Ref. M2685-MP-21.09-01

# Millom Ironworks

## Millom, Cumbria

## LANDSCAPE MANAGEMENT PLAN

## YEARS 1 – 15

**For: AIBM Ltd**

DOCUMENT NO. M2685-MP-21.09-01

**September 2021**

**Barnes Walker Limited**

Unit 6
Longley Lane
Northenden
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# Contents

## 1.0 Introduction

1.1 The Development Proposals

This document provides details of the 15 year Landscape Management Plan for the proposed lodge development at the Old Ironworks site in Millom. The development site is circa 2.1ha in size and the proposals comprise 14no rotunda lodges, 21no caravan plots (for 10no classic Airstream caravans and 11no Vardos), associated kitchen and toilet/shower facilities and a proprietor's lodge, set within an open, former industrial site on the edge of the Duddon Estuary.

1.2 The Plan Structure

This document sets out how the site is to be managed and maintained to achieve the scheme objectives of retaining and enhancing the site existing characteristics by maintaining and where practicable, improving the high ecological and biodiversity value of the site, through the development proposals.

The land lies adjacent to Ironworks Local Nature Reserve (LNR) which has previously supported a breeding population of natterjack toads *Epidalea calamita*. The development site falls within Duddon Estuary Site of Special Scientific Interest (SSSI), and a small area falls within the Duddon Estuary SPA and Ramsar Site designated for its international bird populations. In addition, the development site lies less than 200 metres from Morecambe Bay Special Area of Conservation (SAC).

Other relevant documents that should be read in conjunction with the Landscape Plan are the Natterjack Toad Mitigation Plan (AIBM-E, 2021a[1]) and the Construction Environmental Management Plan (CEMP) (AIBM-E, 2021b[2]).

As a result, the design process has been very much ecologically led, with a focus upon retaining existing features, minimising direct effects upon the more sensitive parts of the site and proposing construction techniques and built form which respond appropriately to the sensitivities of the site.

In general, the Landscape Plan will be in-line with all the measures laid out in and associated with the Habitat Management and Recreation Plan (HMRP) (AIBM-E, 2021[3]) and the recommendations of the "Assessment of Likely Significant Effects" (Gibson 2020[4]). However, if there is a doubt as to management to be implemented, site conditions/monitoring should be considered to inform the correct management regime to be used.

The key objective of the Plan is to arrange the management of the landscape into landscape elements by providing a framework of routine operations. This document will form a guide to the AIBM site proprietor in their role as 'Biodiversity Champion' and will also be used to guide and instruct the landscape maintenance operations carried out by contractors on site.

The Plan forms a working document and refers to drawing M2685.04S Landscape

[1] As If By Magic Ecology (2021a). Natterjack Toad Mitigation Plan, Devonshire Road, Millom. As if By Magic Ltd.
[2] As If By Magic Ecology (2021b) Construction Environmental Management Plan, Octagon, Millom. As if By Magic Ltd.
[3] As If By Magic Ecology (2021). Habitat Management and Recreation Plan Plan. Devonshire Road, Millom. As If By Magic Ltd.
[4] Gibson, L. Consulting (2020) Duddon Estuary SPA, Morecambe Bay and Duddon Estuary pSPA and Morecambe Bay SAC Assessment of Likely Significant Effect (ALSE) (Regulation 61) for The Old Iron Works, Devonshire Road, Millom.

Layout prepared by Barnes Walker Ltd, to facilitate the long-term management of the existing and proposed landscape elements comprising existing grassland scrub and trees, along with limited areas of proposed native species planting and a series of ponds/areas of standing water, one of which will incorporate some native species marginal and aquatic planting (the easternmost pond B adjacent to the Ancillary Building).

1.3 The Landscape Areas

The landscape areas to be managed are as follows:

- Existing Trees & Shrubs;
- Existing Neutral/Basic Grassland;
- Existing Calcareous Grassland;
- Existing Bare Ground;
- Existing Areas of Bramble;
- Existing Amenity Grassland;
- Existing Rough Grassland;
- Proposed Areas of Calcareous Grassland;
- Proposed Native Species Trees and Shrubs;
- Proposed Ponds; and
- Hard Surfacing, Boundary Treatments and Elements.

