



**AQUIND Limited**

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## **AQUIND INTERCONNECTOR**

Environmental Statement – Volume 3 –  
Appendix 15.7 Landscape Schedules, Planting  
Heights and Image Board

The Planning Act 2008

The Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations  
2009 – Regulation 5(2)(a)

The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017

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**AQUIND Limited**

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Environmental Statement – Volume 3 –  
Appendix 15.7 Landscape Schedules, Planting  
Heights and Image Board

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## DOCUMENT

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# APPENDIX 15.7 LANDSCAPE SCHEDULE, PLANTING HEIGHTS AND IMAGE BOARD

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## 1.1. INTRODUCTION

1.1.1.1. This Appendix includes a Planting Schedule for both Section 1 – Lovedean (Converter Station Area) and Section 10 – Eastney (Landfall), the anticipated heights of proposed planting at the Converter Station Area and an image board of proposed species for the Landfall as requested by Portsmouth City Council. This Appendix should be read alongside Figure 15.48, 15.49 and 15.50 of the Environmental Statement ('ES') Volume 2 (document references 6.2.15.48, 6.2.15.49 and 6.2.15.50) covering the indicative landscape mitigation plans for the Converter Station and Landfall.

## 1.2. PLANTING SCHEDULE

### 1.2.1. CONVERTER STATION

1.2.1.1. Tables 1 to 10 (below) set out the species composition and size at planting for the following planting mixes:

- Native mixed woodland up to 25 m in height.
- Native mixed woodland up to 15 m in height.
- Ground flora species for all woodland.
- Scrub (up to 10m in height close to the Converter Station).
- Scrub with scattered trees (up to 15 m in height).
- Native hedgerows with hedgerow trees.
- Native hedgerows.
- Marginal / pond planting.
- Calcareous grassland.
- Marshy grassland for attenuation ponds.

**Table 1 - Native Mixed Woodland up to 25 m in height**

Species		Size	Age / Pot size	MIX%
<b>Tree Planting</b>				
<b>Alder</b>	<i>Alnus Glutinosa</i>	60-80 cm	1+1	15
<b>Pedunculate Oak</b>	<i>Quercus Robur</i>	100-125 cm	1+2	5
<b>Pedunculate Oak</b>	<i>Quercus Robur</i>	60-80 cm	1+2	25
<b>Silver Birch</b>	<i>Betula Pendula</i>	60-80 cm	1+1	15
<b>Hornbeam</b>	<i>Carpinus Betulus</i>	60-80 cm	1+1	10
<b>Small Leaved Lime</b>	<i>Tilia Cordata</i>	60-80 cm	1+1	10
<b>Small Leaved Lime</b>	<i>Tilia Cordata</i>	100-125 cm	1+2	5
<b>Rowan</b>	<i>Sorbus Aucuparia</i>	60-80 cm	1+1	5
<b>Whitebeam</b>	<i>Sorbus Aria</i>	60-80 cm	1+1	5
<b>Wild Cherry</b>	<i>Prunus Avium</i>	60-80 cm	1+1	5
<b>Understorey Planting</b>				
<b>Field Maple</b>	<i>Acer Campestre</i>	40-60 cm	1+1	20
<b>Hazel</b>	<i>Corylus Avellana</i>	40-60 cm	1+1	30
<b>Hawthorn</b>	<i>Crataegus Monogyna</i>	40-60 cm	1+1	30
<b>Holly</b>	<i>Ilex Aquifolium</i>	40-60 cm	3ltr pot	20

**Table 2 - Native mixed woodland up to 15 m high**

Species		Size	Age / Pot size	MIX%
<b>Tree &amp; Understorey Planting</b>				
<b>Bird Cherry</b>	<i>Prunus Padus</i>	60-80 cm	1+1	10
<b>Field Maple</b>	<i>Acer Campestre</i>	80-100 cm	1+1	30
<b>Yew</b>	<i>Taxus Baccata</i>	60-80 cm	5ltr pot	10
<b>Holly</b>	<i>Ilex Aquifolium</i>	40-60 cm	3ltr pot	10
<b>Hazel</b>	<i>Corylus Avellana</i>	40-60 cm	1+1	20
<b>Hawthorn</b>	<i>Crataegus Monogyna</i>	40-60 cm	1+1	20

