

*Proposed road access through
Boatbrae Wood*

the **paulhogarth** company

April 2011



PLANNING & BUILDING
SERVICES

- 4 MAY 2011

KIRKBANK, DUMFRIES

Boatbrae Wood, Thornhill

Landscape Proposals for New Access Road



A report by

the **paulhogarth** company

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April 2011

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1.0 INTRODUCTION

Queensberry Properties are currently seeking outline planning approval for phase 1 of a new Housing development on allocated land to the south west of Thornhill town centre, and west of the local hospital (*See Appendix C – Proposed Masterplan Phases 1 & 2*).

The development proposes to access the land via the south end of Kinnell Street close to its junction with Townhead Street and through the east end of Boatbrae Wood which is part of a more significant mature woodland belt extending around the west of the town and along the south including Common Belt to the east of Townhead Street.

The Boatbrae Wood is known to be partly of ancient semi-natural origin although the area where the road is proposed does not contain any trees of ancient significance. The majority of mature trees that will be impacted by the road are beech although this south eastern sector of the wood also contains some Sessile Oak, Hornbeam, Elm, Lime and Willow.

Public access to the woodland is possible via an informal path of compacted earth which enters adjacent to a seat at the junction of Kinnell Street and Townhead Street (*see inside cover picture*).

The Paul Hogarth Company (TPHC) has been appointed by Queensberry Properties to undertake a review of the tree survey and the access road proposals by W A Fairhurst Consulting Engineers and to prepare landscape mitigation proposals that will satisfy the requirements of Dumfries and Galloway Council (D&GC). TPHC will consult with the Council's Landscape Officer with a view to achieving a satisfactory landscape solution.

1.1 Boatbrae Wood – Tree Survey

Buccleuch Woodlands Ltd carried out a survey of the trees in the area through which the road is proposed to be constructed. A total of 32 trees were surveyed, with 14 trees requiring to be removed to make way for the road and 6 others which required to be felled due to their poor condition or for public safety reasons. Of the 14 trees to be removed for the road 4 (10, 11, 13, 22) are in poor condition and would normally require to be removed as part of best practice woodland management. Of the other 10 trees to

be removed 7 are mature Beech, 2 mature Oak and 1 Hornbeam. A copy of the survey prepared to BS 5837:2005 is attached at Appendix A of this report.

At a site meeting on 4th March 2011 between TPHC and Buccleuch Woodlands Ltd a review of the tree survey in relation to revised proposals from WA Fairhurst it was agreed that based on the root protection zone requirements for a tree of its size that the mature Beech tree nr.9 was at risk from the road and should be removed. TPHC however did note that in a number of similar development circumstances that they have sought to retain valuable trees some of which were perhaps at greater risk than this tree. It is TPHC's view that for the purposes of the planning application that this Beech tree (nr 9) should be identified for felling, however it should be reviewed in the context and likely extent of impact the proposed road construction works (e.g. excavations and compaction) will realistically have on its health and stability. If it were to be retained then appropriate protection of the tree including over-run of roots to BS 5837:2005 will be necessary.

It was also agreed that in review of the revised road proposals and given its distance from the proposed road, that the Beech tree nr.14 previously identified for removal should be retained and its condition monitored.

1.2 Tree Preservation Orders and Conservation Area

None of the trees that will be removed from this area of Boatbrae Wood are protected by a Tree Preservation Order (TPO) and none of the woodland at this location falls within the Thornhill Conservation Area.

2.0 LANDSCAPE PROPOSALS

In consultation with the Landscape Officer at D&GC it was established that the road alignment and proposed landscape proposals should seek to protect and enhance as far as is possible the character of the mature woodland at this location while also mitigating the impact of the access road through the wood. In this regard The Council's Landscape Officer was keen to establish the route in the character of a "woodland ride" and to seek to reduce the urban nature of the road and its associated safety features such as road barriers, pavements and lighting. In addition the Landscape Officer requested that consideration be given to routing pavements away from the road and re-aligning through the woodland.

