OUTLINE SPECIFICATION.

Planning Permission to demolish existing structures (total 98sq.m) and construct three detached, storey and a half dwelling houses and connect to public sewer, widening of the existing vehicular entrance and new gate together with all ancillary site works and services at the Townland of Perrystown, (laneway of Muckross Avenue), Perrystown, Dublin 12
For: Kristian Hogan, Ciara Dolan, & Jarlath and Kevin Dolan

Excavate where required to good bearing strata, for foundations to concrete block walls where shown on drawings. Excavate for all drains and services where shown on drawings.	**(11)** EXCAVATION
Ram and consolidate bottoms of all trenches and lay 50mm thick weak mix 15N C concrete.	**(11).1** TRENCH BOTTOMS
Deposit and compact hard-core to depth 225mm Min. as shown on drawings and blind with 50mm layer of clean fine sand. Lay 2000 gauge radon barrier under all floors and turn up to lap at wall edges to seal across cavity. Provide prop central radon sump with 100mm dia vent outlets. Lay 150mm concrete sub floor over extent of floors.	**(13)** FLOOR BEDS
Construct RC raft foundations to Structural Engineers design and specification.	**(16)01** FOUNDATIONS
Construct rising walls in solid concrete blockwork 5 N/mm² to sizes as shown on drawings, stretcher bond in 1:3 mortar. Make provision for drainage of cavity.	**(16) 02** RISING WALLS
Construct external walls with 300mm concrete block cavity wall construction. 100mm thick inner and outer leafs and 100mm cavity.	**(21)01** EXTERNAL WALLS
Cavity insulation to be 60mm thick "Kingspan - Thermacool K8" or similar approved rigid urethane board insulation to achieve a minimum U-value of 0.27w/m² K fixed to inner leaf of cavity. Cavity width to be min 100mm unless otherwise stated.	**(21) 02** CAVITY WALL INSULATION
Stainless steel ties to IS. 268: 1986 at 750mm horizontal and 450mm vertical spacing. Maintain minimum 40mm free cavity space. Wall ties to have one of their drip centres half way across the residual cavity. Provide protective plastic sheathing to ties left protruding for any length of time on site, to prevent injury to site personnel.	**(21) 03** WALL TIES
Keep cavities clean and free of mortar snots by the use of boards or cavity laths. Keep clean as work proceeds. Contractor shall take all precautions to ensure that the cavity is kept clear.	**(21) 04** CLEAN CAVITY
Lay black polythene dpc to I.S. 57 lapped 150 mm in all new walls 150mm minimum over ground level. Strip dpc on gauged lime mortar. DPC on inner block course to project 50mm proud of internal face of wall and lapped with dpm in floor. Lay black polythene dpc under and to the back of all cills, in jambs, under copings, and at stepped DPC over lintels of external openings in new walls.	**(21) 06** DPC.
Build up in cavity blockwork to all opes as indicated on drawings. Use precast concrete lintels to all internal and external openings where required with min. bearing of 200mm to either side.	**(21) 07** BUILD UP OPES.
Lintels shall be to BS 5977. Lay precast concrete cills to details to all new window openings. Provide 25mm expanded polystyrene insulation to back of sills to form thermal break.	**(21) 08** LINTELS AND CILLS

