Spain, Sweden, Taiwan and Thailand

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Publication No: 92973

THORN

PROPOSED LANDSCAPING SCHEME
TO DISTRIBUTOR ROAD EXTENSION
SOUTH OF HORSESHOE ROAD, SPALDING.

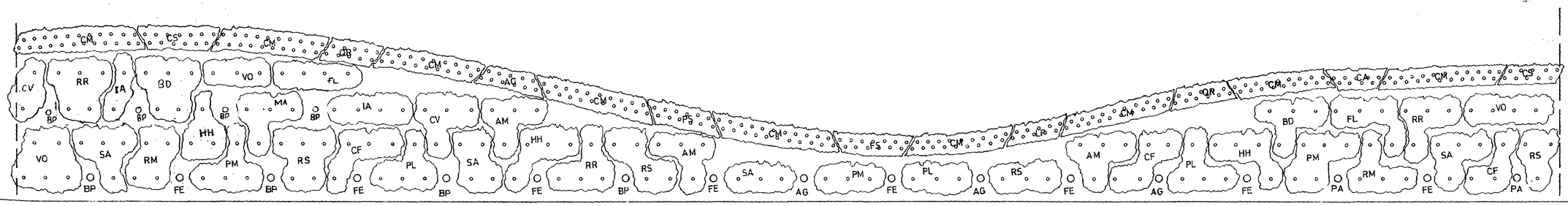
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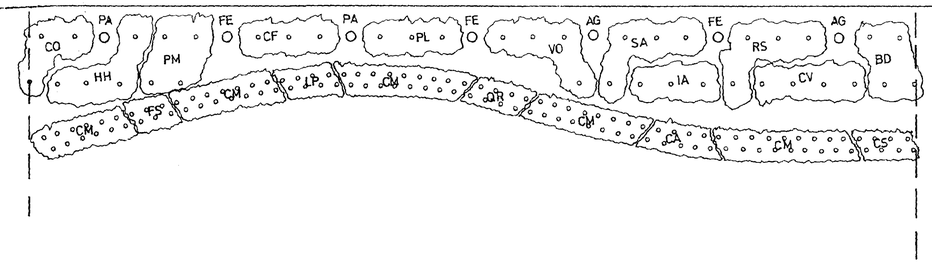
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DETERMINED

SOUTH... HOUSING...