2.1 Road Design

In consultation with TPHC, WA Fairhurst have considered and where possible adopted proposals to mitigate the impact of the road on the woodland. This has included the removal of the pavement on the south side of the road, removal of the road barrier on the initial 70 metres of the road, steepening the constructed slopes to 1:2 and therefore the removal of stone filled gabions at the base of slopes. These amendments and change to the construction and earthworks has also reduced the land requirement and impact of fill over the root zone of other mature trees.

The road follows a natural clearance close to Kinnell Street and to facilitate the introduction of a new junction for Kinnell Street onto the proposed new access road. The level change between Kinnell Street and the lower development site of approximately 12 metres and this will require cut and fill along the line of the road to establish an appropriate road gradient acceptable for adoption by D&GC Roads Section. In this regard the road is predominantly in fill as it extends south westwards into the development site. As indicated the slopes have been increased from 1:3 to 1:2 in order to minimize the impact on the woodland. While these slopes will not be conducive to grass maintenance they can be successfully planted with woodland under storey shrubs and with a number of appropriately specified trees to compensate for the loss of the 20 number trees scheduled for removal.

W A Fairhurst has consulted with D&GC Roads Section with regards to the Landscape Officers request to consider the routing of the pavement away from the road. The

Councils Roads Engineer does not consider this to be appropriate and has confirmed that the Council will require a single pavement to the north side of the road. It is also necessary to provide lighting of the road and pavement. In this regard TPHC would confirm that given the nature of the surround ground (slopes and drainage) the impact of establishing a separate path with lighting away from the road would not be practical in that the construction and excavation for lighting cabling would exacerbate local impact on trees, otherwise not affected by the proposed road.

TPHC are satisfied that WA Fairhurst's road design has done as much as can be expected in both satisfying the requirements of D&GC Roads Section while also adopting an engineering design that seeks to minimize its impact on the woodland. It will be important that stringent controls are imposed on the contractor during construction of the road to protect all other mature trees close to the extents of cut and fill. Appropriate protection should be established in accordance with BS 5837:2005 and to the full satisfaction of the appropriate officer within D&GC.

2.1 Landscape Design

In order to further mitigate the impact of the road through the woodland it is proposed to ensure that there is appropriate compensation for the trees that will be felled to make way for the road. In this regard we propose to plant up the new slopes adjacent to the road and on the interface with the existing retained woodland edge with native trees and under storey shrubs. In addition it is proposed to plant additional large native woodland trees such as Beech, Oak and Ash into existing gaps created by the removal of trees for both the road and woodland management purposes. Through discussion with Buccleuch Woodlands Ltd it was agreed that the re-planting proposals should seek to diversify the woodland with other native trees such as Ash, Oak, Birch, Glean and perhaps some Rowan, Scots Pine and Hawthorn. While it would still be appropriate to maintain a predominance of beech, diversifying the trees within this area of Boatbrae Wood will also improve local biodiversity of the wood.

The removal of the need for stone gabions at the toe of the road embankments will establish an area of reduced slope/flat ground on the outer edges of the road corridor. It is important that earthworks grade out the engineered angles at the no-cut/no-fill line to establish more natural transition with the surrounding topography. These areas will also

be able to accommodate some slightly larger specification of trees (e.g. standards and heavy standards) where appropriate.

In order to reduce the visual impact of road barriers and the concrete retaining structure it is proposed to plant a woodland edge mix relatively close to the back of the road barrier and the protective fence above the retaining structure which would ultimately be maintained as an informal native hedge. In time it will require to be trimmed and topped but will establish a strong edge to the road as it descends through the woodland towards the site.

In addition to new young woodland planting on the slopes of the road, approximately 70 number trees ranging in specification from feathered half standards to a few heavy standards will be planted as compensation for the removed trees and to fill gaps created by previous felling and clearance of Elms.

