



# Aberdeen Harbour Expansion Project

## Construction Environmental Management Document

11<sup>th</sup> May 2017

**DRAGADOS**

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# Chapter 10

## Landscape Mitigation Compensation Plan

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## 10 Introduction

The Landscape Mitigation and Compensation Plan (LMCP) has been developed for the construction phase of the Aberdeen Harbour Expansion Project (AHEP).

The requirement to produce a LMCP is listed under Schedule 3.2.10 of the Marine Construction Licence and Schedule 2 of the Harbour Revision Order. This Plan has been produced to fulfil these requirements.

### 10.1 Information Sources

The LMCP for the AHEP both on and off site have been informed by the following:

- Preliminary Ecological Assessment (Environment Statement (ES) Vol 3: Technical Appendices, Appendix 11-A);
- ES Vol 2: Chapter 10 – Biological Environment;
- ES Vol 2: Chapter 11 – Terrestrial Ecology;
- ES Vol 2: Chapter 17 – Seascape, Landscape and Visual Effects;
- Detailed Mitigation and Compensation Plan (DMCP);
- Habitat Management Plan (HMP);
- Aberdeen Local Development Plan 2012<sup>1</sup>;
- Ecology Update Survey Report<sup>2</sup>; and
- Scottish Natural Heritage (SNH) response to the AHEP submission to planning, December 2015

### 10.2 Roles, Responsibilities and Cross-Referencing

The following individuals are responsible for ensuring that the requirements of this LMCP are implemented at the AHEP site.

Table 10.1: Roles and Responsibilities

| Job Title             | Name       | Responsibility  |
|-----------------------|------------|---|
| Environmental Manager | Craig Hynd | The Environmental Manager has the responsibility to ensure that all mitigations outlined in this LMCP are done using the detailed specifications during the construction period. The Environmental Manager is also responsible for ensuring the LMCP is updated |

<sup>1</sup> Policy D6 – Landscape, Aberdeen Local Development Plan, Aberdeen City Council

<sup>2</sup> Biocensus (2016) Aberdeen Harbour Expansion Project – Ecology Update Survey Report

|                              |                    |   |
|------------------------------|--------------------|---|
|                              |                    | and reissued following and changes that affect this plan.   |
| Environmental Clerk of Works | Emma Bias          | The ECoW is responsible for overseeing the implementation of the mitigation measures and specifications of the LMCP during the construction period. This includes coordinating with contractors completing the work, monitoring the success of the measures and ensuring the measures are completed in line with measures as outlined in the Habitat Management Plan. |
| Construction Manger          | Jose Enrique Perez | The construction manager will oversee all construction related activities that align with the LMCP.   |

### 10.2.1 Cross-Referencing

The LMCP should be read in conjunction with the following CEMD:

- Habitat Management Plan.

### 10.3 Summary

The site is located within the Greenbelt (NE2) and the Green Space Network (NE1)<sup>3</sup> for Aberdeen. The character of the coast is one of open, grassy cliff tops and headlands.

Key to the on and off site LMCP is the retention of this character whilst keeping the visual impact of the development to a minimum where possible. The scheme has been developed in line with the recommendations within Chapter 17 of the ES through consideration of the design of the harbour itself and the various soft landscape proposals.

The siting and design of the AHEP have been developed in accordance with Aberdeen City Council (ACC) requirements. To minimise the visual impact the water and fuel tanks – the largest fixed installations on the quayside have been positioned in the north-eastern corner of the North Quay where they are screened by the surrounding topography of the coastal cliff.

As identified in Section 17.7.2 of the ES, the AHEP cannot effectively be screened by vegetation. The ES also recognised that there is limited opportunity for tree and shrub planting close to or on the development site without compromising the existing open character of the coastal environment and/or having a negative impact on the existing natural habitats. However, areas of existing young woodland planting in St Fittick’s Park will mature into a small woodland which, over time, will provide a degree of localised screening of the West Quay and the access roads and main entrance.

<sup>3</sup> City Wide Proposals Map, The Aberdeen Local Development Plan, Aberdeen City Council.

Opportunities have been identified to enhance existing hedgerows and establish new species-rich native ecological corridors along existing boundary fences connecting various habitats found within and around the site. In view of the above, the LMCP is primarily focused on reinstating habitats lost during the construction phase, creating new green links and incorporating the measures outlined in the DMCP and HMP.

The safety requirements of both the temporary and permanent fencing in accordance with the International Ship and Port Facility Security (ISPS) Code prohibits the use of vegetated screens/planting adjacent to the fences during construction and operation. A screen of this nature also contradicts the open coastal character impacting on views out to sea, which precludes their use in visually mitigating the scheme.

However, a number of protected flora are known to populate the site. Prior to construction, where feasible, these will be identified and translocated to an appropriate location off site in accordance with the recommendations of the ECoW. Refer to the HMP for further details.