Allow for movement joints, in internal and external walls, in accordance with concrete block manufacturers written requirements and as indicated on architects drawings.	**(21)10** MOVEMENT JOINTS
Construct non- Loadbearing internal walls using 75x50mm timber studs @ 400mm centres with 12.5mmGyproc Wallboard plasterboard generally and 12.5mm Gyproc Moisture resistant board to bathroom and kitchen areas to receive wall tiling.	**(22) 01** INTERNAL PARTITIONS NON-LOADBEARING
Internal loadbearing walls to be constructed in 100mm concrete block as indicated on drawings. Refer to structural Engineer for density of block to be used.	**(22)02** PARTITIONS LOADBEARING
75mm sand and cement screed finish on 75mm "Kingspan" polyurethane flooring grade insulation on concrete raft foundation.	**(23)** FLOORS
Timber trussed roof designed and fabricated by specialists. 100x75mm wallplate. Provide 250mm fibreglass quilted roof insulation to achieve U-value of 0.16W/m²K.at ceiling level.	**(27)** ROOF
Fix to ends of new rafters ex 250 x 32mm marine plywood fascia and narrow barge flashing	**(27)04** EAVES DETAIL
Provide proprietary soffit and rafter ventilators to achieve 25mm continuous ventilation at eaves and 50mm clear air space between rafters over wall plates in accordance with part F building regulations 1997	**(27)05** EAVES VENTILATION
Anthracite PVC windows double-glazed supplied and fitted by specialist window manufacturer. Double glazing units to be argon filled with 12mm cavity and soft low E glass to achieve average U-value of 2.2 W/m²K	**(31)** EXTERNAL WINDOWS
Provide and fix nom 250x32mm iroko Teak window boards nosed to finish proud of finish wall. Fixings to be counter sunk and pelleted.	**31(03)** WINDOW BOARDS
Form openings for internal doors as shown. Fit lintels over opes to engineer's specification. Provide new internal door sets as scheduled. All internal doors to be of timber construction with selected finishes to detail. External Doors to be Hardwood unless otherwise stated. Provide and fix 16mm hardwood bevelled door saddle to all internal doors, neatly scribed to architraves. Provide and fix 75x25mm hardwood moulded architraves to all internal doors. All frame fixings to be countersunk and pelleted.	**(32)01** DOORS
Ceilings generally to be 12.5mm Gyproc plasterboard with 3mm gypsum skim finish.. Ceilings in areas subject to high humidity, i.e. bathroom, en-suite to be 12.5mm moisture resistant plasterboard with 3mm gypsum skim finish.	**(35)** CEILINGS
Proposed External walls to be nap finished sand/cement render painted to selected colour. Existing External walls to be repaired and painted to selected colour. All as indicated on drawings PA003	**(41)** EXTERNAL FINISH
Plaster, scud, render and float in sand and cement render to blockwork walls with hardwall plaster finish. 3mm gypsum skim finish to plasterboard. Supply and fix selected glazed ceramic wall tiles in accordance with C.P. 202 : l972, to bathrooms, ensuites and kitchen areas. Allow for all grouting to tile joints. Skirtings to be 100x 16mm hardwood to match doorframes, flush with wall finish.	**(42)01** INTERNAL WALL FINISHES

Apply three coats of emulsion generally to walls and ceilings. Three coats of oil paint to be applied to woodwork on primer.	**(42)02** PAINTING
Ceilings throughout to be foil backed Gyplath plasterboard finished with 3mm Gypweld skim.	**(45)02** CEILINGS
Finish plasterboard with 3mm gypsum plaster skim throughout.	**(45)02** GYPSUM SKIM
Roof finish generally to be of selected fibre cement slate / flat conc. Tile to BS 690 to a neutral uniform blue/black colour, laid on treated 50 x 38 mm battens fixed at 250 mm centres on 'monorfol' sarking breather felt on 50 x 200mm rafters at 400 mm centres. Include 50 x 200 mm solid trimming to form structural opes to 'Velux' windows.	**(47)01** FINISHES : ROOF
Lay over rafters untearable felt weighing not less than 22kg per roll of 20, lapped 75mm at horizontal and 150mm at vertical joints, carried over ridge, allowed to sag slightly between rafters, carried out over fascia to give drip into gutters, fixed with large headed galvanised nails.	**(47)02** SARKING FELT
Provide lead flashings to all chimneys and abutments with soakers, aprons and counter flashings.	**(47)03** LEAD FLASHING
Seal all new blockwork with mix of emulsion paint thinned with water to manufacturer specification. Apply three coats of emulsion generally to walls and ceilings. Three coats of oil paint to be applied to woodwork on primer.	**(49)** PAINTING
Provide and construct manholes, A.Js, back inlet gully traps and connect up site drainage system and rain water harvesting system	**(52)01** DRAINAGE
Excavate for drainpipes, manholes, etc. 400mm minimum below existing ground level, ram and consolidate bottoms of trenches and grade to fall of l in 40 or such other fall as directed. Construct manholes, install fittings lay and joint pipes. Test system with water test and on satisfactory completion of same return, fill and ram excavated material. Remove surplus excavated material from site.	**(52)02** LAYING DRAINAGE
All vent, soil and waste pipes are to be in rigid pvc piping. Wastes shall be 38mm dia. from WHB and soil pipes to be ll0 mm dia. pvc pipes.	**(52)03** SOIL AND WASTE PIPES
Provide where shown l25mm ogee seamless aluminium gutters and downpipes fixed strictly in accordance with manufacturer's instructions. Connect r.w.p. to back inlet gully traps. Fit gratings to all gully traps.	**(52)04** RAINWATER GOODS
Make new connection to water mains. Provide all necessary stop valves etc. 19mm diameter rising main to be taken to cold water storage tank in attic. From rising main take 12mm cold branch to kitchen sink. Provide 12mm hot supply to kitchen sink. Provide hot and cold services to other sanitary fittings and connect up.	**(53)01** HOT & COLD WATER SERVICE
All concealed pipes including heating pipes in floor space to be insulated as with Armaflex or other similar approved.	**(53)02** INSULATION OF PIPES
Provide and Insulate cold water storage tank with 44mm expanded polystyrene. Allow for expansion pipe over tank.	**(53)03** COLD WATER STORAGE TANK
Provide complete oil fired heating installation. External type packaged oil fire boiler. Provide room thermostats, thermostatic radiator valves or other sensing device for independent	**(56)01** SPACE HEATING.