A plan and sections outlining the overall scope of the landscape proposals including an outline specification for the trees is provided in Appendix B of this report.

2.2 Informal Woodland Path

The existing informal woodland path extends across the line of the proposed new road and will require to be accommodated by the road and landscape design. In order to accommodate the road proposal the path will require to be realigned across the road at approximately 70 metres and close to Beech number 9. With the new layout the main access into the path network of Boatbrae Wood will be via the road pavement on the north side linking with the realigned path as shown on the drawing (*Appendix B*). It is envisaged that the short section of existing path from behind the seat (at road junction) and requiring to cross the road at the proposed build out, give way point would only occasionally be used. It is accepted that a priority direction sign will be required at the build outs and this will provide greater protection for pedestrians crossing at this point.

3.0 CONCLUSION

With the proposed engineering design, stringent control on the protection of all other trees during construction and with the implementation of the landscape mitigation/compensation planting (as described in this report and outlined in the following appendices) TPHC are satisfied that the access road can be successfully established through Boatbrae Wood.

APPENDIX A

Tree Survey



Tree Number	Species	Age Class	Diameter	Stem type	Height	Crown	Category	Crown Spread				Action	RPA	
			(m)		(m)	Lower Ht		N	S	E	W		Dia	Area
1	Sessile Oak	M	0.8	S	23.6	9	B2	6	6	9	3	Retain	9.6	289.5
2	Hornbeam	M	0.7	S	22	3	C2	2	5	8	6	Remove	8.4	221.7
3	Sessile Oak	M	1.1	S	25	6	B2	5	10	12	4	Retain	13.2	547.4
4	Lime	M	0.35	S	10	3	C2	1	5	9	0	Remove	4.2	55.4
5	Lime	M	0.5	S	17	1	C2	0	9	5	4	Remove	6	113.1
6	Hornbeam	J	0.12	S	7	1	B2	1	4	2	2	Retain	1.4	6.2
7	Beech	M	1.1	S	28	4	A2	7	12	12	7	Retain	13.2	547.4
8	Sessile Oak	J	0.2	S	8	1	A2	2	3	2	3	Retain	2.4	18.1
9	Beech	M	1.2	S	30	7	A2	8	9	12	10	Remove	14.4	651.4
10	Willow	J	0.28	S	7	1	C2	5	0	5	2	Remove	3.4	36.3
11	Elm	J	0.3	M	9	2	C2	5	1	5	0	Remove	3	28.3
12	Beech	M	1.2	S	30	8	A2	13	12	10	9	Remove	14.4	651.4
13	Hornbeam	M	0.47	S	12	3	C2	5	9	1	9	Remove	5.6	98.5
14	Beech	M	1.1	S	30	8	A2	8	8	10	8	Retain	13.2	547.4
15	Sessile Oak	M	0.6	S	25	0	R	0	0	0	0	Remove	7.2	162.9
16	Beech	M	0.89	S	23	2	C2	2	9	5	3	Remove	10.7	359.7
17	Sessile Oak	M	1	S	30	11	A2	4	15	7	11	Retain	12	452.4
18	Sessile Oak	M	0.8	S	24	2	C2	0	14	6	4	Remove	9.6	289.5
19	Beech	M	0.6	S	27	9	B2	9	5	8	9	Retain	7.2	162.9
20	Beech	M	0.9	S	28	5	B2	1	12	6	6	Retain	10.8	366.4
21	Sessile Oak	M	0.7	S	22	9	B2	4	6	8	0	Remove	8.4	221.7
22	Elm	J	0.1	S	6	1	C2	3	1	4	2	Remove	1.2	4.5
23	Beech	M	1.1	S	30	10	A2	10	10	5	7	Remove	13.2	547.4
24	Sessile Oak	M	0.8	S	28	6	A2	0	11	9	14	Remove	9.6	289.5
25	Beech	M	1	S	27	7	B2	3	10	5	7	Remove	12	452.4
26	Hornbeam	M	0.6	S	24	3	B2	0	10	1	7	Remove	7.2	162.9
27	Beech	M	1.1	S	30	6	A2	4	13	8	7	Remove	13.2	547.4
28	Beech	M	0.97	S	29	5	B2	2	10	10	9	Remove	11.6	422.7
29	Beech	M	1	S	31	6	B2	4	8	9	9	Retain	12	452.4
30	Beech	M	1.1	S	30	2	B2	9	5	6	10	Retain	13.2	547.4
31	Sycamore	J	0.38	S	18	2	B2	1	4	2	4	Retain	4.6	66.5
32	Sycamore	M	0.43	S	17	1	B2	4	6	3	4	Retain	5.2	84.9

