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ASSOCIATED BRITISH PORTS

NEWPORT DOCKS - PROPOSED PLASTERBOARD MANUFACTURING FACILITY

ECOLOGICAL MANAGEMENT PLAN

JANUARY 2020

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DATE ISSUED:	**JANUARY 2020**
JOB NUMBER:	**CA11637**
REPORT NUMBER:	**0008**
VERSION:	**V1.0**
STATUS:	**FINAL**

ASSOCIATED BRITISH PORTS

NEWPORT DOCKS - PROPOSED PLASTERBOARD MANUFACTURING FACILITY

ECOLOGICAL MANAGEMENT PLAN

JANUARY 2020

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CONTENTS

APPENDICES

DRAWINGS

Drawing Number	Title	Scale
CA11637-006/D	Illustrative Green Infrastructure Plan	1:250@A2
CA11637-011B	Detailed Planting Plan	1:500 @A3
CA11637-011C	Detailed Planting Plan	1:500 @A3

EXECUTIVE SUMMARY

Wardell Armstrong LLP were instructed by Associated British Ports (ABP) to prepare an Ecological Management Plan (EMP) in relation to the redevelopment of a site at Newport Docks for a 14,940m^2 Plasterboard Manufacturing Facility.

Ecological surveys undertaken identified the site as supporting scrub and ephemeral short perennial habitats characteristic of previously developed industrial land. The habitats are considered to have potential to support terrestrial invertebrates, nesting birds, common reptiles and foraging bats. An Ecological Impact Assessment (EcIA) of the application area identified measures which will be implemented to minimise the significance of effects on the habitats and species because of the proposed development.

The purpose of this EMP is to outline the mitigation and enhancement measures that will be undertaken. It also describes the management objectives and prescriptions for each habitat and/or feature retained, enhanced or created and sets out an appropriate future management and monitoring programme.

The measures include the enhancement of on-site habitats including a Habitat Enhancement Area (HEA) – to be managed to retain and enhance Open Mosaic Habitat, Habitat Corridor (dense scrub belt), and soft landscaping associated with the external area of the manufacturing facility.

Other biodiversity enhancements proposed include provision of nest boxes for bird's and bat boxes within the Habitat Corridor, increased diversity of foraging for birds within the HEA and increased opportunities for hibernating reptiles and invertebrates within the HEA.

The EMP provides recommendations for landscape planting to include native shrub and tree planting foraging and shelter/nesting opportunities for birds.

1 INTRODUCTION

1.1 Background

1.1.1 Associated British Ports (ABP) are applying for planning permission for redevelopment of a site at Newport Docks for a 14,940m^2 Plasterboard Manufacturing Facility (PMF). The development site is covered by the Newport Local Development Plan 2011-2026 under the allocation for "Newport Docks" justified as "*surplus of land within Newport Docks which could better meet Newport's economic development objectives if brought into alternative, productive, employment generating uses within Use Class B1, B2 or B8*".

1.1.2 The planning application area is 4.5268 hectares (ha) (refer to Existing Site Location Plan drawing attached as Appendix 1) of which 3.439 ha will be utilised for the proposed PMF, hereafter referred to as the 'development site'. The remainder of the planning application area will be undeveloped and managed for the benefit of nature conservation (approximately 1.0782 ha).

1.1.3 The PMF will comprise a simple warehouse-type structure enclosing production lines, conveyor belts, storage loading areas and hoppers. Externally there will be storage areas/bays, hardstanding parking and an administrative office. A strip of vegetation approximately 0.5162ha (10m wide) will be maintained along the western boundary of the development site to maintain connectivity of habitats and an area of approximately 0.5620 ha, hereafter referred to as Habitat Enhancement Area (HEA), in the south of the development site will be maintained for ecological mitigation and enhancement.

1.1.4 An Additional Habitat Enhancement Area (AHEA) (1.1287ha) is being offered by AMP as off-site mitigation and is not included within the planning application boundary will be located approximately 500m to the north of the proposed manufacturing facility. This will be subject to a separate Ecological Management Plan to be secured by planning permission.

1.1.5 Wardell Armstrong LLP (WA) has undertaken an Ecological Impact Assessment (EcIA) of the application area and identified measures which will be implemented to minimise the significance of effects on the habitats and species because of the proposed development.

1.2 Scope of Report

1.2.1 This Ecological Management Plan (EMP) document has been prepared to provide details on future habitat management and biodiversity enhancements of the 0.5620 ha HEA to the south of the PMF (refer to Drawing DR-A-ZZZZ-01001 -Proposed Site Plan attached as Appendix 2) and the Habitat Corridor (0.5162ha) and considers existing features of nature conservation interest within this part of the site together with the development's associated landscape and nature conservation proposals. The AHEA to the north of the PMF will be subject to a separate EMP area.

1.2.2 The purpose of the EMP is to set out the principles which should underpin the future management of this area retained and created for wildlife, to describe the management practices which would be appropriate and biodiversity enhancement measures which will be implemented for fauna.

1.2.3 A separate 'Construction and Environmental Management Plan (CEMP)' document will provide all future contractors with information of the biodiversity features within the application site and specifies the measures and methods which will need to be employed to ensure protection of retained habitat and fauna during all phases of initial site works and construction works.

1.2.4 Japanese knotweed (*Reynoutria japonica*) is present within the application site and details of the eradication strategy to be implemented within the construction phase will be included within the CEMP.

1.2.5 As detailed in the CEMP, during the construction phase, the area of hardstanding present within the HEA will be removed to increase the area of Open Mosaic Habitat (OMH).

1.3 Site Location and Site Characteristics

1.3.1 The location of the application site is shown on the Existing Site Location Plan (Drawing Number DR-A-ZZZZ-0002) provided in Appendix 1.

1.3.2 The site is not subject to any statutory or non-statutory nature conservation designations.

1.3.3 An Extended Phase 1 (EP1) Habitat Survey was undertaken in May 2019 by Thompson Environmental Consultants (TEC). The site currently supports scrub and ephemeral short perennial habitats characteristic of previously developed industrial land. Existing habitats are shown on Figures 2 and 4 provided within Appendix 3.

1.3.4 The habitats within the application site are considered to have potential to support terrestrial invertebrates, nesting birds, common reptiles and foraging bats.

1.4 Development Proposals

1.4.1 The proposed development will comprise initial site clearance operations including vegetation clearance, land raising activities and construction of the proposed manufacturing facility and associated infrastructure including car parking and landscaping on 3.439 ha of land within the northern part of the application site.

1.4.2 The proposed landscaping proposals for the development site and the HEA to the south of the proposed built development are shown on Drawing Number CA11637-006 Rev D (Illustrative Green Infrastructure Plan).