temperature control of heating system in accordance with the requirements of Technical Guidance Document L Building regulations 2002.

All electrical work to be to ESB and IEE requirements. Number and location of fittings to be as scheduled.	**(63)** ELECTRICAL
Provide smoke alarm system to minimum Grade E system as set out in Technical Guidance Document B Building regulations 1997.	**(68)01** SMOKE ALARM
Built in kitchen and bedroom fittings to be supplied and installed by specialist manufacturers.	**(73)** BUILT IN FITTINGS
Provide and install complete Sanitary fittings as scheduled and as indicated on drawings complete with all fixing accessories to be fixed where shown on drawings and connected up to water supply and electricity supply in accordance with manufacturer's specification.	**(74)** SANITARY FITTINGS
Construct access roads and parking areas where shown. Tarmacadam finish to roads. Lay concrete footpaths where shown on drawings. Provide concrete kerbing to edge of driveways. Respread topsoil and grade evenly over area of disturbed site, sow grass seeds (top quality) at 69 grams/m². Planting by specialist in accordance with proposed landscaping schedule Clean out and remove all builders rubble and plant from site.	**(90)** EXTERNAL WORKS

GENERAL SPECIFICATION FOR ROADS, FOOTPATHS & SITEWORKS FOR

1. ROADS

(i) Layout and Gradient

Road longitudinal gradient shall be 1/85. Road camber and crossfall shall be 1/40.

(ii) Road Construction

Flexible carriageway construction shall be used. Vegetable soil and peat shall be removed over the road and footpath area to formation level (formation level shown on longitudinal and cross sectional drawings of road-way). The sub-grade material below formation level has an average C.B.R. reading of 10%. Formation level to the access road nearest the west boundary shall be reduced to within 4 15mm of finished road level from channel 180m to 60m. For the remainder of the access road areas where the formation level lies below 415mm of the finished road level, selected fill approved by Waldron & Associates shall be used to raise the level to within 415mm of finished road level. This fill shall be laid in 300mm layers and compacted to obtain a lO% C.B.R. reading.

A 225mm sub-base material comprising of crushed rock material lying within the grading limits set out in the following table, shall be used laid on the surface 415mm below the finished road level.

Sieve Size B.S. 410	Percentage by weight passing
75mm	100
37.5 mm	85 - 100
9.5mm	40-70
4.8mm	25-45

600m	8-22
75 m	0-10

The carriageway base shall be 130mm thick consisting of a wet mix macadam of crushed rock lying within the grading limits set out below.

Sieve size B.S. 410	Percentage by weight passing
50 mm	100
37.5 mm	95 - 100
19 mm	60-80
9.5mm	40-60
4.8mm	25-40
2.4mm	15-30
600 m	8-22
75 m	0-8

Surface shall be 60mm thick Wearing coarse bitumen macadam complying with B.S. 1621.

2. FOOTPATH

The minimum footpath width shall be 2m. Where isolated obstructions occur on footpaths the minimum clear width at the obstruction shall be 1 .2m. Footpaths shall have a crossfall of 1 in 36 and where adjacent to carriageways, this fall shall be towards the carriageway.