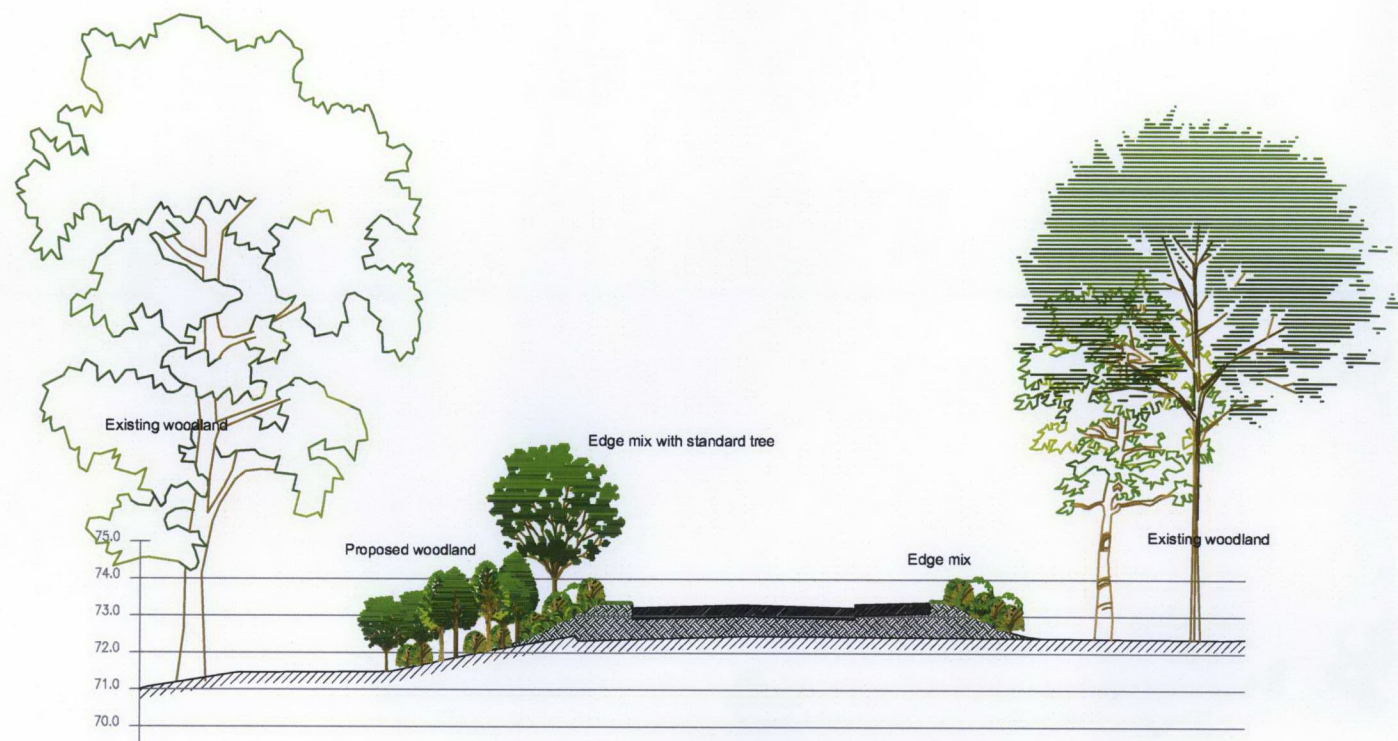
Trees marked remove in red are to be removed due to road construction. Trees in blue will be removed due to health and safety concerns anyway.