## 2.0 Delivery

2.1 The Management Plan

The delivery of the Management Plan will be facilitated by AIBM Ltd, working with an appropriate landscape contractor with assistance as necessary by a consultant ecologist and or Landscape Architect. Defined tasks are outlined below, and reference should be made to the associated schedules for the annual maintenance of each of the landscape elements identified in Section 3.0.

The Site Manager of the construction phase appointed by the developer has the responsibility of maintaining a secure and safe site as well as ensuring all activities on site remain lawful during the construction phase. Once the development is operational, this responsibility for long term management shall be passed to a management company.

To ensure the Management Plan is implemented properly and that management aims are being achieved, progress will be reviewed on a regular basis by an appropriately qualified consultant (Ecologist or Landscape Architect). A site visit will be carried out in years 1, 3, and 5 of the plan to evaluate management actions and habitat quality. This will allow direct measures to be made against the objectives set out within the Management Plan. At the end of the initial 5 year monitoring period, the Plan should be reviewed and updated accordingly to ensure the long-term viability and success of the Management Plan and long-term prescriptions set for years 10 and 15.

The Management Plan shall be implemented in accordance with the details contained therein.

## 3.0 The Landscape Elements & Their Maintenance Regimes

3.1 Existing Trees & Shrubs

Existing, retained trees and shrubs should be inspected annually to ensure that they are in good health, and are not hazardous to the users of the site. Both the inspection and all works to existing trees should be carried out by qualified arboricultural personnel and is likely to include the following:

- The removal of dead, diseased and dying branches;
- The removal of vegetation growing onto/over footpaths, parking areas and proposed buildings and any other location where it may present a hazard to the users of the site;

  Inspection for, and reporting of, any incidence of pests and disease.
- Management should seek to retain existing tree heights and be undertaken only by suitably skilled and qualified arboriculturalist;
- Any branches requiring removal should be cut in accordance with BS 3998:2010 Tree work – Recommendations;
- If pollarding or coppicing of individual existing trees is deemed necessary by a suitably skilled and qualified arboriculturalist, once started it is important to keep trees within the specified rotation. Lapses in management may result in the development of heavy branches and or stems, dense crown foliage and decay or disease associated with heavy pruning;
- Cut material of appropriate size should be retained as large wood/habitat piles within, and around, the site in locations to be agreed with the project Ecologist. These wood/habitat piles will provide additional habitat for reptiles and invertebrates, particularly when combined with any arisings form construction work, such as broken brick, large stones and small rocks;
- Trees across the site situated within existing tree groups will need minimal management. Works will consist of removing broken, dead and or dying branches where trees are in close proximity to public footpaths, open space and buildings. All tree work will again be in accordance with BS 3998:2010 Tree work – Recommendations;
- An annual check for the presence of invasive, pernicious weeds should be undertaken and if present, will be removed (best practice methodology will be followed when removing plants; shrubs will be carefully removed from the ground by hand, taking care to remove any loose berries which may be shed during removal, cut down/chipped/burned on site and where necessary disposed of to landfill to prevent the risk of spread) also see associated CEMP and Habitat Management Plan; and
- Litter, debris and other extraneous material in general should be removed.

3.2 Existing Neutral/Basic Grassland (see Area 1 on the Landscape Layout M2685.04S)

Existing, retained areas of neutral and basic grassland are to be managed as follows:

- Existing neutral and basic grassland should remain undisturbed;
- Bare or sparsely covered areas of grassland should be left to recolonise

naturally;

- Colonising scrub and coarse grasses should be removed on an annual basis to maintain the area as open habitat suited to Natterjack Toads;
- Invasive, non-native species (Cotoneaster sp) should be removed by hand annually and resulting bare patches should be left to recolonise naturally (best practice methodology will be followed when removing plants; shrubs will be carefully removed from the ground by hand, taking care to remove any loose berries which may be shed during removal, cut down/chipped/burned on site and where necessary disposed of to landfill to prevent the risk of spread) also see associated CEMP and Habitat Management and Recreation Plan;
- Litter, debris and other extraneous material in general should be removed.