A number of landscaping measures are proposed in the DMCP to improve the areas adjacent to the AHEP (focused on St Fittick's Park) for the benefit of the local community. These include improved access including a new pedestrian path network to connect play facilities, residential areas, St Fittick's Church and the wider park; addition of natural play elements to supplement the existing play facilities within St Fittick's Park; provision of two outdoor classrooms; introduction of new viewpoints and enhanced access to existing viewpoints along the coastal path; provision of new information boards; and improvements to the car parking at Greyhope Bay and new layby parking and the. Refer to the DMCP for further information.

## 10.4 Proposals

The Landscape Mitigation and Compensation Proposals have been developed taking into consideration all of the above factors and are presented as follows in the appendices:

- On Site Landscape Mitigation Compensation Strategy (i.e. within the footprint of the AHEP and the temporary construction compounds);
- Off Site Landscape Mitigation Compensation Strategy;
- Soft Landscape Outline Specification; and
- Plant Schedule.

### 10.4.1 On Site Landscape Mitigation and Compensation Strategy

The On Site Landscape Mitigation and Compensation Strategy shown in Appendix A proposes the following measures:

- Reinstatement of amenity grassland to Walker Park (Northern Compound, SM2);
- Reinstatement of semi-improved neutral grassland (Southern Compound, SM1);
- Reinstatement of native tree / shrub planting (Central Compound, NW1 and SM3) ;
- Introduction of species rich-native hedgerows along St Fittick's Road (H1); and
- Introduction and reinstatement of areas of scrub and heathland between the Coast Road and Balangask Golf Course (PM1).

Access to the coast will be retained at all times to ensure the continued enjoyment of the area during all phases. The coastal footpath and cycle path will be kept open and/or diverted as necessary, maintaining a continuous path at all times. Once installed/upgraded on a permanent basis, localised seeding/planting in accordance with the soft landscape outline specification (see Section 10.4.1 and Appendix C), will be necessary to re-establish the natural habitat as quickly as possible.

The three temporary construction compounds will be returned to their original condition and use as parkland and animal grazing land, as agreed with Aberdeen City Council (ACC).

### **10.4.2 Off Site Landscape Mitigation and Compensation Proposals**

The Off Site Landscape Mitigation and Compensation Strategy shown in Appendix B proposes the following:

- Introduction of species rich native hedgerows

Building upon the success of the attractive, community resource and wildlife haven of the East Tullos Burn project, species-rich native hedgerows are proposed to continue outside of the site boundary along St Fittick's Road to connect habitats and create new/enhance existing green corridors. This relates to both the DMCP and HMP and is designed to be aesthetically pleasing and enhance the local environment.

The open space surrounding St Fittick's Park has been protected and maintained in line with SNH and ACC recommendations to avoid fragmentation.

These offsite proposals will take place during the construction phase to assist in mitigating against the visual impact of the development.

### **10.4.3 Soft Landscape Outline Specification**

The soft landscape outline specification in Appendix C provides further detail on the procurement of trees, plants and soil and planting works.



### 10.4.4 Plant Schedule

A Plant Schedule is provided in Appendix D which outlines the species mixes for each area, plant sizes, densities and percentage of mix as appropriate.

## 10.5 Delivery Timescale

Table 10.2 sets out the delivery timescale for the measures presented in this plan.

Table 10.2: Delivery timescale

| Action  | Delivery Timescale   |
|---|--|
| Identification and translocation of protected flora                                     | Prior to construction which may impact on relevant area<br>Late summer after seed dispersal and/or turves to be removed between November and March in accordance with HMP                    |
| <b>On Site Landscape Mitigation and Compensation:</b>                                   |  |
| Reinstatement of amenity grassland to Walker Park (Northern Compound)                   | First available planting season (September/October or April/May) post decommission of compound   |
| Reinstatement of semi-improved neutral grassland (Southern Compound)                    | First available planting season (September/October or April/May) post decommission of compound   |
| Reinstatement of native tree/shrub planting (Central Compound)                          | First available planting season (November to March inclusive) post decommission of compound  |
| Planting of native hedgerows alongside Coast Road, Greyhope Road and St Fittick's Road. | First available planting season (November to March inclusive) post decommission of compound  |
| Planting of scrub and heathland between the Coast Road and Balangask Golf Course        | Scrub and Heathland: First available planting season (November to March inclusive) post decommission of compound<br>Wild grass meadow: September/October or April/May in accordance with HMP |
| <b>Off Site Landscape Mitigation and Compensation:</b>                                  |  |
| Planting of native hedgerows  | First available planting season (November to March inclusive) post decommission of compound to provide consistency   |