1.4.3 As part of the development proposals a 0.5162 ha (10m wide) scrub habitat corridor will be maintained along the western boundary of the application site and an 0.5620 ha area of land within the southern area of the application site will be managed as a Habitat Enhancement Area for the purpose of biodiversity conservation.

1.4.4 Based on the nature conservation features to be retained and created within the application site, three Habitat Management Areas have been identified:

- Habitat Enhancement Area (HEA) – to be managed to retain and enhance OMH Priority Section 7 Habitat under Section 7 of The Environment (Wales) Act, 2016 which comprises ephemeral short perennial/scattered scrub habitat;
- Habitat Corridor; and
- Soft landscaping associated with the external area of the manufacturing facility.

1.4.5 The planning application also seeks to provide the following biodiversity enhancements as part of the development proposals:

- Nest boxes for bird's species within the Habitat Corridor.
- Increased diversity of foraging for birds within the HEA;
- Roosting opportunities for bats; and
- Increased opportunities for hibernating reptiles and invertebrates within the HEA.

1.4.6 Landscape planting to include native shrub and tree planting foraging and shelter/nesting opportunities for bats and birds.

Objectives

Operational Phase

1.4.7 The main objectives to be achieved during the operational phase of the proposed development are to:

- Manage appropriately areas of new and retained ephemeral/short perennial and scattered scrub habitat (OMH) to benefit terrestrial invertebrates;
- Retain and manage new scrub /tree planting habitat providing long term enhancements for biodiversity; and
- Enhance the application site for a range of wildlife including bats, breeding birds, common reptiles and invertebrates including species which are listed on Section 7 of The Environment (Wales) Act, 2016 and other notable species.

2 RESPONSIBILITY

2.1.1 This EMP is intended to cover the first 20-year management period. A landscape contractor will be appointed by the owner of the PMF who will be responsible for the operations set out in the EMP.

2.1.2 Sufficient resources will be allocated to carry out the operations set out in this EMP to a satisfactory standard.

2.1.3 The success of the prescribed management as detailed in this EMP will be assessed on an annual basis for the first 5-year period and revised prescriptions considered, if necessary.

2.1.4 Monitoring of habitats will be undertaken by a suitably qualified ecologist.

2.1.5 Terrestrial invertebrate surveys will be undertaken by a suitably qualified entomologist.

2.1.6 Breeding bird surveys will be undertaken by a suitably experienced ecologist/ornithologist.

2.1.7 Any alterations proposed to this EMP will need to be agreed in writing with Newport City Council's Ecologist prior to implementing any changes.

2.1.8 No pesticides, fertilizers or other herbicides (other than those approved for the long-term treatment of Japanese knotweed) will be used within the application site as these pose a risk to achieving biodiversity objectives.

2.1.9 This EMP only covers biodiversity management within the HEA to the south of the PMF. Any future management of OMH secured at the AHEA will be subject to a separate EMP.

3 MANAGEMENT PLAN

3.1.1 The development proposals have sought to retain habitats including the western boundary scrub habitat and an area of ephemeral, short perennial and scattered scrub vegetation within the HEA in order to enhance existing habitats present within the application site. Additional planting will ensure connectivity of retained and enhanced habitats and provide a benefit to protected species and other wildlife by providing berry producing species to benefit bird species and other wildlife, provide nesting and roosting opportunities for birds and bats.

3.1.2 This section sets out the general management considerations for the habitats and species present within the development site and HEA. Section 4 sets out the objectives and specifications for the three Habitat Management Areas.

Scrub and Tree Planting

3.1.3 Any scrub/tree management works will be undertaken by a suitably qualified arboricultural contractor, registered with the Arboricultural Association. Any future tree surgery works will be in accordance with British Standard BS 5837:2012 "*Trees in Relation to design, demolition and construction - Recommendations*".

3.1.4 All pruning / removal works to vegetation, including scrub and tree planting, will not be undertaken during the bird breeding season (March to August inclusive) as detailed in full in paragraph 3.1.9 below.

3.1.5 Any scrub species which mature into tree specimens will need to be assessed for their potential to support roosting bats by a suitably qualified ecologist prior to any pruning or vegetation removal as detailed in paragraph 3.1.11 below.

3.1.6 Shrubs and trees to be planted as per planting schedule detailed on Detailed Planting Strategy drawings (Drawing Numbers CA11637-011B & 011C – 2 sheets).

3.1.7 The planting will comprise native species of shrubs and trees including:

- Common alder *Alnus glutinosa*
- Silver birch *Betula pubescens*
- Common aspen *Populus tremula*
- White willow *Salix alba*
- Goat willow *Salix caprea*
- Hawthorn *Crataegus monogyna*

- Common elder *Sambucus nigra*
- Dog rose *Rosa canina*

3.1.8 Planting of trees will be undertaken between November to March and will avoid freezing and waterlogged conditions. On completion of the planting, roots will be firmed and watered as necessary.

Birds

3.1.9 Any vegetation clearance/ pruning will generally not be undertaken during bird breeding season (March to August inclusive). If this is not possible an ecologist will check that the area to be cleared is free of nesting birds immediately prior to removal. If an occupied nest or nest in construction is found, which would be damaged or disturbed by the works, no works will commence until the young have fledged.

Bird Boxes

3.1.10 A combination of two bird boxes with 26mm holes, one box with 32mm holes and one open fronted box which will be erected on trees within the Habitat Corridor during the construction/landscaping phase. The boxes will be fixed 2 - 4m high on tree trunks using aluminium or nylon nails or with wire around the trunk. The boxes will be fixed so that it is tilting forward slightly. If suitable trees cannot be located, then metal poles will be used to support the nest boxes. Post erection of the boxes, the EMP will be updated to include a plan showing the final locations of these boxes.

3.1.11 During the first-year post-completion of the development, a breeding bird survey of the ephemeral short perennial and scattered scrub habitat within the HEA and the 10m wide Habitat Corridor will be undertaken by a suitability experienced ecologist/ornithologist.

3.1.12 The methodology for the breeding bird surveys will be agreed with Newport City Council's Ecologist.

3.1.13 A full breeding bird survey will be undertaken every 2 years for the first 6 years following completion of the proposed development. Any proposed changes to the management for the HEA and Habitat Corridor based on the result of the breeding bird surveys will be agreed with the Council's Ecologist and a revised EMP will be approved by Newport City Council's Ecologist and implemented accordingly. After the completion of the first 3 breeding bird surveys, the frequency of breeding bird surveys to inform the remainder of the 20-year management plan for the HEA and Habitat Corridor will also be agreed with the Council's Ecologist.