APPENDIX B

Landscape Proposals



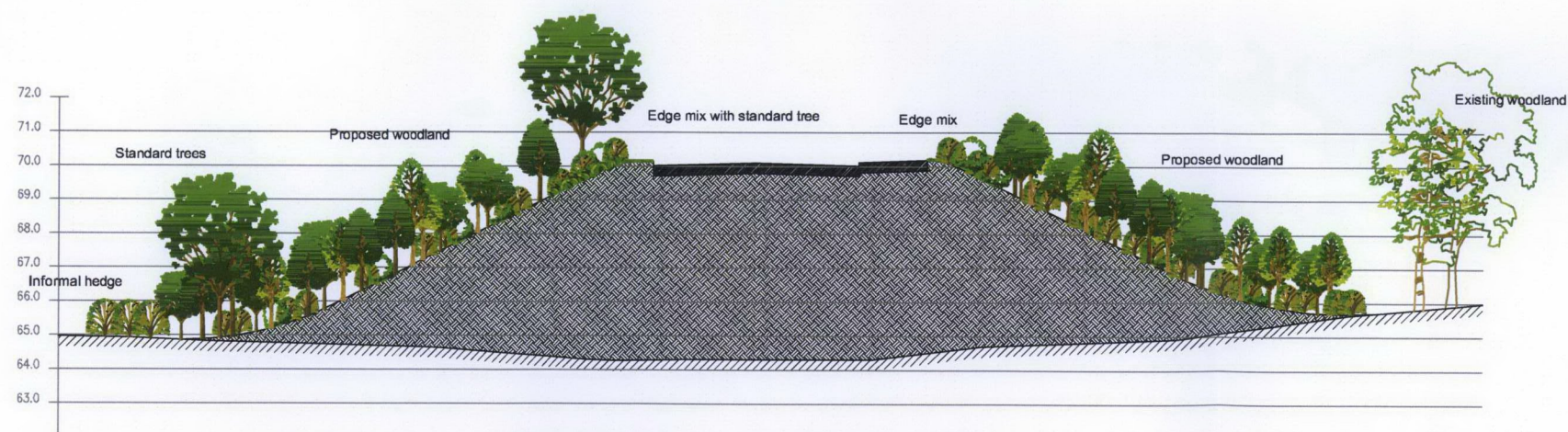
Planting Schedule			
Proposed Woodland Tree Planting			
Plants at 2m centres / 1 plant per 4m ² . Planted in groups of 5-7.			
All plants to be protected with tube and feathered trees to have single low stake.			
%	Species	Specification	Number
5	Acer campestre	Feathered, 2x, 125-150, BR	1bc
5	Quercus robur	Feathered, 2x, 125-150, BR	1bc
10	Quercus petraea	Feathered, 2x, 125-150, BR	1bc
10	Betula pubescens	Feathered, 2x, 150-175, BR	1bc
10	Sorbus aucuparia	Feathered, 2x, 150-175, BR	1bc
10	Fagus sylvatica	Feathered, 2x, 125-150, BR	1bc
10	Fraxinus excelsior	Feathered, 2x, 150-175, BR	1bc
10	Prunus padus	Feathered, 2x, 125-150, BR	1bc
10	Pinus sylvestris	30-40cm, C, 1.5, bushy	1bc
5	Corylus avellana	1+1 Transplant, 60-80, BR	1bc
5	Bambusa nipa	1+1 Transplant, 60-80, BR	1bc
5	Viburnum opulus	1+1 Transplant, 60-80, BR	1bc
5	Crataegus monogyna	1+1 Transplant, 60-80, BR	1bc
5	Rosa pratincola	1+1 Transplant, 60-80, BR	1bc
5	Euonymus europaeus	1+1 Transplant, 60-80, BR	1bc
			Total 1bc
Proposed Edge Mix			
Plants at 1.5m centres / 1 per 2.25m ² . Planted in groups of 5-7.			
Protected with tubes			
%	Species	Specification	Number
15	Corylus avellana	1+1 Transplant, 40-60, BR	1bc
15	Bambusa nipa	1+1 Transplant, 40-60, BR	1bc
15	Viburnum opulus	1+1 Transplant, 40-60, BR	1bc
15	Crataegus monogyna	1+1 Transplant, 40-60, BR	1bc
15	Prunus spinosa	1+1 Transplant, 40-60, BR	1bc
15	Rosa pratincola	1+1 Transplant, 40-60, BR	1bc