- 8 MAY 2000





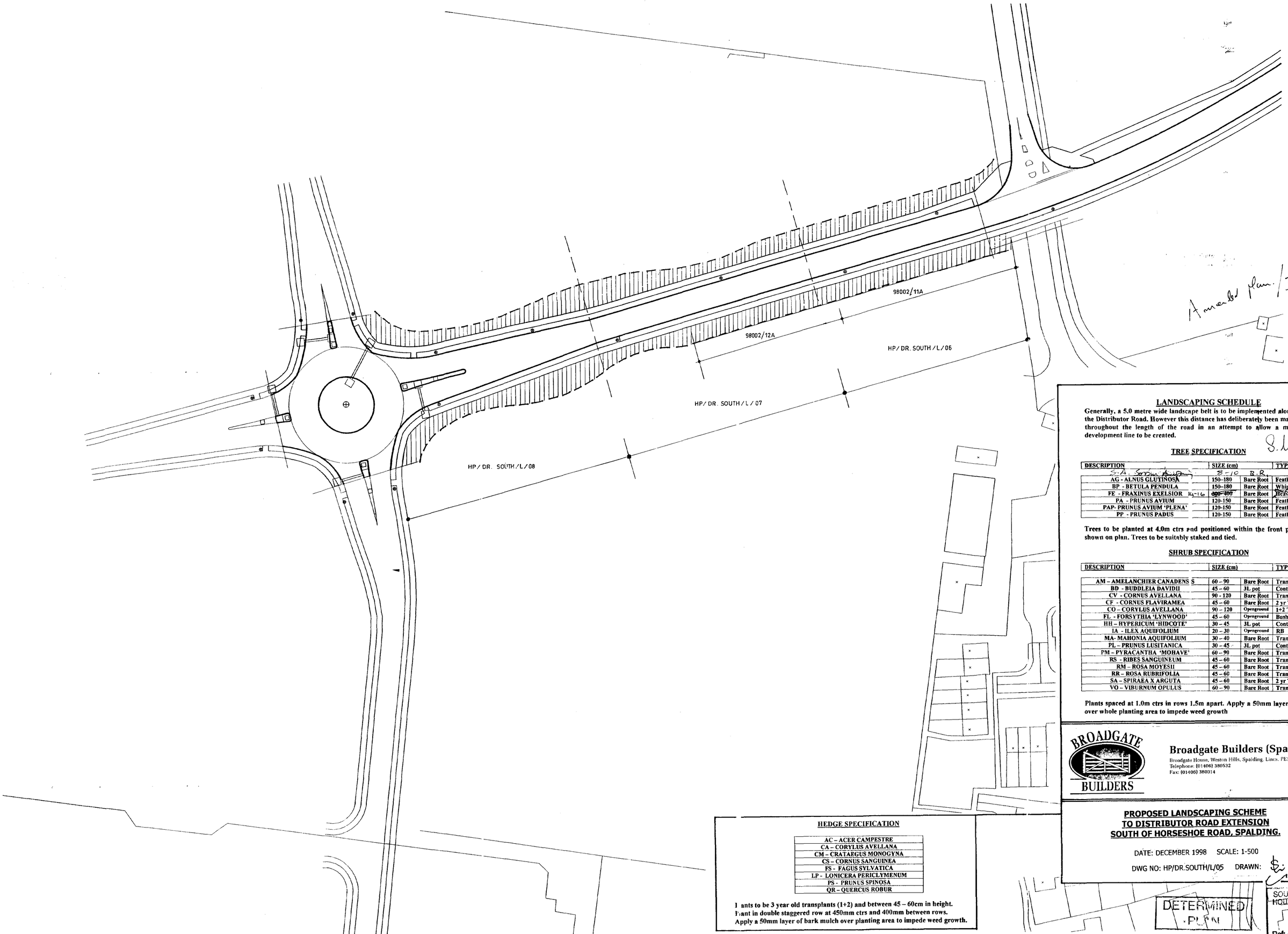
PROPOSED LANDSCAPING SCHEME
TO DISTRIBUTOR ROAD EXTENSION
SOUTH OF HORSESHOE ROAD, SPALDING.

DATE: DECEMBER 1998 SCALE: 1-100

DWG NO: HP/DR.SOUTH/L/07 DRAWN:

DETERMINED
PLAN

SOUTH
HOUSING
-8 MAY 2000
Ref: 0544aa



Amended plan 13/8/00

LANDSCAPING SCHEDULE

Generally, a 5.0 metre wide landscape belt is to be implemented along the whole of the Distributor Road. However this distance has deliberately been made inconsistent throughout the length of the road in an attempt to allow a more interesting development line to be created.

S. Higgins 3.8.00.

TREE SPECIFICATION

S.A. Scrutton Partnership 8-10 B.R.

DESCRIPTION	SIZE (cm)		TYPE
AG - ALNUS GLUTINOSA	150–180	Bare Root	Feathered
BP - BETULA PENDULA	150–180	Bare Root	Whip
FE - FRAXINUS EXELSIOR 14-16 ~~200–400~~		Bare Root	Heavy Standard
PA - PRUNUS AVIUM	120-150	Bare Root	Feathered
PAP- PRUNUS AVIUM 'PLENA'	120-150	Bare Root	Feathered
PP - PRUNUS PADUS	120-150	Bare Root	Feathered

Trees to be planted at 4.0m ctrs and positioned within the front planting row as shown on plan. Trees to be suitably staked and tied.