Joints shall be formed at spacing of 5m. and each joint shall include a double thickness of bituminous roofing fell complying with I.S. 36 (Type I F) for the full depth of the joint.

20N single coarse in-situ concrete 100mm thick shall be used in footpath construction. The thickness shall be increased to 150mm at the vehicular accesses. Footpaths shall have a 75mm sub-base complying with that used in roads.

3. KERBS

At carriageway edges kerbs shall show between 100mm and 150mm above the channel except at vehicular accesses where they shall be reduced to 40mm over channel. Pre-cast kerbs 250mm shall be used complying with 1.5. 146 and shall be laid on a 100mm x 300mm concrete bed and haunch.

FOUL & STORM DRAINAGE.

1. PIPE TYPES AND LAYOUT

Layout shall be in accordance with the Services Layout Drawings.
The foul sewer system shall have a gravity flow to the Local Authority Sewer.
u. P.V.C. pipes complying with the Provisional Specification for soil and waste pipes, drains, sewers and fittings made of Hard P.V.C." issued by the Department of Local Government, shall be used.

2. PIPE SIZES AND GRADIENT

Pipe sizes and gradients shall be in accordance with layout drawings. Storm drainage shall be to storm drainage system.

3. COVER

All pipes shall be laid with a minimum cover of 1 .2m in road and drive-way, 0.9m in open spaces and

footpaths not adjacent to carriageways and 0.6m in gardens. All pipes shall be haunched in concrete where these depths are not achieved.

4. ACCESSABILITY

Sewers shall be constructed in public property to allow accessibility for maintenance and repairs.

5. ACCESS TO SEWERS

Access to sewers shall be provided by means of manholes located as shown on drainage layout drawings.

6. PIPE LAYING

Granular bed laid in accordance with Figure 3. shall be used.
Selected fill shall be free from stones greater than 25mm in size, building rubbish, vegetable matter and lumps of clay greater that 75mm in size and shall be compacted in 100mm loose layers.

7. JOINTS

Rubber Sealing rings shall comply with B.S. 2494 Part 2 shall be used.

8. MANHOLE DIMENSIONS

(a) Length Considering the side with the greater number of branches, provide the sum of the branch diameters plus 200mm per branch for branches up to 150mm diameter, 3 00mm per branch for branches greater than 150mm diameter plus 300mm.
(b) Width: Provide 300mm for each benching with branches or 150mm for a benching with no branches plus the diameter of the pipe. In manholes on sewer lines of 375mm diameter and over, on benching should be at least 350mm wide.

9. CHANNELS AND BENCHING FOR MANHOLES

Channels shall consist of pre-formed channels or pipes cut to form channels.
Benching shall rise vertically from the top edge of the channel to a height not less than that of the soffit of the outlet and be sloped upwards then to the wall at a gradient of 1 in 6 and finished in a cement mortar. In the case of branch drains the benching shall be so shaped as to guide the flow of sewage in the desired direction.

10. MANHOLE COVERS AND FRAMES

Manhole covers and frames shall comply with B.S. 497 in all but dimensions. The minimum opening dimensions shall be 600mm X 600mm rectangular or, if circular 550mm diameter. In appropriate grade of cover and frame which shall be used in any location is given in the following table.

B.S. 497 Grade	Location
Grade A	Carriageways
Grade 13	Footpaths, verges, Vehicular accesses.
Grade C	Situations inaccessible to wheeled vehicles.

11. GULLIES:

Gullies shall be provided for the collection of roof water, waste from waste pipes, for the drainage of paved areas and of road carriageways. Gullies of paved areas and drainage carriageways shall be arranged as shown on the layout drawing.

12. TESTING OF SEWERS AND DRAINS

Sewers and drains shall be water tested by the following method.

Foul sewers shall be tested for a minimum of 20 minutes under a head of not less than lm of water over the crown at the high point and not more than 2.5m of water over the crown at low points of the line under test. The maximum allowable loss of water per hour per 100 lineal meters of pipe shall be as given in the table hereunder.

Pipe Diameter (rnm)	Maximum allowable loss (1/h)
100	6
150	9
335	13.5

13. INFILTRATION TEST FOR MANHOLES

Manholes greater than 1 m deep shall be tested for infiltration of ground water.
Infiltration to manholes shall not exceed 5 litres per house per manhole.
Infiltration tests shall be carried out when the water table in the ground
adjacent to the manhole is at its highest level or at some other approved time.