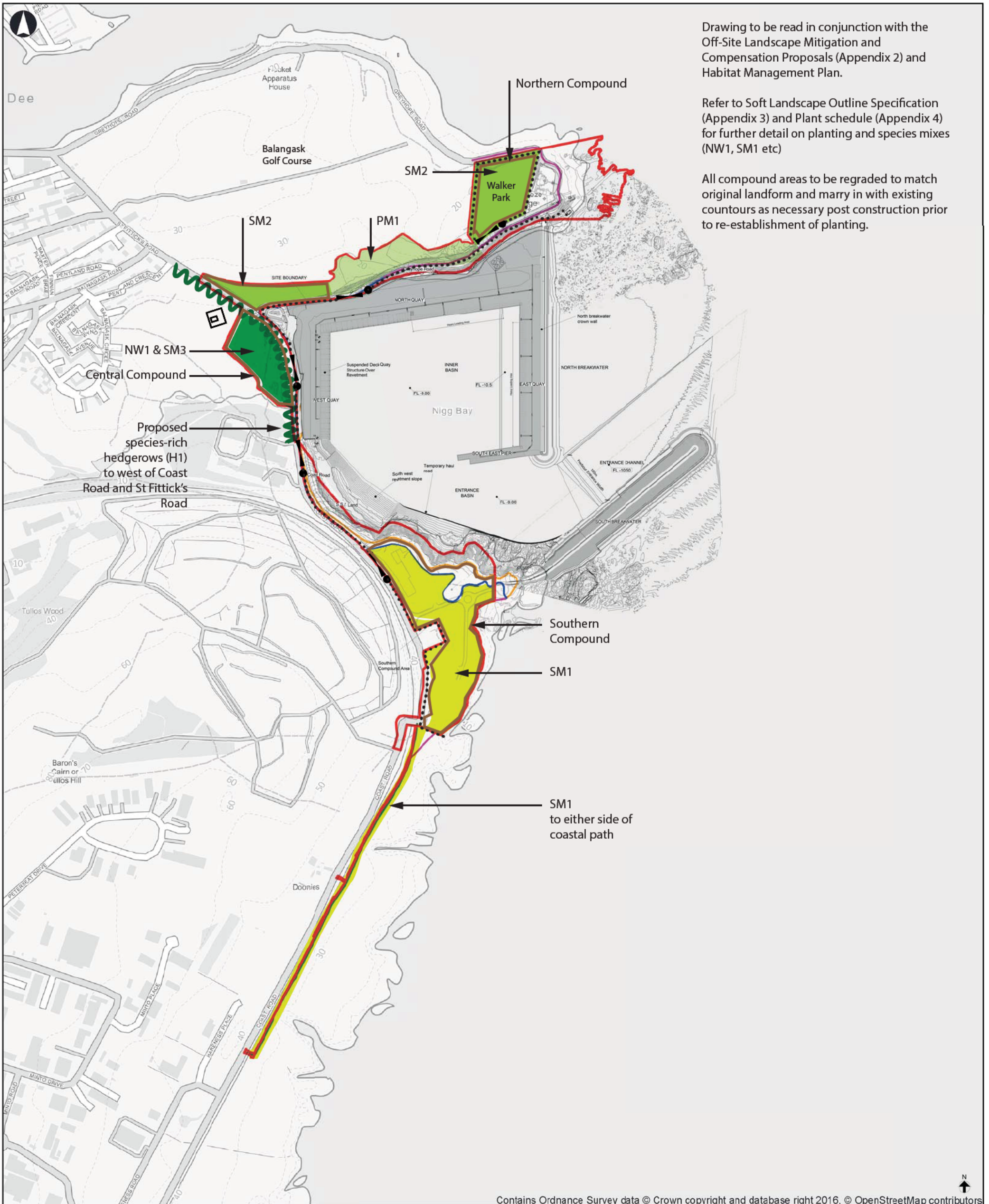
## 10.6 Conclusion

Whilst localised opportunities are limited for mitigating the visual impacts of the AHEP, every effort has been made to ensure that improvements both within and adjacent to the AHEP will be for the benefit of the local community with the natural environment reinstated and enhanced in a timely manner once the construction phase is complete.

## **Appendix A**

### **On Site Landscape Mitigation Strategy**

# **A1 On Site Landscape Mitigation Strategy**



Drawing to be read in conjunction with the Off-Site Landscape Mitigation and Compensation Proposals (Appendix 2) and Habitat Management Plan.

Refer to Soft Landscape Outline Specification (Appendix 3) and Plant schedule (Appendix 4) for further detail on planting and species mixes (NW1, SM1 etc)

All compound areas to be regraded to match original landform and marry in with existing contours as necessary post construction prior to re-establishment of planting.