**Table 3 - Ground flora species for all woodland**

Species		Pot size	MIX%
<b>Woodland Floor Planting</b>			
<b>Wood Anemone</b>	<i>Anemone Nemorosa</i>	2ltr pot	15
<b>Ramsons</b>	<i>Allium Ursinum</i>	2ltr pot	10
<b>Broad Buckler-Fern</b>	<i>Dryopteris Dilatata</i>	2ltr pot	10
<b>Male Fern</b>	<i>Dryopteris Filix-Mas</i>	2ltr pot	15
<b>Red Currant</b>	<i>Ribes Rubrum</i>	2ltr pot	5
<b>Woodruff</b>	<i>Galium Odoratum</i>	2ltr pot	5
<b>Dog's-Mercury</b>	<i>Mercurialis Perennis</i>	2ltr pot	15
<b>Common Hemp-Nettle</b>	<i>Galeopsis Tetrahit</i>	2ltr pot	5
<b>Foxglove</b>	<i>Digitalis Purpurea</i>	2ltr pot	5
<b>Cleavers</b>	<i>Galium Aparine.</i>	2ltr pot	5

Species		Pot size	MIX%
Wood Spurge	<i>Euphorbia Amygdaloides</i>	2ltr pot	5
Bluebell	<i>Hyacinthoides Non-Scripta</i>	2ltr pot	5

**Table 4 - Scrub (up to 10 m in height close to the Converter Station)**

Species		Size	Age/Pot size	MIX%
<b>Scrub Planting</b>				
Blackthorn	<i>Prunus Spinosa</i>	60-80 cm (branched)	1+1	20
Dog Rose	<i>Rosa Canina</i>	60-80 cm (branched)	1+1	20
Dogwood	<i>Cornus Sanguinea</i>	40-60 cm (branched)	1+1	20
Guelder Rose	<i>Viburnum Opulus</i>	40-60 cm (branched)	1+1	20
Spindle	<i>Euonymus Europaeus</i>	40-60 cm (branched)	1+1	20

**Table 5 - Scrub with scattered trees (up to 15 m in height)**

Species		Size	Age/Pot size	MIX%
<b>Scrub Planting</b>				
Blackthorn	<i>Prunus Spinosa</i>	60-80 cm (branched)	1+1	20
Dog Rose	<i>Rosa Canina</i>	60-80 cm (branched)	1+1	20
Dogwood	<i>Cornus Sanguinea</i>	40-60 cm (branched)	1+1	20
Guelder Rose	<i>Viburnum Opulus</i>	40-60 cm (branched)	1+1	20
Spindle	<i>Euonymus Europaeus</i>	40-60 cm (branched)	1+1	20
<b>Tree Planting</b>				



Species		Size	Age/Pot size	MIX%
<b>Bird Cherry</b>	<i>Prunus Padus</i>	60-80 cm	1+1	10
<b>Field Maple</b>	<i>Acer Campestre</i>	80-100 cm	1+1	20
<b>Hazel</b>	<i>Corylus Avellana</i>	40-60 cm	1+1	20
<b>Hawthorn</b>	<i>Crataegus Monogyna</i>	40-60 cm	1+1	40
<b>Holly</b>	<i>Ilex Aquifolium</i>	40-60 cm	3ltr pot	10

**Table 6 Native hedgerow with hedgerow trees**

Species		Size	Age/Pot size	MIX%
<b>Tree Planting</b>				
<b>Pedunculate Oak</b>	<i>Quercus Robur</i>	10/12 Selected Standard	Min 2X transplanted	40
<b>Small-leaved Lime</b>	<i>Tilia Cordata</i>	10/12 Selected Standard	Min 2X transplanted	25
<b>Hornbeam</b>	<i>Carpinus Betulus</i>	10/12 Selected Standard	Min 2X transplanted	25
<b>Resistant Elm</b>	<i>Ulmus 'New Horizon'</i>	10/12 Selected Standard	Min 2X transplanted	10
<b>Hedgerow Planting</b>				
<b>Blackthorn</b>	<i>Prunus Spinosa</i>	60-80 cm (branched)	1+1	20
<b>Dog Rose</b>	<i>Rosa Canina</i>	60-80 cm (branched)	1+1	10
<b>Dogwood</b>	<i>Cornus Sanguinea</i>	40-60 cm (branched)	1+1	10
<b>Field Maple</b>	<i>Acer Campestre</i>	60-80 cm	1+1	5
<b>Hazel</b>	<i>Corylus Avellana</i>	40-60 cm (branched)	1+1	10
<b>Hawthorn</b>	<i>Crataegus Monogyna</i>	40-60 cm (branched)	1+1	30