SHRUB SPECIFICATION

DESCRIPTION	SIZE (cm)		TYPE
AM – AMELANCHIER CANADENS S	60 – 90	Bare Root	Transplant
BD - BUDDLEIA DAVIDII	45 – 60	3L pot	Container
CV - CORNUS AVELLANA	90 - 120	Bare Root	Transplant
CF - CORNUS FLAVIRAMEA	45 – 60	Bare Root	2 yr Transplant
CO – CORYLUS AVELLANA	90 – 120	Openground	1+2 Transplant
FL - FORSYTHIA 'LYNWOOD'	45 – 60	Openground	Bushy
HH – HYPERICUM 'HIDCOTE'	30 – 45	3L pot	Container
IA - ILEX AQUIFOLIUM	20 – 30	Openground	RB
MA- MAHONIA AQUIFOLIUM	30 – 40	Bare Root	Transplant
PL – PRUNUS LUSITANICA	30 – 45	3L pot	Container
PM – PYRACANTHA 'MOHAVE'	60 – 90	Bare Root	Transplant
RS - RIBES SANGUINEUM	45 – 60	Bare Root	Transplant
RM – ROSA MOYESII	45 – 60	Bare Root	Transplant
RR – ROSA RUBRIFOLIA	45 – 60	Bare Root	Transplant
SA – SPIRAEA X ARGUTA	45 – 60	Bare Root	2 yr Transplant
VO – VIBURNUM OPULUS	60 – 90	Bare Root	Transplant

Plants spaced at 1.0m ctrs in rows 1.5m apart. Apply a 50mm layer of bark mulch over whole planting area to impede weed growth

HEDGE SPECIFICATION

AC – ACER CAMPESTRE
CA – CORYLUS AVELLANA
CM – CRATAEGUS MONOGYNA
CS – CORNUS SANGUINEA
FS – FAGUS SYLVATICA
LP - LONICERA PERICLYMENUM
PS - PRUNUS SPINOSA
QR – QUERCUS ROBUR

Plants to be 3 year old transplants (1+2) and between 45 – 60cm in height. Plant in double staggered row at 450mm ctrs and 400mm between rows. Apply a 50mm layer of bark mulch over planting area to impede weed growth.

BROADGATE BUILDERS

Broadgate Builders (Spalding) Limited
Broadgate House, Weston Hills, Spalding, Lincs. PE12 6DB
Telephone: (01406) 380532
Fax: (01406) 380014