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**Legend**

- PPIP Boundary
- Coast Road Cycle Path
- Existing Coastal Path to be closed
- Existing Cycle Path to be retained
- Permanent Coastal Path
- Temporary fencing
- Vehicular Gate
- Pedestrian Gate
- Temporary Compound

- Reinstatement native tree planting
- Proposed species-rich native hedgerow
- Proposed scrub and heathland
- Reinstatement semi-improved neutral grassland
- Reinstatement amenity grassland

|    |          |    |    |    |
|----|----------|----|----|----|
| P4 | 31-03-17 | RY | AP | JW |
| P3 | 23-02-17 | RY | AP | JW |
| P2 | 31-01-17 | RY | AP | JW |
| P1 | 28-11-16 | RY | AP | JW |

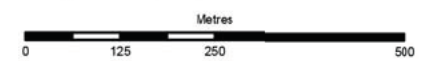
| Issue | Date | By | Chkd | Appd |
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Client  
**Aberdeen Harbour**

Job Title  
**Aberdeen Harbour Expansion Project**



**On Site Landscape Mitigation and Compensation**

Scale at A3  
**1:10,000**

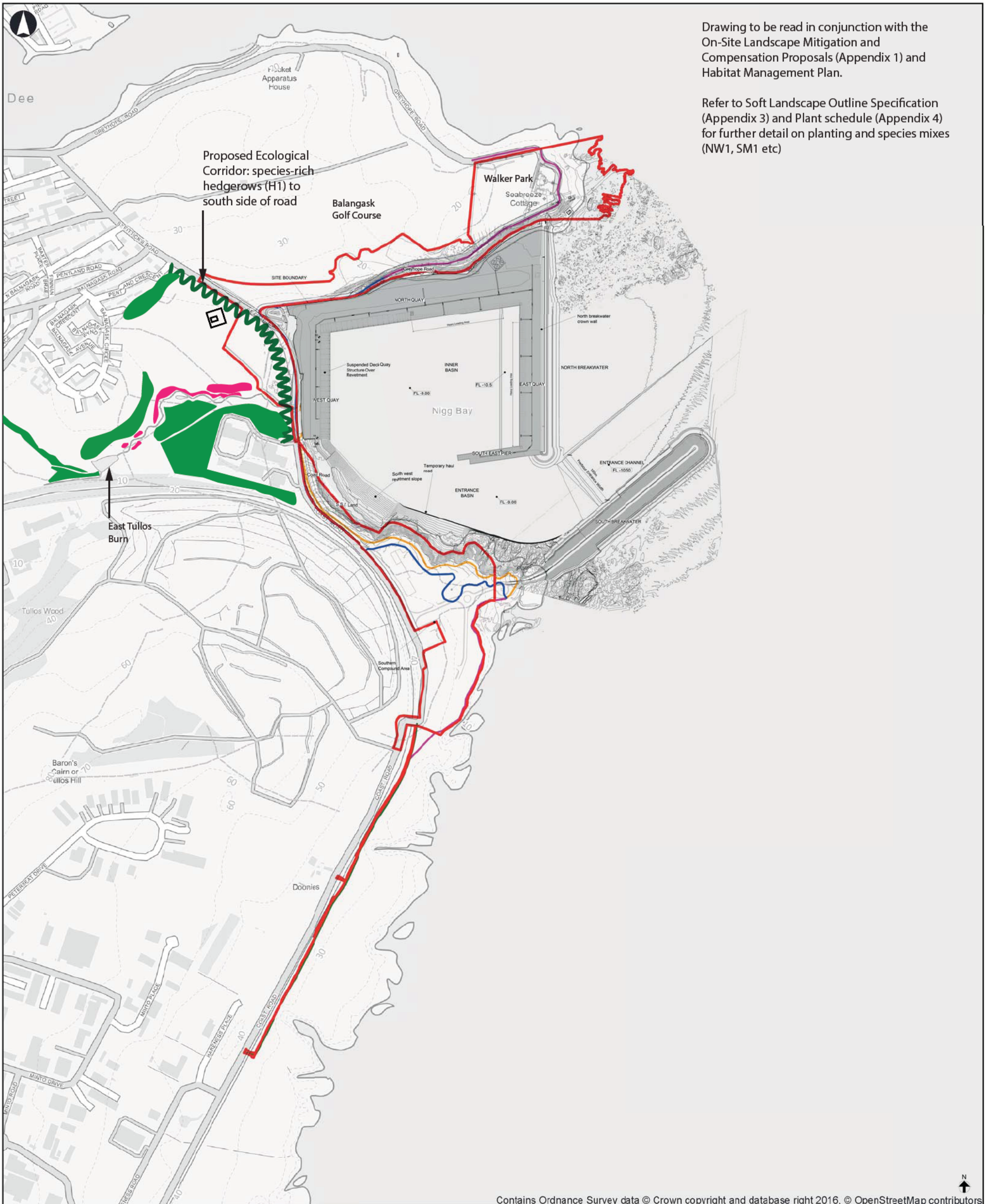
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| Drawing No<br><b>001</b> | Issue<br><b>P4</b>                 |

## **Appendix B**

### **Off Site Landscape Mitigation Strategy**

## **B1 Off Site Landscape Mitigation Strategy**

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Drawing to be read in conjunction with the On-Site Landscape Mitigation and Compensation Proposals (Appendix 1) and Habitat Management Plan.