Species		Size	Age/Pot size	MIX%
<b>Holly</b>	<i>Ilex Aquifolium</i>	40-60 cm bushy	3ltr pot	5
<b>Spindle</b>	<i>Euonymus Europaeus</i>	40-60 cm (branched)	1+1	5
<b>Wych Elm</b>	<i>Ulmus Glabra</i>	60-80 cm	1+1	5

**Table 7 - Native hedgerows**

Species		Size	Age/Pot size	MIX%
<b>Hedgerow planting</b>				
<b>Blackthorn</b>	<i>Prunus Spinosa</i>	60-80 cm (branched)	1+1	20
<b>Dog Rose</b>	<i>Rosa Canina</i>	60-80 cm (branched)	1+1	10
<b>Dogwood</b>	<i>Cornus Sanguinea</i>	40-60 cm (branched)	1+1	10
<b>Field Maple</b>	<i>Acer Campestre</i>	60-80 cm	1+1	5
<b>Hazel</b>	<i>Corylus Avellana</i>	40-60 cm (branched)	1+1	10
<b>Hawthorn</b>	<i>Crataegus Monogyna</i>	40-60 cm (branched)	1+1	30
<b>Holly</b>	<i>Ilex Aquifolium</i>	40-60 cm bushy	3ltr pot	5
<b>Spindle</b>	<i>Euonymus Europaeus</i>	40-60 cm (branched)	1+1	5
<b>Wych Elm</b>	<i>Ulmus Glabra</i>	60-80 cm	1+1	5

**Table 8 - Marginal pond planting**

Species		Age/Pot size	MIX%
<b>Marginal Planting up to 300 mm depth</b>			
<b>Stachys Palustris</b>	<i>Marsh Woundwort</i>	2 ltr pot	10

Species		Age/Pot size	MIX%
<b>Angelica Sylvestris</b>	<i>Wild Angelica</i>	2 ltr pot	10
<b>Juncus Articulatus</b>	<i>Jointed Rush</i>	2 ltr pot	5
<b>Caltha Palustris</b>	<i>Marsh Marigold</i>	2 ltr pot	10
<b>Carex Riparia</b>	<i>Greater Pond Sedge</i>	2 ltr pot	5
<b>Carex Pendula</b>	<i>Pendulous Sedge</i>	2 ltr pot	5
<b>Carex Nigra</b>	<i>Common Sedge</i>	2 ltr pot	5
<b>Mentha Aquatica</b>	<i>Water Mint</i>	2 ltr pot	10
<b>Rumex Hydrolapathum</b>	<i>Water Dock</i>	2 ltr pot	10
<b>Scrophularia Auriculata</b>	<i>Water Figwort</i>	2 ltr pot	10
<b>Emergent Planting up to 600 mm depth</b>			
<b>Apium nodiflorum</b>	<i>Fools Watercress</i>	2 lt pot	10
<b>Sagittaria Sagitifolia</b>	<i>Arrowhead</i>	2 ltr pot	5
<b>Ranunculus Lingua</b>	<i>Greater Spearwort</i>	2 ltr pot	5
<b>Oxygenators 600 mm+ depth planted as individual specimens</b>			
<b>Starwort</b>	<i>Callitriche Stagnalis</i>	2 ltr pot	n/a
<b>Spiked Water-Milfoil</b>	<i>Myriophyllum Spicatum</i>	2 ltr pot	n/a

**Table 9 - Calcareous grassland**

Species	MIX%
<b>John Chambers Calcareous Soils 80% Grass 20% Wildflower Mix (ref: 130JC9001-PRO)</b>	