Bats

3.1.14 Prior to any felling or tree surgery as part of the development, trees will be re-assessed for their current bat roost potential and, if individual trees are assessed as having bat roost potential, these trees will be subject to either a detailed inspection by a licensed bat-worker and/or emergence/re-entry surveys to determine whether a roost is present. Should bats or evidence of bat occupation be found within the trees then it will be necessary to apply for a disturbance licence from Natural Resources Wales to carry out works including mitigation and compensation measures (e.g. erection of new bat boxes and relocation of any bats found) for these European Protected Species under the Conservation of Habitats and Species Regulations 2018 (as amended).

Bat Boxes on Poles

3.1.15 Two bat pole mounted rocket bat boxes (or equivalent) will be installed within the Habitat Corridor along the western boundary as part of the enhancement proposals. The locations will be accessible for maintenance requirements. Post erection of the poles, the EMP will be updated to include a plan showing the final locations of these boxes. Prior to any activities to clean or replace these boxes, these will need to be inspected by a licensed bat worker. Monitoring of boxes will also be undertaken by a licensed bat worker as required.

Invertebrates

3.1.16 During the first-year post-completion of the development, a full invertebrate survey of the ephemeral short perennial and scattered scrub habitat within the HEA will be undertaken by a suitability qualified entomologist.

3.1.17 The methodology for the full terrestrial invertebrate surveys will be agreed with Newport City Council's Ecologist.

3.1.18 A full terrestrial invertebrate survey will be undertaken every 2 years for the first 6 years following completion of the proposed development. Any proposed changes to the management for the HEA based on the result of the terrestrial invertebrate surveys will be agreed with the Council's Ecologist and a revised EMP will be approved by Newport City Council's Ecologist and implemented accordingly. After the completion of the first 3 terrestrial invertebrate surveys, the frequency of terrestrial invertebrate surveys to inform the remainder of the 20-year management plan for the HEA will also be agreed with the Council's Ecologist.

Reptiles

3.1.19 There is the potential for future vegetation management/clearance activities to kill or injure a low number of common reptiles, if present at the time of the works. Therefore, there is a risk that management activities could contravene legislation pertaining to the protection of reptiles.

3.1.20 The risk of harming reptiles during any future vegetation management/clearance works of within the Habitat Corridor and HEA will be reduced through the implementation of Reasonable Avoidance Measures under a Precautionary Working Method Statement (PWMS).

3.1.21 A detailed PWMS is provided in Appendix 3, however a summary is provided below:

- Reptiles will be discouraged from areas by implementing suitable vegetation management procedures under the supervision of an Ecological Clerk of Works (EcOW) who will also deliver toolbox talks to contractors prior to commencement of any site works;
- Vegetation clearance will progress from the north eastern side of the development site towards the south west to allow any reptiles present to move into the retained habitat areas;
- Materials / debris, which could be used by reptiles as refuges, will not be stored in close proximity to retained scrub habitat while reptiles are active and will not be disturbed when reptiles are hibernating (i.e. between November to March); and
- If reptiles are discovered during the vegetation management activities, these individuals will be translocated into undisturbed suitable habitat within the Habitat Corridor or HEA.

3.1.22 As an enhancement measure for reptiles, two hibernacula (e.g. rubble piles covered with wood cuttings and earth) no more than 1m wide and 0.5m high, will be created along the boundary between the Habitat Corridor and the HEA.

4 MANAGEMENT ACTIONS – OPERATIONAL PHASE

4.1.1 For each management zone, objectives and management specifications have been identified which are applicable during the operational phase of the development.

Habitat Corridor

Objectives

4.1.2 The habitats in the west and southwest periphery which mainly comprise dense scrub and trees will be retained and enhanced to retain bird nesting habitat and to create a natural wildlife buffer to the site. Management objectives for this habitat are:

- Maintain suitable foraging habitat within the application area for common reptiles, birds, bats and invertebrates;
- Establish and maintain planting in good condition;
- To control non-native, invasive species as required;
- Protect breeding birds, bats and reptiles from harm during habitat management works; and
- To maintain nest boxes and bat boxes in good condition.

Management Specifications

- Ensure checks are undertaken for nesting birds by a suitably qualified ecologist prior to any tree/shrub maintenance works, if vegetation clearance is undertaken during bird breeding season (i.e. March to August inclusive);
- The potential for roosting bats to be present in semi-mature/mature trees will also be assessed by a suitably qualified ecologist prior to any tree surgery work being carried out;
- Implement PWMS for reptiles;
- Dense scrub within the 10m buffer strip to the west will be retained and managed on a rotational cutting regime to provide structural diversity;
- As scrub typically matures in 15 years, 1/15th of the Habitat Corridor should be cut every year to create scrub in various stages of development;
- Within the period covered by the management plan, an assessment of dead or dying plant species will be carried out. Replacement planting will take place

within the next planting season (November – March) with native species of similar size and species;

- Once planting is established, generally from Year 3 onwards, shelters / rabbit guards can be removed;
- The bird boxes should be checked every winter after installation;
- Old nests should be removed from bird boxes in the autumn, from September onwards once the birds have ceased using the box;
- Bird boxes should be cleaned in winter to kill any remaining parasites using boiling water. The boxes should then be allowed to dry out thoroughly before replacing the lid; and
- Bat boxes will be inspected for damage (from the ground only) and repaired / replaced if necessary (a licensed bat worker will need to inspect the bat box prior to any repairs/replacements) on an annual basis.

Habitat Enhancement Area (HEA)

Objectives

- To maximise the area of OMH and maintain this S7 Priority Habitat within Newport Docks in the long term;
- Undertake monitoring scheme for invertebrates and implement management regime to the OMH to benefit key invertebrate species which may utilise this habitat;
- Maintain a flower rich foraging habitat for invertebrates until late September through scrub management to maintain an open habitat with regular rotational cutting to promote growth of early colonising species;
- To reduce / remove aggressive species (i.e. coarse grasses, buddleia and willow scrub);
- Protect reptiles from harm during habitat management works;
- Create additional reptile hibernacula; and
- Maintain suitable foraging habitat within the application area for common reptiles, birds and bats.

Management Specifications

Fauna

- Implement PWMS for reptiles;
- Create hibernacula for reptiles; and
- Ensure checks are undertaken for nesting birds by a suitably qualified ecologist prior to any tree/shrub maintenance works if vegetation clearance is undertaken during bird breeding season (i.e. March to August inclusive).