Refer to Soft Landscape Outline Specification (Appendix 3) and Plant schedule (Appendix 4) for further detail on planting and species mixes (NW1, SM1 etc)

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**Legend**

- PPIP Boundary
- Coast Road Cycle Path
- Existing Coastal Path to be closed
- Existing Cycle Path to be retained
- Permanent Coastal Path
- Existing woodland
- Existing wildflower meadow

www Proposed species-rich native hedgerow

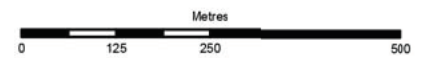
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| P2    | 31-01-17 | RY | AP   | JW   |
| P1    | 28-11-16 | RY | AP   | JW   |
| Issue | Date     | By | Chkd | Appd |

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**Off Site Landscape Mitigation and Compensation**

Scale at A3  
**1:10,000**

|                          |                                    |
|--------------------------|------------------------------------|
| Job No<br><b>247468</b>  | Drawing Status<br><b>For Issue</b> |
| Drawing No<br><b>002</b> | Issue<br><b>P4</b>                 |



## Appendix C

### Soft Landscape Outline Specification

## C1 Soft Landscape Outline Specification

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### General

- All material, workmanship and horticultural terms shall comply with the current, appropriate British Standards unless specifically stated in this specification

### Soft Landscape:

- Before starting work, all trees and shrubs to be retained within close proximity to the construction boundary, shall be identified.
- Tree protection in accordance with British Standards, particularly BS 5837:2012 'Trees in relation to design, demolition and construction') and to the Planning Authorities requirements.
- Existing trees and shrubs to be retained shall be located outside the site hoarding area for their protection. The foundations of the hoardings should be set outside the root zone in accordance with BS 5837:2012
- Do not dump soil or rubbish, excavate or disturb topsoil, change in levels of soil, park vehicles, store materials/plant machinery or place temporary accommodation within the Root Protection Area (RPA).
- Do not sever roots exceeding 25mm in diameter
- Do not change the level of the ground within the RPA.
- All works to existing vegetation to be undertaken in accordance with BS 3998
- Tree works to be undertaken by contractor competent for the type of work and to the approval of an Arboriculturalist. (List of local contractors usually available from the Local Authority Tree Officer)
- All works shall be undertaken in the correct manner to protect legally protected fauna and flora
- Any noxious weeds/ plants listed on Schedule 9 of the Wildlife and Countryside Act in Scotland shall be removed (e.g. japanese knotweed, giant hogweed, bamboo etc.) in accordance with relevant guidance and in consultation with the Landscape Architect.

### Plants:

- Trees: Transplant and Standard (Light) refer to plant schedule for sizes.
- Hedge: refer to plant schedule for size and percentage of mix. Double staggered rows at 450mm centres to either side of a post and wire fence
- Shrubs: refer to plant schedule for size, density and percentage of mix. Planted randomly but evenly in groups of 3 – 11no.

### Soil:

#### Requirements after settlement:

- Tree Pits (Feathered/Standard Light): min. 800mm depth topsoil
- Transplants/Whip planting: min. 400mm depth topsoil
- Shrub planting: min. 300mm depth topsoil
- Seeded Areas: min. 150mm depth topsoil

Soil levels should be married in with existing soil levels after settlement

**Supply:**

- All topsoil to BS 3882:2015, Multi-purpose topsoil
- Locally sourced and compatible with the existing topsoil/subsoil
- Subsoil to be well broken up before topsoiling
- Of medium texture, reasonably free of stones (maximum size in any dimension 50mm) and free from contamination, subsoil, weed seeds and roots and any other foreign matter.
- Topsoil to be mounded up 100mm within 500mm of adjacent paving after settlement, excavate to allow topsoil to be mounded.
- Topsoil shall be spread in layers not exceeding 150mm and firm each layer before spreading the next.
- At the time of laying, both material and weather should be reasonably dry.

**Preparation:**

- Topsoil handling shall occur in the driest conditions possible to BS 3883.
- Cultivate topsoil to full planting depth and remove any compaction.
- Subsoil/topsoil stripped to lower fertility to be spread over all areas of proposed wildflower seeding.
- When soil is reasonably dry and workable, grade to smooth flowing contours removing all minor hollows and ridges.

**Planting Works:****Plant supply and handling:**

- Plants as specified and supplied in accordance with the National Plant Specification and the HTA Nursery Certification Scheme.
- Plants are to be of Local or British provenance where attainable, grown in a suitable environment and hardened off and with good fibrous root systems and to comply with the requirements of BS3936 Specification for Nursery Stock.
- Ensure all plants are strong and sturdy with a balanced branch and root system, and are in good health, free from pests, diseases and damage.
- Plant handling in accordance with BS 4428/JCL/CPSE Code of Practice for 'Handling and establishing landscape plants' Parts I, II and III.
- All planting to be undertaken in accordance with BS4428 Code of Practice for General Landscape Operations.
- All plants to be protected from wind exposure at all times. All plants to be soaked in water for several hours prior to planting and well watered in.
- Undertake all work in appropriate climatic and ground conditions as per good horticultural practice.
- Ensure that all plants are adequately packed and protected so that they survive transport without damage in loading, transit or unloading.
- Ensure that all plants are unpacked and heeled-in or planted on the same day as delivery. Before planting, protect on site from frost, desiccating wind and keep the roots moist.