15	Euonymus europaeus	1+1 Transplant, 40-60, BR	1bc
			Total 1bc
Proposed Hedge at Hospital boundary			
To be planted as triple staggered rows, approx 450mm apart. 12 plants per m in groups of 5 plants			
Protected with tubes			
%	Species	Specification	Number
20	Bambusa nipa	1+1 Transplant, 40-60, BR	1bc
20	Viburnum opulus	1+1 Transplant, 40-60, BR	1bc
20	Crataegus monogyna	1+1 Transplant, 40-60, BR	1bc
20	Prunus spinosa	1+1 Transplant, 40-60, BR	1bc
20	Rosa pratincola	1+1 Transplant, 40-60, BR	1bc
			Total 1bc
Proposed Standard Tree Planting			
Low double stake + spiral guard			
Abb	Species	Specification	Number
Op	Quercus petraea	10-12cm RBP	1bc
Bp	Betula pubescens	12-14cm RBP	1bc
Se	Sorbus aucuparia	12-14cm BR	1bc
Ps	Fagus sylvatica	10-12cm RBP	1bc
Fe	Fraxinus excelsior	2-14cm BR	1bc
			Total 1bc
Grass Mix			
Grass seed mix to be supplied by British Seed Houses Ltd			
Road Verges Grass Mix A16, 35g/m ²			
Key			
 Woodland Tree Planting			
 Edge Mix Planting			
 Informal Hedge Planting			
 Standard Tree Planting			
Revision	Description	Date	Initial
P01	Amendments in line with Engineers revisions Edge mix areas A + B combined. Edge mix Area C renamed as B.	05 04 11	SNR
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client			
Queensbury Properties Ltd			
project title			
Thornhill Residential Development			
drawing title			
Planting Layout			
drawn by	checked by	scale @ A1	revision
SNR	PH	1:250	P01
project no.	date	drawing no.	
11007E	15/03/2011	300	
status			
PLANNING			