Scrub

- Dense scrub within the 10m buffer strip to the west will be retained and managed as described in Paragraphs 3.1.3 to 3.1.8 and 4.1.2;
- Dense scrub outside the buffer strip will be monitored to prevent encroachment into the OMH;
- Flailing can be used on the mature, more established dense scrub to cut down scrub and create open ground areas. This can be achieved by slow passes with a flail over the scrub.

Ephemeral Tall Perennial/Scattered Scrub/Bare Ground

- Vegetation within this area will be subject to an annual rotational cutting regime after September each year. The area will be divided into two management sections, whereby half is cut one year, and the other half the following year. The sections will be spread out within the HEA ensuring that willow scrub is regularly distributed; and
- Approximately 1/3 of the area cut will have the vegetation removed to create areas of bare and sparsely vegetated ground to maintain early coloniser plant species and invertebrates which depend on these plant species (i.e. shrill carder bee) and denser areas of vegetation left will provide structural diversity and will include nectaring species (i.e. butterfly bush).

Habitat Piles

- Woody cuttings arising from maintenance works will be piled in discrete areas as habitat piles to benefit reptiles and invertebrates within the edge of the Habitat Corridor (no more than 1m wide and 0.5m high) with the remainder composted or removed off site.

- Care to be taken when cutting around reptile hibernacular and log/brash piles so these features are not damaged or disturbed during the months of November to March when reptiles are expected to be hibernating.

Soft Landscape Planting – Development Area

Objectives

- Establish and maintain planting in good condition; and
- Protect breeding birds and bats from harm during maintenance works to landscape planting.

Management Specifications

- Within the period covered by the management plan, an assessment of dead or dying plant species will be carried out. Replacement planting will take place within the next planting season (November – March) with native species of similar size and species; and
- Once planting is established, generally from Year 3 onwards, shelters / rabbit guards can be removed;
- Ensure checks are undertaken for nesting birds by a suitably qualified ecologist prior to any tree/shrub maintenance works if vegetation clearance is undertaken during bird breeding season (i.e. March to August inclusive); and
- The potential for roosting bats to be present in semi-mature/mature trees will also be assessed by a suitably qualified ecologist prior to any tree surgery work being carried out.

APPENDICES

Appendix 1

Existing Site Location Plan

Responsibility is not accepted for errors made by others in scaling from this drawing.
All construction information should be taken from figured dimensions only.

0mm 50mm 100mm

ALL DIMENSIONS IN METERS

Planning Application Boundary

ABP Land Ownership Boundary

1 Manufacturing facility and habitat enhancement area

NORTH

W Way Road

Newport Docks

Timber Storage Shed

Alexandra Docks
South Dock

River Usk

Tom Lewis Way

Tom Lewis Way

1

River Ebbw

Ebbw River / Afon Ebwy

Wentloage Level

Existing Site Location Plan
1 : 2500

0 50 100 150 200 250m

STATUS	REV	DATE	DESCRIPTION
PL	P29	21/01/2020	PLANNING ISSUE

CLIENT
Associated British Ports

REVISED BY
Gareth Brown

CHECKED BY
Martin Long

ORIGINATOR NO
153091

CONSULTANT
STRIDE TREGLOWN
www.stridetreglown.com

PROJECT
ABP New Manufacturing Plant
Land adjacent West Way Road
Alexandra Docks
Newport

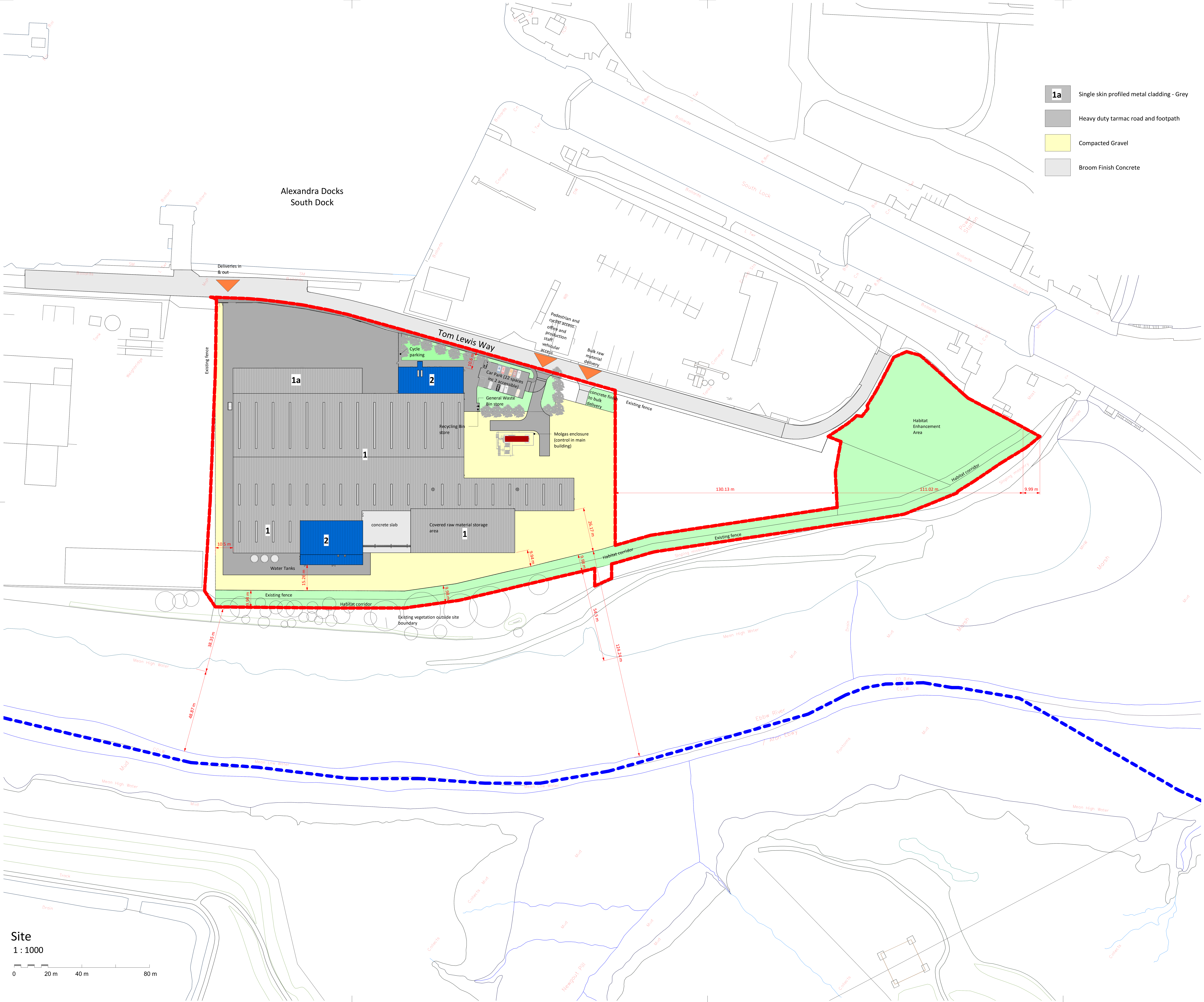
DRAWING TITLE
Existing Site Location Plan

SUITABILITY STATUS	SCALE
PL : PLANNING	As indicated @ A1

PROJECT | ORIGINATOR | ZONE | LEVEL | TYPE | ROLE | CLASS. | NUMBER	REVISION
153091-STL-00-00-DR-A-ZZZZ-00002	P29

Appendix 2

Proposed Site Plan



Responsibility is not accepted for errors made by others in scaling from this drawing.
All construction information should be taken from figured dimensions only.