**Planting:**

- Planting shall generally take place in the following seasons:
- Deciduous plants: beginning November – end April
- Evergreen plants: October/November or April
- Shrub pits: minimum size 300 x 300 x 300mm with pit bottom broken up to 150mm depth
- Tree pits (Standard Light/Feathered): 600 x 600 x 800mm depth and pit bottom broken up to a depth of 150mm
- Standard (Light) Trees shall be supplied with 1 no. tree stake. The overall length shall be sufficient to ensure they are firm when driven into the soil and that the top of the stake extends above ground level to approximately one third of the tree's height. Stakes are to be hammered into the ground at an angle to follow the direction of the prevailing wind before the tree is positioned in the pit. Stakes shall be whole sections of softwood, peeled chestnut, larch or oak timber 50-75mm top diameter, straight, free from projections and large or edge knots and with pointed lower end and pressure treated. Tree to be secured with adjustable rubber tie positioned approximately 300mm from the top of the stake to hold the tree ensuring that the tree and stake do not touch in any place.
- Transplant/Whip planting: individual 300 x 300 x 400mm depth planting pits with pit bottom broken up to 150mm depth.
- Tree pit sizes should be adjusted accordingly to ensure pits are at least 300mm wider and 75mm deeper than the tree root system when fully spread.
- Leave base of tree pits slightly domed to assist drainage.
- Shrubs planted randomly but evenly in areas shown. Trees planted in locations shown on drawings.

**Water:**

- Thoroughly water trees and shrubs immediately after planting to full depth of topsoil without damaging or displacing plants or soil.

**Mulch:**

- Mulch to be coarse horticultural grit – 6mm
- Lay 50mm mulch depth to ornamental shrub beds
- Lay a 300mm diameter x 50mm depth circle of mulch to individual whips
- Lay a minimum 1500 diameter x 50mm depth circle of mulch to individual trees

**Seeded areas:**

- Prepare soil as above and seed on fine tilth.
- Seed: sow either during March/April or September spreading equally in two equal sowings in transverse directions.
- Lightly harrow or rake.
- Amenity Grass seed: 20-35g/m<sup>2</sup>

As part of good horticultural practice, use peat-free composts, mulches and conditioners.

All surplus material – subsoil, stones, debris, wrapping material, canes, ties, prunings and other arisings/rubbish to be removed from site.

**Establishment:**

- New tree, hedge and shrub planting to be protected with tree guards to protect from deer and rabbit damage
- Inspection, adjustment and replacement as necessary of all stakes, ties and guards/shelters as required.

**Maintenance: 2-5 years**

In accordance with BS 4428 Code of Practice for general landscape operations.

- Trees will be replaced if found to be damaged beyond survival from animals such as deer and rabbits.

Trees:

To ensure the successful establishment of new trees, establish canopy and good root system the following is recommended:

- Investigation of failed growth of trees, remedial actions and replacement.
- Aeration of compacted soils.
- Inspect for pests, diseases and undertake remedial action.
- Check tree stability.
- Check tree ties and loosen if required annually.
- Remove stakes and ties after 1 year subject to inspection unless otherwise instructed by ACC Ranger/Tree Officer.
- Annual formative pruning and shaping of canopy as recommended by ACC Ranger/Tree Officer. Remove dead wood and encourage balance growth. Pruning/shaping to be undertaken outside of bird nesting season – timings to be advised by Ecologist.
- Watering as required to field capacity\*, during the dry months during establishment.
- Mulch backfilled if required.

Hedge & Shrub Planting:

- Inspection for pests, vermin and plant diseases and remedial actions.
- Formative and seasonal pruning for stem, foliage and flowering bud wood.
- Hedge cutting once a year and twice a year on those areas where hedges about footpaths/highways. Removal of clippings.
- Cut back to the previous year's growth once the hedge has reached its preferred height. Clear out hedge base at the time of clipping.
- Check for invasive species and remove from site in accordance with relevant guidance and in consultation with the ACC Ranger.
- Extension or strengthening of guards or other barriers where planting is becoming eroded trampled or damaged.

- Re-balancing of growth, removal of over-vigorous species.
- Replanting of failed stock or redesign /re-specification of failed areas.
- Watering as required to field capacity\*, during the dry months during establishment.
- Removal of litter

Amenity grassland areas:

- Maintenance regime to match Local Authority's existing regime for Walker Park.

**Herbicides and Fertilisers:**

- The use of any chemical or organic herbicides and fertilisers has not been suggested to encourage the planting to adapt to the existing conditions.