14. CLEANING OF SEWERS AND DRAINS

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

WATER SUPPLY

1. LAYOUT, PIPE SIZES AND CLASS

The layout shall be in accordance with the Site Layout Drawing. The main water line shall have a diameter of 100mm as per existing public mains and service pipes shall be 1/2 inches diameter. All pipes shall be Class C.

2. COVER TO PIPE

Watermain pipes shall have a minimum cover of 1000mm. Service pipes shall have a minimum cover of 600mm.

3. PIPE LAYING

Maximum trench width shall be the pipe diameter plus 600mm. Pipes shall be laid on a 50mm bed of fine grained material consisting of sand, gravel or soil passing a 9.5mm sieve. Similar material shall be placed around and over the pipe for a cover of 100mm. Selected fill free from stones greater than 25mm in size, rubbish, tree roots, vegetable matter and lumps of clay greater than 75mm in size shall be used to fill the

next 300mm.

4. PIPE JOINT

Joints shall be formed by an approved method recommended by the pipe manufacturers. Rubber sealing rings, shall comply with B.S. 2494. Part 1.

5. PIPE ANCHORAGE

Concrete anchor blocks shall be provided on watermains at the right angle bends and at both sides of a sluice valve chamber. Anchor blocks shall encase the pipe in concrete to a minimum thickness of 150mm all round and shall be a minimum length of 600mm.

6. SLUICE VALVES

Sluice Valves shall be provided as shown on the water main layout drawing and shall comply with B.S. 1218. The depth of the sluice valve spindle below finished ground level shall not exceed 300mm.

7. HVDRANTS

Hydrants shall be provided as shown on the water main layout drawing. Hydrants shall comply with B.S. 750 screw down type. The depth of the hydrant outlet shall not exceed 200mm below finished ground level.

8. AIR VALVES

Air valves shall be provided as shown on water main layout drawing and installed in accordance with drawing 4.1.

9. STOPCOCKS

A stopcock shall be provided on each service pipe in the footpath immediately outside the boundary of each house. Stopcocks shall comply with B.S. 1010. The depth of the stopcock spindle shall not exceed 200mm below finished ground level.

10. CHAMBERS FOR SLUICE VALVES, AIR VALVES, HYDRANTS AND STOPCOCKS.

Chambers for sluice valves, air valves, hydrants and stopcocks shall be as shown on drawings Nos. 4.1, 4.2 and 4.3. Chambers for stopcocks shall comply with B.S. 1185.

11. SURFACE BOXES

Hydrant, sluice valve, air valve and stopcock chambers shall be provided with cast iron surface boxes. Surface boxes for sluice valve and stopcock chambers shall comply with B.S. 1426 AND 3461. The appropriate grade of surface box to be used in any location is given in the following table.

B.S. 1426 and 3461 Grade	Location
Heavy - Type H	Carriageways
Medium - Type M	Footpaths, verges, vehicular accesses.
Light - Type A	Situations inaccessible

to wheeled traffic.

Hydrant surface boxes shall comply with B.S. 497 except that dimensions of clear openings and markings on hydrant box covers shall comply with B.S.
750. The appropriate grade of surface box to be used in any location shall be as given in the table for manhole covers and frames. Air valve surface boxes shall be approved.

Surface boxes shall be bedded in mortar on the chamber walls and where the chamber is located other than on a footpath, driveway or carriageway shall be surrounded by 150mm concrete, 100nn thick.

12. INDICATOR PLATES AND MARKER POSTS

Hydrants, air valves and sluice valves shall be located by indicator plates positioned to the approval of the Local Authority. Hydrant indicator plates shall be single hydrant indicator plates with fixed black letter complying with B.S. 3251 except that the plates shall be white.

Air valve and sluice valve indicator plates shall comply with the specification for single hydrant indicator plates with fixed letters in B.S. 3251 except that they shall be covered white and instead of the letter H, shall bear the letters A.V. and S.V. respectively as approved. Where marker posts are used that shall be concrete complying with I.S. 162.

13. TESTING AND STERILISATION

On completion all pipes shall be tested, flushed out and sterilized. Pipework shall be tested under a pressure of 1.5 times class static pressure. At this pressure the maximum acceptable leakage shall be 20 litres per kilometer per 24 hours.