0mm 50mm 100mm

ALL DIMENSIONS IN METERS

1a	Single skin profiled metal cladding - Grey
	Heavy duty tarmac road and footpath
	Compacted Gravel
	Broom Finish Concrete
1	Grey insulated built-up cladding system
2	Blue insulated built-up cladding system
3	Concrete upstand
4	Double glazed PPC aluminium windows in RAL 7012
5	Translucent roof lights/windows as part of cladding system
6	Steel doors in RAL 7012
7	Roller shutter doors in RAL 7012

Planning Application Boundary

ABP Land Ownership Boundary

1 Manufacturing facility and habitat enhancement area

NORTH

See drawing number 72689-CUR-00-XX-DR-C-SK001 for further detail regarding existing and proposed levels.
See drawing number 72689-CUR-00-XX-DR-C-92000 for details of drainage strategy proposals.

STATUS	REV	DATE	DESCRIPTION
PL	P30	23/01/2020	Redline boundary amended
PL	P29	21/01/2020	PLANNING ISSUE

CLIENT
Associated British Ports

REVISED BY
Gareth Brown

CHECKED BY
Martin Long

ORIGINATOR NO
153091

CONSULTANT
STRIDE TREGLOWN
www.stridetreglown.com

PROJECT
ABP New Manufacturing Plant
Land adjacent West Way Road
Alexandra Docks
Newport

DRAWING TITLE
Proposed Site Plan

SUITABILITY STATUS
PL : PLANNING

SCALE
As indicated @ A1

PROJECT | ORIGINATOR | ZONE | LEVEL | TYPE | ROLE | CLASS. | NUMBER
153091-STL-00-00-DR-A-ZZZZ-01001

REVISION
P30

Appendix 3

Figures 2 and 4 Phase 1 Habitat Survey Maps

Thomson environmental consultants
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Legend

- Photograph Location and Direction
- Target Note
- Target Note
- Earth Bank
- Dense Scrub
- Standing Water
- Ephemeral Short Perennial/Scattered Scrub Mosaic
- Hard Standing
- Development Area
- Wider Site Boundary

This map has been drawn at a sufficient level of accuracy to fulfil the requirements of a Phase 1 baseline habitat survey. The level of accuracy depends on both the size of the area involved and the base mapping. Every effort has been made to create a map that is as accurate as possible. However, this map is not intended to represent a scaled landscape survey so should not be used to pin-point accurate engineering work or as a basis for detailed site planning.

Site Grid Reference: 331,376 184,174

Drawing Ref	AABP122/27575/1
Scale at A3	1:1,400
Drawn	JH
Checked	EA
Date	23/05/2019
Date	23/05/2019
Client	ABPmer
Figure Number	2
Figure Title	Phase 1 Habitat Survey Map

Filepath: S:\Cardiff\Projects\AABP122 - Newport Docks Plasterboard Factory Development\Mapping\Working\AABP122_Fig2_Phase1Results_JH_230519.mxd

Filepath: S:\Cardiff\Projects\AABP122 - Newport Docks Plasterboard Factory Development\Mapping\Working\AABP122_Fig4_Phase1Results_EnhancementArea_EA_171018.mxd

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Legend

- Fence
- Dense Scrub
- Ephemeral Short Perennial/Scattered Scrub Mosaic
- Hard Standing
- Wider Site Boundary
- Habitat Enhancement Area Boundary

This map has been drawn at a sufficient level of accuracy to fulfil the requirements of a Phase 1 baseline habitat survey. The level of accuracy depends on both the size of the area involved and the base mapping. Every effort has been made to create a map that is as accurate as possible. However, this map is not intended to represent a scaled landscape survey so should not be used to pin-point accurate engineering work or as a basis for detailed site planning.

Site Grid Reference: 331,545 183,973

Drawing Ref	AABP122/28594/1
Scale at A3	1:400
Drawn: EA	Checked: TP
Date: 17/10/2019	Date: 17/10/2019
Client	ABPmer
Figure Number	4

Figure Title

Phase 1 Survey of Habitat Enhancement Area

Appendix 4

Precautionary Working Method Statement for Reptiles

Appendix 4: Precautionary Working Method Statement (PWMS) for Reptiles

The following describes the precautionary working methods to be implemented during the operational phase of the development. The locations of the Habitat Corridor and Habitat Enhancement Area (HEA) are shown on Drawing Number STL-00-00-DR-A-ZZZZ-01001 (Proposed Site Plan).

Vegetation Management

Dense Scrub & Scattered Scrub within Open Mosaic Habitat (OMH)

Any future removal of dense scrub within the Habitat Corridor and scattered scrub which is present within the HEA will proceed in a two-staged approach, with the first strim down to 15cm and left for as long as possible (ideally at least 24hrs) before the root stock is removed.

This phased approach will allow reptiles to disperse to adjacent suitable habitat whilst the vegetation is at a height of 15cm. The final clearance to ground level will make the area unsuitable for reptiles thereby reducing the risk of injury during ground disturbance works.

All vegetation arisings must be removed away from the working areas. If necessary, the area will be hand searched (see below) by an ecologist with any larger logs/rocks or other material suitable for use as a refuge being removed.

All scrub habitat has the potential to support nesting birds, therefore will be subject to a nesting bird check no more than 48hrs before clearance works commence

Any suitable refuges should be only be removed or relocated (if required) during the main reptile ‘active’ season which is considered to be between April and September (works during these warmer months will increase the likelihood of reptiles having enough energy to move out of harm’s way during vegetation management work activities).

If any reptiles are found during vegetation management procedures, they will be relocated within the HEA or Habitat Corridor to avoid any current vegetation management works.