<b>Species</b>		<b>MIX%</b>
<b>Grasses 80%</b>		
<b>Sheeps Fescue</b>	<i>Festuca Ovina</i>	16
<b>Slender Creeping Red Fescue</b>	<i>Festuca Rubra</i>	24
<b>Chewings Fescue</b>	<i>Festuca Rubra Commutata</i>	16
<b>Hard Fescue</b>	<i>Festuca Brevipila</i>	20
<b>Browntop Bent</b>	<i>Agrostis Capillaris</i>	4
<b>Wildflowers 20%</b>		
<b>Bird's Foot Trefoil</b>	<i>Lotus Corniculatus</i>	1
<b>Common Vetch</b>	<i>Vicia Sativa</i>	2.7
<b>Common Poppy</b>	<i>Papaver Rhoedas</i>	1.5
<b>Cowslip</b>	<i>Primula Veris</i>	0.2
<b>Dropwort</b>	<i>Filipendula Vulgaris</i>	0.7
<b>Kidney Vetch</b>	<i>Anthyllis Vulneraria</i>	0.8
<b>Lady's Bedstraw</b>	<i>Galium Verum</i>	1.5
<b>Meadow Buttercup</b>	<i>Ranunculus Acris</i>	1.5
<b>Meadow Crane's Bill</b>	<i>Geranium Pratense</i>	0.15
<b>Musk Mallow</b>	<i>Malva Moschata</i>	1
<b>Oxeye Daisy</b>	<i>Leucanthemum Vulgare</i>	1.5
<b>Ribwort Plantain</b>	<i>Plantago Lanceolata</i>	1.5
<b>Salad Burnet</b>	<i>Sanguisorba Minor</i>	1.75
<b>Selfheal</b>	<i>Prunella Vulgaris</i>	1
<b>Common Sorrel</b>	<i>Rumex Acetosa</i>	1.1

Species		MIX%
Small Scabious	<i>Scabiosa Columbaria</i>	0.5
Wild Carrot	<i>Daucus Carota</i>	1.5
Wild Marjoram	<i>Origanum Vulgare</i>	0.1
Sow at a rate of 5g/m <sup>2</sup>		

**Table 10 - Marshy grassland for attenuation ponds**

Species		MIX%
<b>John Chambers Wet and Moist Soils 80% Grass 20% Wildflower Mix (ref: 130JC9005-PRO)</b>		
<b>Grasses 80%</b>		
Tufted Hair Grass	<i>Deschampsia Cespitosa</i>	2
Crested Dog's Tail	<i>Cynosurus Cristatus</i>	34
Slender Creeping Red Fescue	<i>Festuca Rubra</i>	26
Meadow Fescue	<i>Festuca Pratensis</i>	6
Browntop Bent	<i>Agrostis Capillaris</i>	12
<b>Wildflowers 20%</b>		
Greater Bird's Foot Trefoil	<i>Lotus Pedunculatus</i>	0.5
Meadow Buttercup	<i>Ranunculus Acris</i>	3
Meadowsweet	<i>Filipendula Ulmaria</i>	2.2
Purple Loosestrife	<i>Lythrum Salicaria</i>	0.15
Ragged Robin	<i>Lychnis Flos-Cuculi</i>	0.6
Red Campion	<i>Silene Dioica</i>	2.9
Selfheal	<i>Prunella Vulgaris</i>	1.95

Species		MIX%
Teasel	<i>Dipsacus Fullonum</i>	1
Water Avens	<i>Geum Rivale</i>	0.7
Yellow Iris	<i>Iris Pseudacorus</i>	6.5
Gypsywort	<i>Lycopus Europaeus</i>	0.5
<b>Sow at a rate of 5g/m<sup>2</sup></b>		

## 1.2.2. LANDFALL

1.2.2.1. Native hedgerows and native hedgerow trees are proposed for the Landfall indicated in Table 11 and 12 below:

**Table 11 - Native Hedgerows**

Species		Size	Age/Pot size	MIX%
<b>Hedgerow planting</b>				
Blackthorn	<i>Prunus Spinosa</i>	60-80 cm (branched)	1+1	20
Sea Buckthorn	<i>Hippophaea Rhamnoides</i>	40-60 cm (branched)	1+1	20
Field Maple	<i>Acer Campestre</i>	60-80 cm	1+1	10
Hawthorn	<i>Crataegus Monogyna</i>	40-60 cm (branched)	1+1	30
Holly	<i>Ilex Aquifolium</i>	40-60 cm (bushy)	3ltr pot	5
Wych Elm	<i>Ulmus Glabra</i>	40-60 cm	1+1	5
Hornbeam	<i>Carpinus Betulus</i>	40-60 cm	1+1	10

**Table 12 - Specimen Trees**

Species		Size	Age/Pot size	MIX%
<b>Specimen Trees</b>				

<b>Alder</b>	<i>Alnus Glutinosa</i>	16/18 Extra Heavy Standard	Min 3X transplanted	n/a
<b>Hornbeam</b>	<i>Carpinus Betulus</i>	16/18 Extra Heavy Standard	Min 3X transplanted	n/a

## 1.3. PLANTING HEIGHTS

### 1.3.1. CONVERTER STATION

1.3.1.1. The following table details the anticipated height of the proposed species at 10 and 20 years after planting, and likely height at maturity. The size at planting is given in the tables in sections 1.1 and 1.2 (above).