3.3 Existing Calcareous Grassland (see Area 2 on the Landscape Layout M2685.04S)

Existing, retained areas of calcareous grassland are to be managed as follows:

- Existing calcareous grassland should remain undisturbed were practicable. In the instance where it is unavoidably disturbed, the area in question should be levelled and prepared prior to being seeded with a seed mix that has been collected from the site and surrounding areas;
- Bare or sparsely covered areas of calcareous grassland should be left to recolonise naturally;
- Colonising scrub and coarse grasses should be removed on an annual basis to maintain the area as open habitat suited to Natterjack Toads;
- Invasive, non-native species (Cotoneaster sp) should be removed by hand annually and resulting bare patches should be left to recolonise naturally (best practice methodology will be followed when removing plants; shrubs will be carefully removed from the ground by hand, taking care to remove any loose berries which may be shed during removal, cut down/chipped/burned on site and where necessary disposed of to landfill to prevent the risk of spread) also see associated CEMP and Habitat Management and Recreation Plan;
- Litter, debris and other extraneous material in general should be removed.

3.4 Existing Bare Ground (see Area 3 on Landscape Layout M2685.04S)

Existing, retained areas of bare ground (ideal for Natterjack Toads) containing a variety of rare ephemeral and pioneer species are to be managed as follows:

- Existing areas of bare ground should remain undisturbed were practicable. In the instance where it is unavoidably disturbed, the area in question should be levelled and prepared prior to being seeded with a seed mix that has been collected from the site and surrounding areas;
- Bare or sparsely covered areas of grassland should be left to recolonise naturally;
- Colonising scrub and coarse grasses should be removed on an annual basis to maintain the area as open habitat;
- Invasive, non-native species (Cotoneaster sp) should be removed by hand

annually and resulting bare patches should be left to recolonise naturally (best practice methodology will be followed when removing plants; shrubs will be carefully removed from the ground by hand, taking care to remove any loose berries which may be shed during removal, cut down/chipped/burned on site and where necessary disposed of to landfill to prevent the risk of spread) also see associated CEMP and Habitat Management Plan ; and

- Litter, debris and other extraneous material in general should be removed.

3.5 Existing Areas of Bramble (see Area 5 on Landscape Layout M2685.04S)

Existing, retained areas of bramble have already been strimmed back to ground level. Going forward, the bramble is likely to reappear and if so, should be managed as follows:

- Small areas of bramble should be left to regenerate;
- Bramble should not be left to spread unchecked, so coverage should be reviewed annually and strimmed back as necessary to maintain smaller clumps; and
- Litter, debris and other extraneous material in general should be removed.

3.6 Existing Amenity Grass

Existing areas of amenity grassland should be maintained to ensure a lower level sward height in order to promote the movement of Natterjack Toads.

The sward should be cut approximately fourteen times per year during the growing season, to a height of 25 mm. This frequency and height of cut should allow the cuttings to be dispersed without leaving too many residues, but obviously is dependent on the weather conditions.

Areas of short grass should be maintained as follows:

- The sward should be cut 14 times per year once in April, twice in May, 3 times in June, July and August and twice in September;
- Watering should be carried out as necessary, particularly from June to October for the first 3 years following planting. A provision of at least 12 waterings per year should be included;
- Before cutting, remove all litter and debris from grass areas;
- Before cutting and during the debris clearance the grass should be checked for lizards, frogs and toads to ensure no animals are harmed by the cutting regime (especially important for the first 2 or 3 cuts).
- Trim and reform edges adjacent to hard surfacing / manholes etc. as necessary;
- At the end of each visit ensure that the site is left in a tidy condition;
- Overseed to repair any worn patches as necessary; and
- Litter, debris and other extraneous material in general should be removed.

3.7 Existing Rough Grassland

Area of existing rough grassland at the western end of the proposed car park is to be overseeded with a wildflower seed mix in order to diversify the species mix of this grassland.

Prior to seeding the grass should be cut and scarified. Following seeding works (ideally in spring), the sward should be cut regularly to promote the development of the wildflower species. Thereafter, the grassland should be cut twice annually to a height of 50mm.

Areas of meadow grass should be maintained as follows:

- The sward should be cut up to 6 times in the first year following over-seeding works and twice a year thereafter;
- Watering should be carried out as necessary, particularly from June to October for the first year following seeding. A provision of at least 12 waterings per year should be included;
- Before cutting, remove all litter and debris from grass areas;
- Before cutting and during the debris clearance the grass should be checked for lizards, frogs and toads to ensure no animals are harmed by the cutting regime (especially important for the first 2 or 3 cuts).
- Trim and reform edges adjacent to hard surfacing / manholes etc. as necessary;
- At the end of each visit ensure that the site is left in a tidy condition;
- Overseed to repair any worn patches as necessary; and
- Litter, debris and other extraneous material in general should be removed.