Time Constraints

Table 1 overleaf outlines the optimum period for undertaking the required activities on site.

Table 1 – Optimum period for undertaking activity												
Activity	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Above Ground vegetation Clearance / removal												
Removal of hedgerow roots stock / debris												

- Sub Optimal period for undertaking activity

- Optimum period for undertaking activity

DRAWINGS

DO NOT SCALE FROM THIS DRAWING

- Site Boundary
- Existing built form
- Proposed manufacturing plant
- Existing structural landscaping
- Grassland/scrub (beyond the Site)
- 10 metre retained scrub corridor to be supplemented with meadow grassland seeding and tree planting
- Ecological enhancement area - retained vegetation managed as open mosaic habitat
- Proposed amenity grass with bulb planting
- Proposed meadow grass
- Proposed structural landscape planting / tree planting

The Green Infrastructure proposals will principally comprise a 10 metre wide wildlife corridor along the length of the south-western boundary, an area for habitat enhancement in the south, a new planting belt to the west, and some amenity landscaping around the facility's entrance

- The habitat corridor seeks to provide suitable habitat for foraging and movement for wildlife along the length of the site. It would comprise a belt of scrub with meadow grassland, flanked by informal lines of tree planting

- Vegetation removed along the north-western boundary would be replaced with a new belt of structural landscape planting comprising trees and shrubs which would also connect into the proposed habitat corridor

- The Habitat Enhancement Area (HEA) to the south seeks to maximise open mosaic habitat on the site through a regime of scrub management, removal of invasive species, and regular rotational cutting

- Landscaping at the facility entrance would comprise some amenity grassland with bulbs, meadow grassland seeding where practicable, and standard tree planting

REVISION	DETAILS	DATE	DRAWN	CHK'D	APP'D
E	Trees added to car park	22.01.20	YK	KMS	KMS
D	Revised building and drive layout	21.01.20	YK	KMS	KMS
C	Revised building layout	16.12.19	YK	KMS	KMS
B	Graphic revision	13.12.19	YK	KMS	KMS

CLIENT

Associated British Ports

PROJECT

Proposed Manufacturing Plant
Newport Docks

DRAWING TITLE

Illustrative Green Infrastructure Plan

DRG No.		REV
CA11637-006		E
DRG SIZE	SCALE	DATE
A2	1:1250 @ A2	21.01.20
DRAWN BY	CHECKED BY	APPROVED BY
YK	KS	KMS

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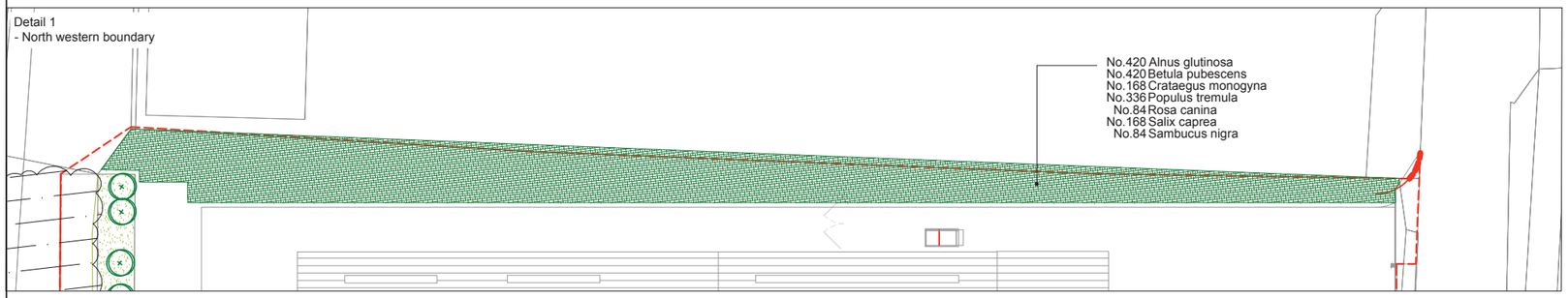
N:\CA\CA11637 - NEWPORT DOCKS\03 - DESIGN\AUTOCAD\CA11637-006F ILLUSTRATIVE GREEN INFRASTRUCTURE PLAN.DWG

DO NOT SCALE FROM THIS DRAWING

Detail 1
- North western boundary



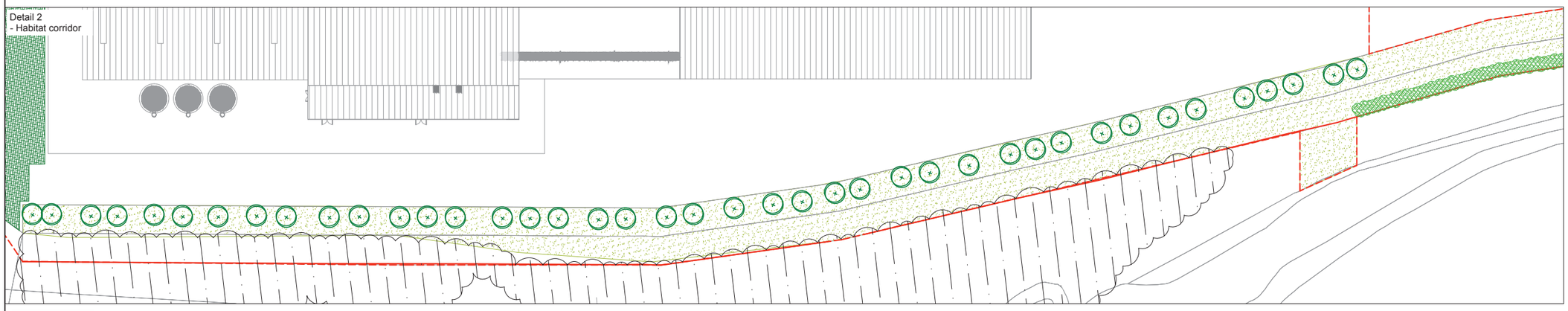
Native structural landscape planting

Standard tree planting to habitat corridor
- Plant side

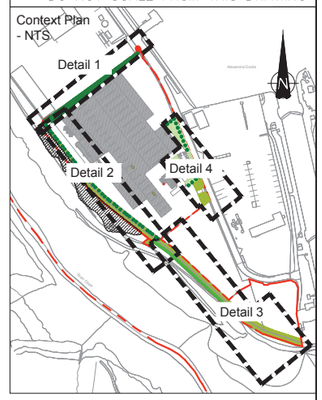
Standard tree and shrub planting to habitat corridor
- Riverside

Existing scrub vegetation to be retained and seeded with meadow grass as appropriate (to be determine don site)

Detail 2
- Habitat corridor



Context Plan
- NTS



GENERAL PLANTING NOTES

Existing scrub within the habitat corridor will be retained, with new planting provided to enhance the existing habitat. Selective scrub / invasive species removal may be carried out within existing scrub areas, according to the direction on site by the supervising ecologist. Where planting is proposed in locations where existing trees / shrubs occur, the new plants should be redistributed to accommodate existing vegetation, as advised by the supervising ecologist.