## **Appendix D**

### **Plant Schedule**

## **D1 Plant Schedule**

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## Aberdeen Harbour Expansion Project

### Indicative Plant Schedule

#### Native Woodland Planting

| Ref: NW1          | Species                   | Common Name   | Form             | Age | Girth  | Height    | Clear Stem | Root condition | % Mix |
|-------------------|---------------------------|---------------|------------------|-----|--------|-----------|------------|----------------|-------|
| Broadleaved (75%) | <i>Alnus glutinosa</i>    | Common Alder  | Transplant       | 1+1 | n/a    | 40-60cm   | n/a        | B              | 1     |
|                   | <i>Alnus glutinosa</i>    | Common Alder  | Standard (Light) | 2x  | 6-8cm  | 250-300cm | 150-175cm  | B              | 3     |
|                   | <i>Betula pendula</i>     | Silver Birch  | Transplant       | 1+1 | n/a    | 40-60cm   | n/a        | B              | 1     |
|                   | <i>Betula pendula</i>     | Silver Birch  | Standard (Light) | 2x  | 6-8cm  | 250-300cm | 150-175cm  | B              | 3     |
|                   | <i>Crataegus sp.</i>      | Hawthorn      | Transplant       | 1+1 | n/a    | 40-60cm   | n/a        | B              | 1     |
|                   | <i>Crataegus sp.</i>      | Hawthorn      | Feathered        | 2x  | n/a    | 100-125cm | n/a        | B              | 3     |
|                   | <i>Fraxinus excelsior</i> | Ash           | Transplant       | 1+1 | n/a    | 40-50cm   | n/a        | B              | 1     |
|                   | <i>Fraxinus excelsior</i> | Ash           | Standard (Light) | 2x  | 6-8cm  | 250-300cm | 150-175cm  | B              | 10    |
|                   | <i>Populus tremula</i>    | Aspen         | Transplant       | 1+1 | n/a    | 40-60cm   | n/a        | B              | 1     |
|                   | <i>Populus tremula</i>    | Aspen         | Standard (Light) | 2x  | 6-8cm  | 250-300cm | 150-175cm  | B              | 3     |
|                   | <i>Prunus padus</i>       | Bird Cherry   | Transplant       | 1+1 | n/a    | 40-50cm   | n/a        | B              | 1     |
|                   | <i>Prunus padus</i>       | Bird Cherry   | Standard (Light) | 2x  | 6-8cm  | 250-300cm | 150-175cm  | B              | 3     |
|                   | <i>Sorbus aucuparia</i>   | Rowan         | Standard (Light) | 2x  | 6-8cm  | 250-300cm | 150-175cm  | B              | 3     |
|                   | <i>Sorbus intermedia</i>  | Whitebeam     | Transplant       | 1+1 | n/a    | 40-60cm   | n/a        | B              | 1     |
|                   | <i>Sorbus intermedia</i>  | Whitebeam     | Standard (Light) | 2x  | 6-8cm  | 250-300cm | 150-175cm  | B              | 2     |
| Conifer (25%)     | <i>Larix europaeus</i>    | Larch         | Standard (Light) | 2x  | 6-8cm  | 250-300cm | 150-175cm  | B              | 30    |
|                   | <i>Pinus sylvestris</i>   | Scots Pine    | Transplant       | 2x  | n/a    | 40-60cm   | n/a        | B              | 2     |
|                   | <i>Pinus sylvestris</i>   | Scots Pine    | Standard (Light) | 3x  | 8-10cm | 250-300cm | 150-175cm  | RB             | 15    |
|                   | <i>Picea abies</i>        | Norway Spruce |                  | 2+1 | n/a    | 30-40cm   | n/a        | B              | 1     |
|                   | <i>Picea abies</i>        | Norway Spruce |                  | 3x  |        |           | 125-150cm  | RB             | 15    |

#### Native Hedge Species

| Ref: H1 | Species                   | Common Name | Form           | Height   | Root condition | Size | Habit    | % Mix |
|---------|---------------------------|-------------|----------------|----------|----------------|------|----------|-------|
|         | <i>Acer campestre</i>     | Field Maple | Transplant     | 60-80cm  | B              | -    | -        | 5     |
|         | <i>Corylus avellana</i>   | Hazel       | 1+2            | 60-80cm  | B              | -    | Branched | 10    |
|         | <i>Crataegus monogyna</i> | Hawthorn    | Feathered      | 80-100cm | B              | -    | -        | 40    |
|         | <i>Lonicera nitida</i>    | Honeysuckle | Bushy, rounded | 30-40cm  | C              | 2L   | -        | 5     |
|         | <i>Prunus spinosa</i>     | Blackthorn  | Bushy, rounded | 60-80cm  | B              | -    | Branched | 30    |
|         | <i>Rosa canina</i>        | Dog rose    | Bushy, rounded | 60-80cm  | B              | -    | Branched | 10    |