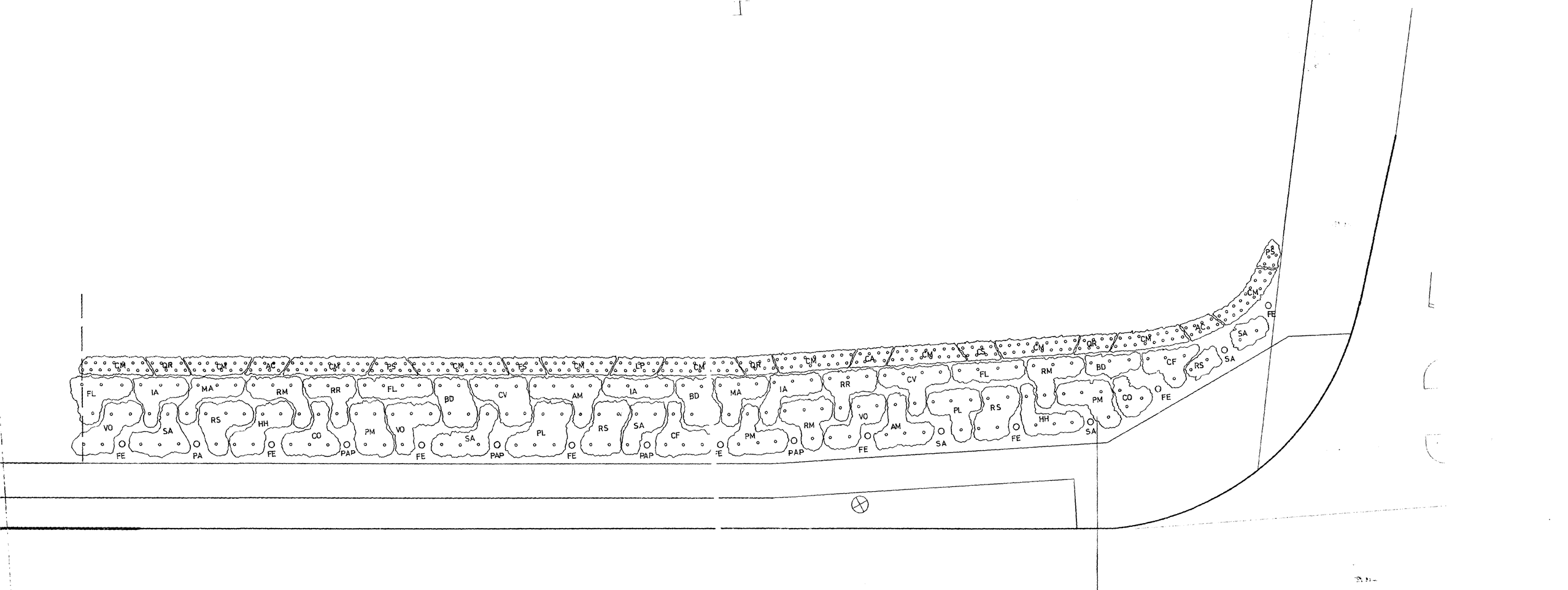
PROPOSED LANDSCAPING SCHEME TO DISTRIBUTOR ROAD EXTENSION SOUTH OF HORSESHOE ROAD, SPALDING.

DATE: DECEMBER 1998 SCALE: 1-500

DWG NO: HP/DR.SOUTH/L/05 DRAWN:

DETERMINED PLAN

SOUTH KESTEVEN DC HOUSING & PLANNING
- 8 MAY 2000
Ref: 0564/00



PROPOSED LANDSCAPING SCHEME
TO DISTRIBUTOR ROAD EXTENSION
SOUTH OF HORSESHOE ROAD, SPALDING.

DATE: DECEMBER 1998 SCALE: 1-100

DWG NO: HP/DR.SOUTH/L/06 DRAWN:

DETERMINED
PLAN

SOUTH HOLLAND
HOUSING & PLANNING
-8 MAY 2000
Ref

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PRIVATE DRIVE SPECIFICATION

Private drives ▒▒▒ to be block paved using Marshalls Rialta in Burnt Ochre to create a cobblestone effect.

. ● lb = lighting bollard.

LANDSCAPING SPECIFICATION

TREES
.ac = Acer Campestre (Field Maple)
.bp = Betula Pendula (Silver Birch)
.fs = Fagus Sylvatica (Common Beech)
.mg = Malus 'Golden Hornet' (Flowering Crab)
.rp = Robinia Pseudoacacia 'Frisia' (False Acacia)

All trees to be 1.8 ~ 2.4 metre high standards and when planted need to be suitably staked and tied.