Meadow grassland will be sown within the habitat corridor where appropriate to supplement existing vegetation and ground over.

Within the enhancement area, invasive species indicated for management (i.e. buddleja and willow) within the Ecological Management Plan (Wardell Armstrong, December 2019) are to be selectively removed to prevent the development of a dense covering of scrub and maintain an open mosaic habitat. Some specimens should be retained for the benefit of invertebrates. Specific plants for removal or retention are to be advised on site by the supervising ecologist .

1. Tree protection shall be in place prior to works commencing, refer to the submitted Existing Vegetation Removal and Protection Plan. Any existing trees to be retained, are the responsibility of the main contractor on site who shall take all necessary protective measures set out in BS 5837:2012.

2. All groundworks and planting operations shall be in accordance with the following British Standards:

- BS 3975 Glossary for Landscape Work -Part 4: Plant Description
- Part 5: Horticultural, Arboricultural and Forestry Practice BS 4428 General Landscape Operations

2. All areas of proposed planting/grass seeding affected by construction works to be relieved of compaction by ripping to a depth of 600mm, in two directions. Following seeding/turfing, wet full depth of topsoil without displacing seed or soil. If water supply is likely to be restricted, do not carry out seeding/turfing until instructed. Works to be carried out while soil and weather conditions are suitable; do not plant during periods of frost or strong winds.

3. Effective weed control shall be carried out prior to cultivation. Structural planting areas where applicable to be cultivated to a depth of 300mm, all proposed grass areas to be cultivated to a depth of 150mm, except within 4.0m of any existing tree stem, unless otherwise stated in the specification.

4. Topsoil depths to be: 150mm mown grass and meadow margin areas; 450mm for shrub areas; 300mm for trees. Good quality on site topsoil can be used for tree, shrub and mown grass area. Topsoil shall be spread for grass areas flush with any areas of paving and after settlement, the soil level should be no greater than 10mm below paved areas to allow for turf. For areas to be grass seeded, the soil level shall be flush with any finished paved surfaces after settlement (or to a maximum of 5mm below) to allow for rain water to drain onto soft surfaces. Settlement shall be no greater than the tolerances given, or problems will be encountered with mowing (the blades in danger of touching concrete edging or where soil is proud of pavements, then drainage problems maybe encountered). Tree Pits will be dug by the landscape contractor. Pits for containerised trees and shrubs (2L or 3L) to be 300 x 300 x 300mm. Pits for feathered trees and larger trees to be 1.2 x 1.2 x 0.6m (300mm topsoil,300mm subsoil).

5. Any deciduous trees and shrubs to be planted in late October to late March. Any conifers and evergreens to be planted in September/October or April/May. Container grown plants may be planted at any time of year.

6. Apply peat-free tree and shrub planting compost by thoroughly incorporating it with topsoil into planting holes at the rate of 40 litres per feathered and standard trees.

7. All shrubs, whips and transplants shall be watered in on planting with 20 litres per square metre. Trees shall be watered in with 25 litres per tree position. Standard trees including Containerised RB and BR, shall be supported by 1 No. 50mm diameter x 1200mm long stakes angled to avoid rootball and angled to the north with 400mm below ground level, tied with Standard Nylon Reinforced Rubber Belts, 37.5mm with Extra Large Pads spacer - supplied by J Toms ltd or similar approved. Extra Heavy standard trees to be supported by 2no. 75mm diameter x 1900mm double stake, cross-bar and tie.

8. Surface mulching to be supplied to all individual trees in grass (500mm radius). Surface mulching to woodland mix to be 50mm depth of spent mushroom compost.

9. Where considered necessary, native plants are to be protected with rabbit proof fencing installed prior to planting.

10. Rabbit proof fencing where required to be 900mm high galvanised mesh with timber stakes. Mesh to buried 150mm below ground, with 150mm angled away from planting and installed where shown on this drawing.

Planting Schedule

Grass Areas

Seed Mix Name	Seed Mix Supplier	Density
EH1 Hedgerow Mixture	Emorsgate Seeds	4g/m²

Structural Landscape Mix

Number	Species	Height	Specification	Density	%
420	Alnus glutinosa	300-350cm	Standard :2x :Clear Stem min. 200 :B :4x	1.5/m²	25%
420	Betula pubescens	250-300cm	Standard :2x :Clear Stem 175-200cm :B :3x	1.5/m²	25%
168	Crataegus monogyna	125-150cm	Feather :2x :B	1.5/m²	10%
336	Populus tremula	250-300cm	Feather :2x :Clear Stem 175-200 :B :3x	1.5/m²	20%
84	Rosa canina	60-80cm	1+1 :B :Branched :3 brks	1.5/m²	5%
168	Salix caprea	125-150cm	Feather :0/1/2 :B :3 Stems	1.5/m²	10%
84	Sambucus nigra	80-100cm	1+1 :B :Branched :3 brks	1.5/m²	5%
Total :1680					

Habitat Corridor - Plant Side

Number	Species	Height	Specification	Density	%
10	Alnus glutinosa	350-425cm	2x :Clear Stem min. 200 :B :5 brks	6Ctr	25%
16	Betula pubescens	350-400cm	Heavy Standard :3x :Clear Stem 175-200 :RB :5 brks	6Ctr	40%
8	Populus tremula	250-300cm	Standard :2x :Clear Stem 175-200 :B :3 brks	6Ctr	20%
6	Salix alba	350-425cm	2x :Clear Stem 175-200 :B :5 brks	6Ctr	15%
Total :40					