Note: To be planted double staggered at 450mm centres

#### Scrub and scattered heathland

| Planting Mix 1 | Species                        | Common Name         | Habit          | Age | Height   | Root condition | Size    | Density / M <sup>2</sup> | % Mix |
|----------------|--------------------------------|---------------------|----------------|-----|----------|----------------|---------|--------------------------|-------|
| PM1            | <i>Crataegus monogyna</i>      | Hawthorn            | Feathered      | 2x  | 80-100cm | B              | -       | 1                        | 5     |
|                | <i>Culluna vulgaris</i>        | Ling heather        | -              | -   | -        | C              | 1L      | 5                        | 10    |
|                | <i>Cytisus scoparius</i>       | Broom               | Bushy, rounded | 1+0 | 50-60cm  | B              | -       | 1                        | 5     |
|                | <i>Dipsacus fullonum</i>       | Teasel              | -              | -   | -        | C              | 1L      | 5                        | 5     |
|                | <i>Epilobium angustifolium</i> | Rosebay willow-herb | -              | -   | -        | C              | 9cm pot | 5                        | 5     |
|                | <i>Erica cinerea</i>           | Bell heather        | Bushy          | -   | -        | C              | 1L      | 5                        | 10    |
|                | <i>Erica tetralix</i>          | Cross-leaved heath  | Bushy          | -   | -        | C              | 1L      | 5                        | 10    |
|                | <i>Hippophae rhamnoides</i>    | Sea Buckthorn       | Bushy, rounded | 1+2 | 60-80cm  | B              | -       | 1                        | 5     |
|                | <i>Ilex aquifolium</i>         | Holly               | Bushy, rounded | -   | 40-60cm  | C              | 2L      | 1                        | 2.5   |
|                | <i>Prunus spinosa</i>          | Blackthorn          | Bushy, rounded | 1+0 | 50-60cm  | B              | -       | 1                        | 5     |
|                | <i>Rubus fruticosus</i>        | Bramble             | -              | -   | 40-60cm  | B              | -       | 3                        | 5     |
|                | <i>Salix ssp.</i>              | Willow              | -              | -   | -        | -              | -       | 1                        | 2.5   |
|                | <i>Sambucus nigra</i>          | Elderberry          | Bushy, rounded | 0/1 | 40-50cm  | B              | -       | 1                        | 5     |
|                | <i>Ulex europaeus</i>          | Gorse               | -              | -   | 30-40cm  | C              | 3L      | 1                        | 25    |

Root Condition: B = Bareroot, RB = Root Ball, C = Container

## Aberdeen Harbour Expansion Project

### Indicative Plant Schedule

#### Semi-improved neutral grassland

| Seed Mix 1 | Species                         | Common Name        | % Mix | Sowing Rate |
|------------|---------------------------------|--------------------|-------|-------------|
| SM1        | <i>Bellis perennis</i>          | Daisy              |       | 20-35g/m2   |
|            | <i>Dactylis glomerata</i>       | Cocksfoot          |       |             |
|            | <i>Hypnum jutlandicum</i>       | Health Plait-moss  |       |             |
|            | <i>Juncus effuses</i>           | Common rush        |       |             |
|            | <i>Molina caerulea</i>          | Purple Moor Grass  |       |             |
|            | <i>Plantago lanceolata</i>      | Ribwort plantain   |       |             |
|            | <i>Rumex acetosa</i>            | Common sorrel      |       |             |
|            | <i>Rumex obtusifolius</i>       | Dock               |       |             |
|            | <i>Taraxacumofficinale agg.</i> | Dandelion          |       |             |
|            |                                 | Thistle sp.        |       |             |
|            | <i>Trifolium pratense</i>       | Red clover         |       |             |
|            | <i>Trifolium repens</i>         | White clover       |       |             |
|            | <i>Ranunculus repens</i>        | Creeping Buttercup |       |             |

#### Amenity Grassland

| Seed Mix 2 | Species                         | Common Name        | % Mix | Sowing Rate |
|------------|---------------------------------|--------------------|-------|-------------|
| SM2        | <i>Heracleum sphondylium</i>    | Common hogweed     |       | 20-35g/m2   |
|            | <i>Lolium perenne</i>           | Perennial ryegrass |       |             |
|            | <i>Rumex sp.</i>                | Dock               |       |             |
|            | <i>Taraxacumofficinale agg.</i> | Dandelion          |       |             |
|            | <i>Trifolium repens</i>         | White clover       |       |             |

#### Central Compound Ground cover

| Seed Mix 3 | Species                        | Common Name | % Mix | Sowing Rate |
|------------|--------------------------------|-------------|-------|-------------|
| SM3        | <i>Agrostis capillaris</i>     | Common Bent |       | 20-35g/m2   |
|            | <i>Dactylis glomerata</i>      | Cocksfoot   |       |             |
|            | <i>Epilobium angustifolium</i> |             |       |             |
|            | <i>Rumex obtusifolius</i>      | Dock        |       |             |

Refer also to the Habitat Management Plan

Final species list and percentages of mixes to be confirmed by Ecologist

Final seed mixes to be developed in consultation with Ecologist and Scottish Seed Company to ensure appropriate mix and sowing rates for existing environment provided

All plants to be of local provenance as far as possible to improve survival rates, conserve local wildlife and local natural heritage