3.8 Proposed Areas of Calcareous Grassland (see Area 4 on Landscape Layout M2685.04S)

Existing, retained areas of low quality sward and/or bare ground (ideal for Natterjack Toads) are to be managed as follows:

- Existing areas of low quality sward/bare ground will be lightly scarified and prepared prior to being seeded with a seed mix that has been collected from the site and surrounding areas;
- Colonising scrub and coarse grasses should be removed on an annual basis to maintain the area as open habitat;
- Invasive, non-native species (Cotoneaster sp) should be removed by hand annually and resulting bare patches should be left to recolonise naturally (best practice methodology will be followed when removing plants; shrubs will be carefully removed from the ground by hand, taking care to remove any loose berries which may be shed during removal, cut down/chipped/burned on site and where necessary disposed of to landfill to prevent the risk of spread) also see associated CEMP and Habitat Management Plan ; and
- Litter, debris and other extraneous material in general should be removed.

3.9 Proposed Native Species Trees and Shrubs

Whilst not in the original scheme or recorded in the Habitat Management Plan, tree and shrub planting is included to enhance the southern boundary of existing trees and shrubs and to enhance the main entrance to the site and the environs around Millway. The open areas and significant habitat on site will not be impacted by the proposed planting.

Planting to the southern boundary will comprise areas of shrub planting to create a screen around the centrally located sub-station and areas of tree and shrub planting to fill existing gaps and thin sections of the existing tree belt located along the southern boundary of the site (see Landscape Layout M2685.04S – Proposed native species trees and shrubs – NM1, NM2 & NM3). The tree planting around Millway will comprise 3no Birch (Betula pendula) 10-12cm Selected Standard trees, 4no Whitebeam (Sorbus aria) 10-12cm Selected Standard trees and 3no multi-stem Birch 1.5-2m high. These areas of planting and trees should be maintained as follows:

- In the first 2-3 years newly notch and pit planted whips are still establishing and shallow rooting zones will need to be kept moist by hand watering - watering directly once per week in dry weather during the growing season and using correctly fixed mulch matting to help to retain soil moisture and thus reduce the need for watering. After three years plants should be well established and able to access water deeper within the soil. Additional watering should only be required if periods of extended drought threaten younger plants;
- 10-12cm Selected Standard Trees should be watered once per week, or as necessary in dry weather, during the growing season (June to October). Apply approximately 50-75 litres per tree per week. Once they have become well established, most trees only need to be watered during spells of drought – up to 12no waterings should be provided for;
- Whip planting mulched with mulch matting will benefit from the slow release fertiliser pellet incorporated into individual notches at the time of planting. This will feed the plant until the mat has degraded, usually after 2 to 3 years;
- Mulch matting should be checked regularly to ensure that it remains firmly pegged in place at the edges, overlaps and root collars throughout its lifespan, usually 2-3 years, as advised by the manufacturer. Additional mulching should not be required as any localised areas of poor growth can be taken into account during future thinning regimes;
- Hand weed throughout where necessary, eg at gaps in mat, Correct fixing should minimise the need for this;
- Rabbit guards should be checked / replaced for the first 2-3 years until plant stems are thick enough to withstand rabbit damage;
- Pruning of young trees should not generally be required unless they have dead, damaged, vandalised or diseases branches. In such cases the tree branch should be pruned back (using a sharp clean knife) to an outward facing bud whilst maintaining the natural shape of the tree;
- As the trees become established, some selective pruning works may be required. This should be undertaken once annually in November;

