



AQUIND Limited

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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APPENDIX 15.7 LANDSCAPE SCHEDULE, PLANTING HEIGHTS AND IMAGE BOARD

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.

1.1.1.2. 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 and revised indicative landscape mitigation plans submitted at Deadline 6 relating to:

- Option B(i) Deadline 6 Submission - 6.2.15.48 Environmental Statement - Vol 2 - Figure 15.48 Option B(i) (north) - Rev 03 (APP-281, Rev03)
- Option B(i) Deadline 6 Submission - 6.2.15.49 Environmental Statement - Vol 2 - Figure 15.49 Option B(i) (south) - Rev 03 (APP-282, Rev03)
- Option B(ii) Deadline 6 Submission - 7.7.8 - Indicative Landscape Mitigation Plans Option B(ii) WQ CA1.3.7 - Rev 03 (REP5-032, Rev03)

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	
Alder	<i>Alnus Glutinosa</i>
Pedunculate Oak	<i>Quercus Robur</i>
Pedunculate Oak	<i>Quercus Robur</i>
Silver Birch	<i>Betula Pendula</i>
Hornbeam	<i>Carpinus Betulus</i>
Small Leaved Lime	<i>Tilia Cordata</i>
Small Leaved Lime	<i>Tilia Cordata</i>
Rowan	<i>Sorbus Aucuparia</i>
Whitebeam	<i>Sorbus Aria</i>
Wild Cherry	<i>Prunus Avium</i>
Field Maple	<i>Acer Campestre</i>
Hazel	<i>Corylus Avellana</i>
Hawthorn	<i>Crataegus Monogyna</i>
Holly	<i>Ilex Aquifolium</i>

Table 2 - Native mixed woodland up to 15 m high

Species	
Bird Cherry	<i>Prunus Padus</i>
Field Maple	<i>Acer Campestre</i>
Yew	<i>Taxus Baccata</i>
Holly	<i>Ilex Aquifolium</i>
Hazel	<i>Corylus Avellana</i>
Hawthorn	<i>Crataegus Monogyna</i>

Table 3 - Ground flora species for all woodland

Species	
Wood Anemone	<i>Anemone Nemorosa</i>
Ramsons	<i>Allium Ursinum</i>
Broad Buckler-Fern	<i>Dryopteris Dilatata</i>
Male Fern	<i>Dryopteris Filix-Mas</i>
Red Currant	<i>Ribes Rubrum</i>
Woodruff	<i>Galium Odoratum</i>
Dog's-Mercury	<i>Mercurialis Perennis</i>
Common Hemp-Nettle	<i>Galeopsis Tetrahit</i>
Foxglove	<i>Digitalis Purpurea</i>
Cleavers	<i>Galium Aparine.</i>
Wood Spurge	<i>Euphorbia Amygdaloides</i>
Bluebell	<i>Hyacinthoides Non-Scripta</i>

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

Species	
Blackthorn	<i>Prunus Spinosa</i>
Dog Rose	<i>Rosa Canina</i>
Dogwood	<i>Cornus Sanguinea</i>
Guelder Rose	<i>Viburnum Opulus</i>
Spindle	<i>Euonymus Europaeus</i>

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

Species	
Blackthorn	<i>Prunus Spinosa</i>
Dog Rose	<i>Rosa Canina</i>
Dogwood	<i>Cornus Sanguinea</i>
Guelder Rose	<i>Viburnum Opulus</i>
Spindle	<i>Euonymus Europaeus</i>
Bird Cherry	<i>Prunus Padus</i>
Field Maple	<i>Acer Campestre</i>
Hazel	<i>Corylus Avellana</i>
Hawthorn	<i>Crataegus Monogyna</i>
Holly	<i>Ilex Aquifolium</i>

Table 6 Native hedgerow with hedgerow trees

Species	
Pedunculate Oak	<i>Quercus Robur</i>

Species	
Small-leaved Lime	<i>Tilia Cordata</i>
Hornbeam	<i>Carpinus Betulus</i>
Resistant Elm	<i>Ulmus 'New Horizon'</i>
Blackthorn	<i>Prunus Spinosa</i>
Dog Rose	<i>Rosa Canina</i>
Dogwood	<i>Cornus Sanguinea</i>
Field Maple	<i>Acer Campestre</i>
Hazel	<i>Corylus Avellana</i>
Hawthorn	<i>Crataegus Monogyna</i>
Holly	<i>Ilex Aquifolium</i>
Spindle	<i>Euonymus Europaeus</i>
Wych Elm	<i>Ulmus Glabra</i>

Table 7 - Native hedgerows

Species	
Blackthorn	<i>Prunus Spinosa</i>
Dog Rose	<i>Rosa Canina</i>
Dogwood	<i>Cornus Sanguinea</i>
Field Maple	<i>Acer Campestre</i>
Hazel	<i>Corylus Avellana</i>
Hawthorn	<i>Crataegus Monogyna</i>
Holly	<i>Ilex Aquifolium</i>
Spindle	<i>Euonymus Europaeus</i>