Habitat Corridor - Riverside

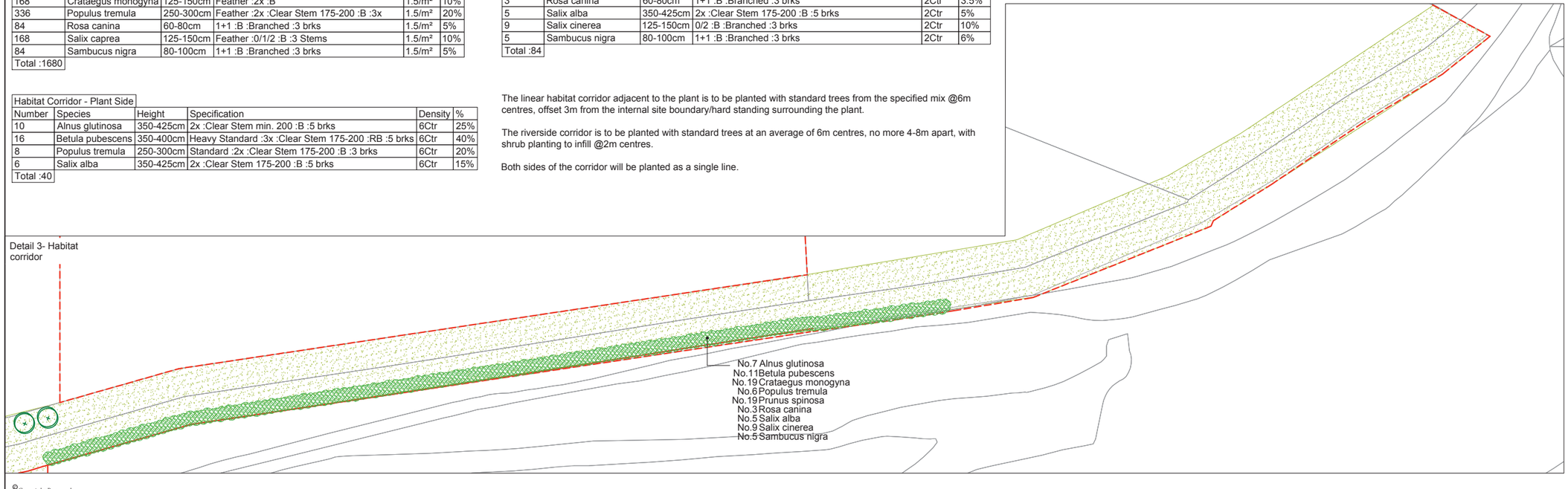
Number	Species	Height	Specification	Density	%
7	Alnus glutinosa	350-425cm	2x :Clear Stem min. 200 :B :5 brks	2Ctr	8%
11	Betula pubescens	350-400cm	Heavy Standard :3x :Clear Stem 175-200 :RB :5 brks	2Ctr	13.5%
19	Crataegus monogyna	100-125cm	Feather :x/1/0 :B :1 brks	2Ctr	23.5%
6	Populus tremula	250-300cm	Standard :2x :Clear Stem 175-200 :B :3 brks	2Ctr	7%
19	Prunus spinosa	80-100cm	1+2 :B :Branched :3 brks	2Ctr	23.5%
3	Rosa canina	60-80cm	1+1 :B :Branched :3 brks	2Ctr	3.5%
5	Salix alba	350-425cm	2x :Clear Stem 175-200 :B :5 brks	2Ctr	5%
9	Salix cinerea	125-150cm	0/2 :B :Branched :3 brks	2Ctr	10%
5	Sambucus nigra	80-100cm	1+1 :B :Branched :3 brks	2Ctr	6%
Total :84					

The linear habitat corridor adjacent to the plant is to be planted with standard trees from the specified mix @6m centres, offset 3m from the internal site boundary/hard standing surrounding the plant.

The riverside corridor is to be planted with standard trees at an average of 6m centres, no more 4-8m apart, with shrub planting to infill @2m centres.

Both sides of the corridor will be planted as a single line.

Detail 3- Habitat corridor



REVISION	DETAILS	DATE	DRAWN	CHKD	APPD
C	Revised building layout and hard standing	20.01.20	YK	KSM	KSM
B	Revised building layout	16.12.19	YK	KSM	KSM

CLIENT

Associated British Ports

PROJECT

New Manufacturing Plant
Newport

DRAWING TITLE

Detailed Planting Plan
- Sheet 1

DRG No.	REV
CA11637-011	C

DRG SIZE	SCALE	DATE
A1	1:500 @ A1	05.12.2019

DRAWN BY	CHECKED BY	APPROVED BY
YK	KS	KSM

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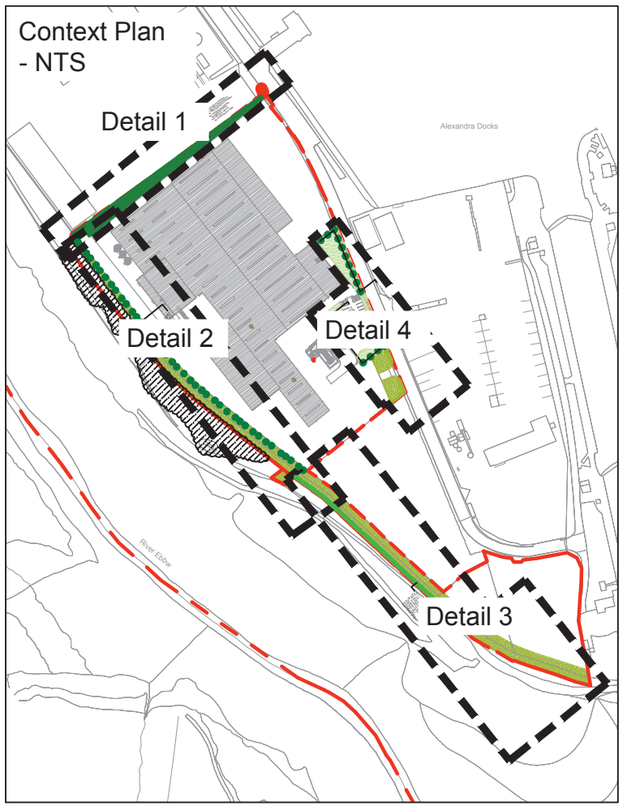

Standard tree planting to habitat corridor - Plant side

Amenity grass

Meadow grass

Planting Schedule

Trees

Number	Species	Specification	Density
18	Betula pendula	Standard :3x :Clear Stem min. 200 :RB :5 brks	Counted

Grass Areas

Seed Mix Name	Seed Mix Supplier	Density
EG22 Strong Lawn Grass Mixture	Emorsgate	25g/m²
EH1 Hedgerow Mix	Emorsgate Seeds	4g/m²

REVISION	DETAILS	DATE	DR'N	CHK'D	APP'D
B	Revised building layout and hard standing	20.01.20	YK	KSM	KSM

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Associated British Ports

PROJECT

New Manufacturing Plant
Newport

DRAWING TITLE

Detailed Planting Plan
Sheet 2 of 2

DRG No.	REV
	A

DRG SIZE	SCALE	DATE
A3	1:500 @ A3	05.12.2019

DRAWN BY	CHECKED BY	APPROVED BY
YK	KS	KS

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