All pipework shall be thoroughly flushed out before sterilization. The pipework shall be sterilized by allowing water containing at least 10 parts per million residual chlorine to stand in the mains and service pipes for at least two hours. The pipework shall be flushed out on completion of sterilization.

EXTERNAL LIGHTING SYSTEM

1. DESCRIPTION OF LAMPS

Street lighting shall be by means of post top mounted lanterns, housing 125 watt M.B.F./U. Lamps and control gear.

2. SUPPORTING POLE TO LAMP

The pole top lanterns shall be mounted on steel poles which shall be 5m above ground level.

3. CABLES TO LAMP

Power shall be supplied to each lamp by 2 X 6mm sq. cable in 50mm U.P.V.C. ducting pipe. This duct shall be laid below the level of all other services and surrounded by fine sand for a depth of 200mm before being backfilled.

LANDSCAPING

1. Schedule of Trees

A.	Salix Caprea Pendula	Weeping Willow	18cm girth.
B.	Prunus	Cherry	18cm girth
C.	Betula Pundula	Silver Birch	18cm girth
D.	Acer Palmatum	Japanese Maple	18cm girth.
E.	Fraximus Exelsior "Atlas"	Ash	18cm. girth.
F.	Tilia Cordata	Lime	18cm. girth
G.	Tilia Green spire	Lime	18cm girth
H.	Sorbus Aria "Luteslens"	Ash	18cm. girth.
I.	Sorbus Aucuparia "Joseph Rock"	Ash	1 8cm. girth.
J.	Alnus Cordata	Alder	12 - 14 cm girth

2. Tree planting.
For 18 cm girth trees, Tree pits 1.2m square.

Staking:
4 stakes to be driven at an angle in each corner and cross batons secured to stakes to hold trees.

3. Planting Mixture:
1.5 cubic metres.
70% high grade topsoil
30% moss peat.
250 grams of long term osmolote.
Note 3 metre's of 60mm perforated agricultural aeration tubing to be incorporated into each tree pit for irrigation purposes.

4. Planting of Alder- 12-14 cm. girth.
lm square tree pit.

5. Staking
100mm diameter pre treated stake, placed on the prevailing wind side of the tree and firmly driven to at least 300mm below the bottom of the planting hole. Two rubber ties per tree, one near the top and one 450mm above ground level.

6. Planting Mixture:
50% top grade soil.
50% peat.

7. Schedule of Shrubs

1. Acer Campestre
2. Quercens Cerris
3. Quercens Robur
4. Betule Pedula
5. Cornus "Alba"
6. Cornus Flacirarnca.
7. Cornus "Alba Siberica".
8. Crataegus Monogyna

9. Fagus Sylvatica.
10. Fuchsia Ricartonii
11. Genista Hispanica
12. Escallonia

8. Planting of Shrubs.
Planting area to be cultivated to a depth of 200mm. All stone greater than 20mm as well as any rubbish or builders rubble to be removed off site.
All plants to be planted in separate pits minimum size 20% bigger then root ball. Shrub beds to be covered with weed control membrane, with slots cut in membrane to plant shrubs. Low maintenance finish such as gravel of mulch to cover membrane.

9. Spacing:
2 plants per metre square.

10. After Planting:
Rake over soil and remove any weeds and apply simazene residual herbicide.

11. All planting schedule
Planting of all trees and shrubs to be carried out in suitable weather conditions in the first dormant season after the completion of construction works.

13. LAWNS:
All areas for lawns to be rotovated to a depth of 20 cm.
All surface stone greater than 10mm to be removed from the top 50mm layer of soil.
Soil to be raked and leveled to produce an even surface with a fine tilth.
No. 2 lawn seed to be sown at a rate of 1.5 oz/rnetre square.
Lawn area to be rolled after seeding.
Also apply lawn feed (fertilizer) at about 1 oz/sq.m.

14. MAINTENANCE:
24 month maintenance period.
2 visits per year.
1. Check tree ties.
2. Wind blown trees to be firmed up.
3. Insect attack - spray if necessary.
4. Failures - replace with suitable material.
5. Remove grass and stickers 300mm from base of trees.
6. Weed control - by hand or spot treat with Round Up.
7. Spray shrub beds in early spring with Simazene after any existing weeds have been removed.