Species	
Wych Elm	<i>Ulmus Glabra</i>

Table 8 - Marginal pond planting

Species	
Stachys Palustris	<i>Marsh Woundwort</i>
Angelica Sylvestris	<i>Wild Angelica</i>
Juncus Articulatus	<i>Jointed Rush</i>
Caltha Palustris	<i>Marsh Marigold</i>
Carex Riparia	<i>Greater Pond Sedge</i>
Carex Pendula	<i>Pendulous Sedge</i>
Carex Nigra	<i>Common Sedge</i>
Mentha Aquatica	<i>Water Mint</i>
Rumex Hydrolapathum	<i>Water Dock</i>
Scrophularia Auriculata	<i>Water Figwort</i>
Apium nodiflorum	<i>Fools Watercress</i>
Sagittaria Sagitifolia	<i>Arrowhead</i>
Ranunculus Lingua	<i>Greater Spearwort</i>
Starwort	<i>Callitriche Stagnalis</i>
Spiked Water-Milfoil	<i>Myriophyllum Spicatum</i>

Table 9 - Calcareous grassland

Species	
Sheeps Fescue	<i>Festuca Ovina</i>
Slender Creeping Red Fescue	<i>Festuca Rubra</i>
Chewings Fescue	<i>Festuca Rubra Commutata</i>
Hard Fescue	<i>Festuca Brevipila</i>
Browntop Bent	<i>Agrostis Capillaris</i>
Bird's Foot Trefoil	<i>Lotus Corniculatus</i>
Common Vetch	<i>Vicia Sativa</i>
Common Poppy	<i>Papaver Rhoeas</i>
Cowslip	<i>Primula Veris</i>
Dropwort	<i>Filipendula Vulgaris</i>
Kidney Vetch	<i>Anthyllis Vulneraria</i>
Lady's Bedstraw	<i>Galium Verum</i>
Meadow Buttercup	<i>Ranunculus Acris</i>
Meadow Crane's Bill	<i>Geranium Pratense</i>
Musk Mallow	<i>Malva Moschata</i>
Oxeye Daisy	<i>Leucanthemum Vulgare</i>
Ribwort Plantain	<i>Plantago Lanceolata</i>
Salad Burnet	<i>Sanguisorba Minor</i>
Selfheal	<i>Prunella Vulgaris</i>
Common Sorrel	<i>Rumex Acetosa</i>
Small Scabious	<i>Scabiosa Columbaria</i>
Wild Carrot	<i>Daucus Carota</i>

Species	
Wild Marjoram	<i>Origanum Vulgare</i>

Table 10 - Marshy grassland for attenuation ponds

Species	
Tufted Hair Grass	<i>Deschampsia Cespitosa</i>
Crested Dog's Tail	<i>Cynosurus Cristatus</i>
Slender Creeping Red Fescue	<i>Festuca Rubra</i>
Meadow Fescue	<i>Festuca Pratensis</i>
Browntop Bent	<i>Agrostis Capillaris</i>
Greater Bird's Foot Trefoil	<i>Lotus Pedunculatus</i>
Meadow Buttercup	<i>Ranunculus Acris</i>
Meadowsweet	<i>Filipendula Ulmaria</i>
Purple Loosestrife	<i>Lythrum Salicaria</i>
Ragged Robin	<i>Lychnis Flos-Cuculi</i>
Red Campion	<i>Silene Dioica</i>
Selfheal	<i>Prunella Vulgaris</i>
Teasel	<i>Dipsacus Fullonum</i>
Water Avens	<i>Geum Rivale</i>
Yellow Iris	<i>Iris Pseudacorus</i>
Gypsywort	<i>Lycopus Europaeus</i>

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	
Blackthorn	<i>Prunus Spinosa</i>
Sea Buckthorn	<i>Hippophaea Rhamnoides</i>
Field Maple	<i>Acer Campestre</i>
Hawthorn	<i>Crataegus Monogyna</i>
Holly	<i>Ilex Aquifolium</i>
Wych Elm	<i>Ulmus Glabra</i>
Hornbeam	<i>Carpinus Betulus</i>

Table 12 - Specimen Trees

Species			
Alder	<i>Alnus Glutinosa</i>		
Hornbeam	<i>Carpinus Betulus</i>		

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 based on a mix of transplants, whips and standards. The size at planting is given in the tables in sections 1.1 and 1.2 (above).
- 1.3.1.2. The final schedule of planting sizes, species and mixes will be presented in the detailed landscaping scheme which will be agreed with the relevant discharging authority in consultation SDNPA.

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

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

Species	Height in metres at	10yrs	20yrs	Maturity
Scrub And Hedgerow Planting				
Blackthorn	<i>Prunus Spinosa</i>	2	3	5
Dog Rose	<i>Rosa Canina</i>	2	4	4
Dogwood	<i>Cornus Sanguinea</i>	2	3	3
Hazel	<i>Corylus Avellana</i>	5	8	7-8
Hawthorn	<i>Crataegus Monogyna</i>	5	8	10
Holly	<i>Ilex Aquifolium</i>	5	8	10
Guelder Rose	<i>Viburnum Opulus</i>	3	6	6
Spindle	<i>Euonymus Europaeus</i>	2	3	4
Resistant Elm (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*

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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'.