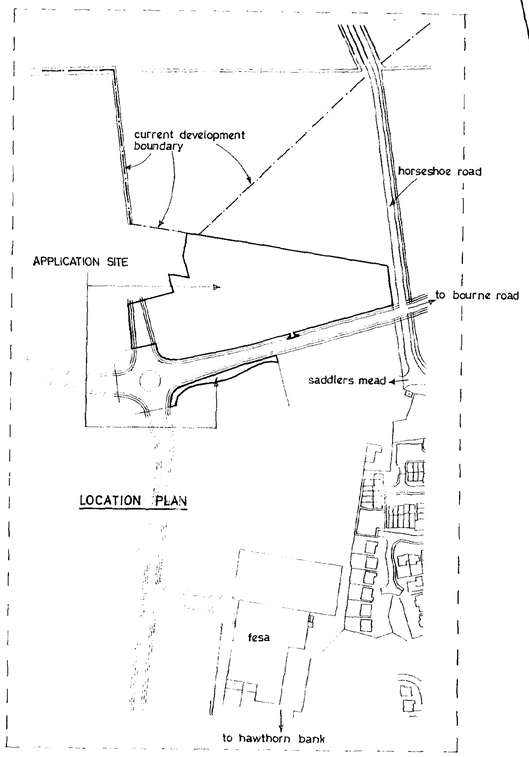
HEDGING
.cm = Crataegus Monogyna (Hawthorn). Use 600 ~ 900mm high specimens planted at 600mm ctrs in 2 rows staggered.

GENERAL

All individual driveways (3.0 metre min width) and footpaths to front of dwellings only (900mm min width)
Footpaths leading to front entrance with level thresh-hold to be ramped at 1:12 max gradient over 5.0 metres or 1:15 max gradient over 10.0 metres.

All front gardens to be turfed.

N



WALL, FENCE & RAILING SPECIFICATION

—o— w18 = 1725mm high brick wall including coping stone.

—o— w9 = 1025mm high brick wall including coping stone.

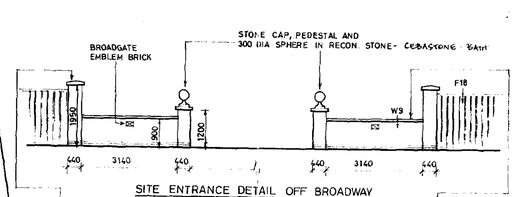
Note: All brick walling and piers to be built in Ibstock Birtley Beamish Blend. (See details below for further information) (except for Plot 1)

—— f18 = 1800mm high vertical board fence.

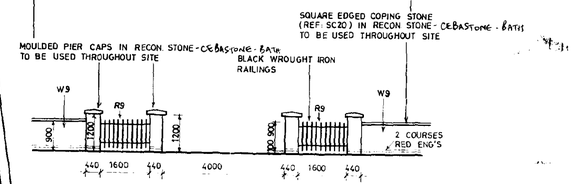
—— r18 = 1800mm high black wrought iron railing.

—— r9 = 900mm high black wrought iron railing.