**Table 13 - Height of proposed planting at 10 years, 20 years and at maturity**

Species	Height in metres at	10yrs	20yrs	Maturity
<b>Tree and Understorey Planting (15 and 25 m height)</b>				
<b>Bird Cherry</b>	<i>Prunus Padus</i>	4	6	10
<b>Field Maple</b>	<i>Acer Campestre</i>	4	5	10-15
<b>Hazel</b>	<i>Corylus Avellana</i>	5	7-8	7-8
<b>Hawthorn</b>	<i>Crataegus Monogyna</i>	5	8	10
<b>Holly</b>	<i>Ilex Aquifolium</i>	5	8	10
<b>Hornbeam</b>	<i>Carpinus Betulus</i>	5	8	15-20
<b>Small Leaved Lime</b>	<i>Tilia Cordata</i>	6	10	20-25
<b>Pedunculate Oak*</b>	<i>Quercus Robur (Sel. Std)</i>	6	10	25-35
<b>Wild Cherry</b>	<i>Prunus Avium</i>	6	11	15-20, (occasionally 25)
<b>Wych Elm*</b>	<i>Ulmus Glabra</i>	8	13	25-35
<b>Yew</b>	<i>Taxus Baccata</i>	3	6	10-15
<b>Pioneer Species</b>				
<b>Alder*</b>	<i>Alnus Glutinosa</i>	8	13	15-20
<b>Birch*</b>	<i>Betula Pendula</i>	6	11	15-20
<b>Whitebeam*</b>	<i>Sorbus Aria</i>	3	6	10
<b>Rowan*</b>	<i>Sorbus Aucuparia</i>	3	6	10-15
<b>Scrub And Hedgerow Planting</b>				
<b>Blackthorn</b>	<i>Prunus Spinosa</i>	2	3	5
<b>Dog Rose</b>	<i>Rosa Canina</i>	2	4	4



Species	Height in metres at	10yrs	20yrs	Maturity
<b>Dogwood</b>	<i>Cornus Sanguinea</i>	2	3	3
<b>Hazel</b>	<i>Corylus Avellana</i>	5	8	7-8
<b>Hawthorn</b>	<i>Crataegus Monogyna</i>	5	8	10
<b>Holly</b>	<i>Ilex Aquifolium</i>	5	8	10
<b>Guelder Rose</b>	<i>Viburnum Opulus</i>	3	6	6
<b>Spindle</b>	<i>Euonymus Europaeus</i>	2	3	4
<b>Resistant Elm</b> (only used as hedgerow tree)	<i>Ulmus 'New Horizon'</i>	5	8	15

**Sources:**

**Mature heights from 'It's time for trees, a guide to species selection for the UK', Mike Glover for Barcham Trees 2009, Cassell's 'Trees of Britain & Northern Europe' (2003) and Bruns tree nursery catalogue 2006.**

**Heights at 10 and 20 years are based on experience of from WSP arboriculture and landscape teams (consensus from individuals with 15 to 35 years professional experience and knowledge of the site).**

***Ulmus 'New Horizon' sizes are an estimate as this is a newly developed cultivar. Ulmus glabra mature size is theoretical as this is likely to succumb to elm disease at about 20 years but it is anticipated to have seeded and thus propagated by this age and to remain an understorey species in the longer term.***

**Note that these figures are revised from those given in the Preliminary Environmental Information Report ('PEIR'), primarily due to considering soil conditions observed during Environmental Impact Assessment ('EIA') survey work.**

# Image board of proposed species for Section 10

## Native Hedgerows



Blackthorn - *Prunus spinosa*



Sea Buckthorn - *Hippophaea rhamnoides*



Field Maple - *Acer campestre*



Hawthorn - *Crataegus monogyna*



Holly - *Ilex aquifolium*



Wych Elm - *Ulmus glabra*



Hornbeam - *Carpinus betulus*

## Native Specimen Trees



Hornbeam - *Carpinus betulus*

## REFERENCES

---

Landscape Institute. (May 1996). Landscape Institute Technical Bulletin: Watering Restrictions and Watering Specifications .

The British Standards Institution. (1992 (Part 1), 2007 (Part 4) ,1998 (Part 9) and 1990 (Part 10)). BS 3936 Nursery Stock.

The British Standards Institution. (2012). British Standard BS5837:2012 'Trees in relation to design, demolition and construction - recommendations'.