Typical landscape Section @ Chainage 90m



Typical landscape Section @ Chainage 116m



Typical landscape Section @ Chainage 130m

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Revision Number	Description	Date	Drawn by
P01	Vehicle safety barrier removed inline with Engineers drawings	07 04 2011	SNR
CAD drawing must not be ammended or measured by hand. All detail drawings to be read in conjunction with layouts and specification. Any discrepancies to be brought to the attention of the Landscape Architect.			

Client	Queensbury Properties Ltd
Project Title	Thornhill Residential Development
Drawing Title	Typical Landscape Sections

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Project number	Drawing number	Revision	Scale @ A3	Date	Drawn by	Checked by
11007E	700	P01	1:200	15/03/2011	SNR	PH

Drawing Status

PLANNING

APPENDIX C

Proposed Masterplan

ROAD ACCESS THROUGH WOODLAND

Contractors are not to scale dimensions from this drawing



KEY

- Site Boundary Phase 1
- Site Boundary Phase 2
- Tarmac Road
- Paved Road
- Private Driveway
- Footway
- Public Amenity Space
- Garden Area
- Low Maintenance Shrubs
- Area of Scheduled Ancient Monument
- Woodland
- Sustainable Urban Drainage System Proposed Pond locations



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Client
Queensberry Properties
Project
Thornhill

Description
**Proposed Masterplan
Phase 1 and 2**

Status
Planning
Scale 1:1000@A1 ns
Job number 25736
Drawing number (02) 003
Date Jan 09
Revision

Original size 100mm @ A1 Copyright Broadway Malyan Limited

3360



Planting Schedule

Proposed Woodland Tree Planting

Plants at 2m centres / 1 plant per 4m². Planted in groups of 5-7.

All plants to be protected with tube and feathered trees to have single low stake.

%	Species	Specification	Number
5	Acer campestre	Feathered, 2x, 125-150, BR	1bc
5	Quercus robur	Feathered, 2x, 125-150, BR	1bc
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10	Betula pubescens	Feathered, 2x, 150-175, BR	1bc
10	Sorbus aucuparia	Feathered, 2x, 150-175, BR	1bc
10	Fagus sylvatica	Feathered, 2x, 125-150, BR	1bc
10	Fraxinus excelsior	Feathered, 2x, 150-175, BR	1bc
10	Prunus padus	Feathered, 2x, 125-150, BR	1bc
10	Pinus sylvestris	30-40cm, C, 1.5, bushy	1bc
5	Corylus avellana	1+1 Transplant, 60-80, BR	1bc
5	Sambucus nigra	1+1 Transplant, 60-80, BR	1bc
5	Viburnum opulus	1+1 Transplant, 60-80, BR	1bc
5	Crataegus monogyna	1+1 Transplant, 60-80, BR	1bc
			Total 1bc

Proposed Edge mix

Plants at 1.5m centres / 1 per 2.25m². Planted in groups of 5-7.

Protected with tubes

%	Species	Specification	Number
15	Corylus avellana	1+1 Transplant, 40-60, BR	1bc
15	Sambucus nigra	1+1 Transplant, 40-60, BR	1bc
15	Viburnum opulus	1+1 Transplant, 40-60, BR	1bc
15	Crataegus monogyna	1+1 Transplant, 40-60, BR	1bc
15	Prunus spinosa	1+1 Transplant, 40-60, BR	1bc
10	Rosa pimpinellifolia	1+1 Transplant, 40-60, BR	1bc
15	Euonymus europaeus	1+1 Transplant, 40-60, BR	1bc
			Total 1bc

Proposed Standard Tree Planting

Low double stake + spiral guard

Abb	Species	Specification	Number
Qo	Quercus petraea	10-12cm RSP	1bc
Bp	Betula pubescens	12-14cm RSP	1bc
Sa	Sorbus aucuparia	12-14cm BR	1bc
Fs	Fagus sylvatica	10-12cm RSP	1bc
Fe	Fraxinus excelsior	2-14cm BR	1bc
			Total 1bc

Grass Mix

Grass seed mix to be supplied by British Seed Houses Ltd

Road Verges Grass Mix: A18, 35g/m²

Key

- Woodland Tree Planting
- Edge Mix Planting
- Informal Hedge Planting
- Standard Tree Planting

PLANNING & BUILDING SERVICES

- 4 MAY 2011

KIRK BANK, DUMFRIES

Revision	Description	Date	Initial
P01	Amendments in line with Engineers revisions Edge mix areas A + B combined. Edge mix Area C renamed as B.	05 04 11	SNR

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client:

Queensbury Properties Ltd

project title

Thornhill Residential Development

drawing title

Planting Layout

drawn by	checked by	scale @ A1	revision
SNR	PH	1:250	P01
project no.	date	drawing no.	
11007E	15/03/2011	300	
status:	PLANNING		