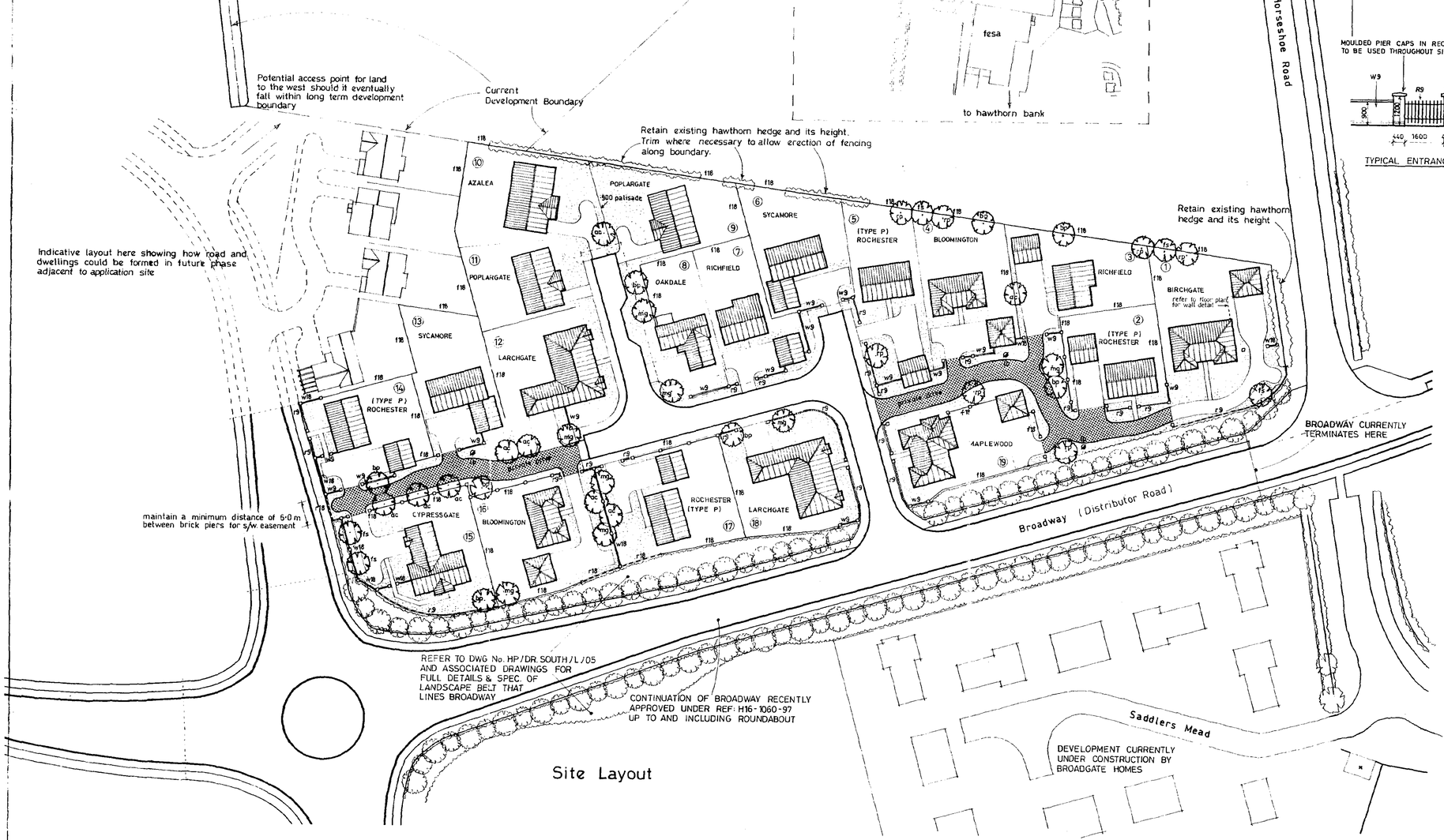
All other boundaries not coded with any of the above to be 450mm high concrete post and wire.



SITE ENTRANCE DETAIL OFF BROADWAY



TYPICAL ENTRANCE DETAIL - EXAMPLE OF PLOT 7 ILLUSTRATED



Site Layout

BROADGATE HOMES

Broadgate Homes Limited
Broadgate House, Weston Hills,
Spalding, Lincolnshire. PE12 6DB.
Telephone: 01406 380532 Fax:01406 380014

PROJECT TITLE

Proposed Residential Development
Plots 1-19. Phase 1.
Off Broadway, Holland Park,
Spalding, Lincs.

DRAWING

- SITE LAYOUT
- LOCATION PLAN
- LANDSCAPING SCHEME
- FENCING LAYOUT
- WALL & RAILING DETAILS

REV	DESCRIPTION	DATE	BY
a)	plot 9 handed. hedge removed from front	11-11-99	
b)	plot 19 substitute for Maplewood	14-12-99	
c)	Re-con Stone colour changed to Bath	7-2-00	
d)	note added relating to S.W. easement strip.	10-3-00	
e)	additional tree planting to western boundary	28-4-00	

SCALE 1·500 , 1·2500 , 1·100 DRAWN

DATE OCTOBER 1999 DRAWING No. 99019/SL(4)

DETERMINED PLAN

SOUTH HOLLAND DC HOUSING & PLANNING -8 MAY 2000 Ref: 0564/00