- Any diseased or rotten wood will be pruned back to sound wood, including the removal of main stems and limbs. A suitably skilled and qualified arboriculturalist shall carry out such pruning;
- All cut material will be removed from the site, unless used within designated log pile habitat creation. No burning on site will occur;
- For the first five years all dead and dying specimens (including existing trees) are to be replaced in the following planting season with a tree of either the same species or similar species as those existing. This is to allow some flexibility and to avoid problems encountered with 'Same Tree Disease';
- Long-term tree management will include the regular checking and tightening of tree supports (recommended every three months or after severe storms). Any stakes, which show movement or instability, shall be secured or repositioned;
- Damaged ties and stakes should be replaced;
- To prevent the ties chafing the selected standard trees, they should be inspected and adjusted at least once per year in April, prior to an increase in the tree girth. This should then be done again in October, after growth has occurred;
- Tree stakes/ties/guards will be removed once trees have established well, and surfaces disturbed will be made good, with any resulting holes filled with suitable topsoil;
- As native tree and shrub planting becomes established some thinning may be required to help establish the structural diversity to ensure that the required balance of species is achieved overall;
- After five years the planting will need to be assessed to establish the overall growth and development. Specific plants will need to be identified either for removal or coppicing to give the crowns and roots of selected trees and shrubs space to develop;
- This process will need to be undertaken again 5 to 7 years later when planting is 10 to 12 years old;
- Both the assessment and thinning works should be undertaken by a suitably experienced and qualified practitioner and in accordance with the recommendations set out in BS3998:2010;
- Management works should be undertaken during the dormant winter season, November to March;
- Litter, debris and other extraneous material in general should be removed; and
- Once the planting is established, they will enter the same management regime as the Existing Trees & Shrubs.

3.10 Proposed Hedgerows

There is a proposed single species hedgerow located along the southern edge of the proposed main car parking area to the east. This hedge will define the car park space, provide aesthetic advantages and low-level screening and containment. In addition, the hedgerow will be supplemented with 9no Italian Alders (Alnus cordata)

10-12cm Selected Standards.

There is also a section of mixed native species hedgerow proposed along the northern boundary of the car parking area. These hedgerows should be maintained as follows:

- Following planting, the hedges is to be mulched with a 50mm depth of BSI PAS 100 standard mulch;
- The depth of mulch should be maintained at a minimum of 50mm until the hedgerow is well established; the mulch layer may need to be topped up every year or two;
- The Griselinia hedgerow should be trimmed annually in October until objective height of 1.2m is achieved, whereas the native species hedgerow should be trimmed annually until an objective height of 1.5-1.8m is achieved; Thin-back laterals in first 2-3 years to shape. Shape to oblique angle (wider base than top), particularly in formative second year, allowing the apical shoot to grow to the desired height before trimming back;
- Once the objective heights are achieved, the hedges should be trimmed once annually in October to the objective height required. Trimming should achieve flat, uniform sides and a flat, level top to the hedge;
- If necessary an appropriate contact herbicide should be applied in May;
- To prevent weed growth, fertiliser application should be avoided unless there are localised areas of poor growth. Hand weed throughout where necessary;
- Watering should be carried out as necessary, particularly from June to October for the first 3 years following planting. A provision of at least 12 waterings per year should be included;
- The 9no 10-12cm Selected Standard Trees should be watered once per week, or as necessary in dry weather, during the growing season (June to October). Apply approximately 50-75 litres per tree per week. Once they have become well established, most trees only need to be watered during spells of drought – up to 12no waterings should be provided for; and
- Litter, debris and other extraneous material in general should be removed.

3.11 Proposed Ponds

There are two proposed pond areas (A and B) located to the east and west of the site respectively. Pond B is to be planted with a variety of marginal and aquatic plants as described by the Landscape Layout drawing M2685.04S, whereas Pond A will not be planted. The ponds and any vegetation therein are to be maintained as follows:

- At the start of the second growing season following planting, any failed or poorly performing plants will be replaced on a like-for-like basis with specimens/species similar to those surviving;
- Aquatic and marginal plants will be monitored on an annual basis to ensure that these do not engulf the pond;
- Marginal and aquatic vegetation should not be allowed to engulf open water and should be managed by physical removal. Periodic cutting, strimming,

raking, pulling or dredging may be required in order to maintain suitable aquatic habitats over time. The frequency of such works will depend on growth rate of marginal and aquatic vegetation and should be undertaken during late autumn/winter. The aim should be to maintain at least 50% of the pond surface as open water free from emergent/marginal vegetation and circa 80% of the shallow margins should also be kept clear. If clearance is required, no more than 30% of such areas should be cleared annually on a rotational basis during autumn (following a five year establishment period for newly planted areas) and a 1 m strip of vegetation adjacent to the summer water level will be retained uncut to ensure that there is always an area of tall vegetation cover for riparian mammals and nesting/foraging resources for wetland bird species.

- All arisings from emergent and marginal vegetation removal will be left next to the open water for at least 48 hours in order to allow fauna to return to the water. Depending on the volume of material removed, this can be left to decompose naturally, providing microhabitat for invertebrate species or removed to a designated composting area.
- Pernicious weeds should be removed by hand; and
- Litter, debris and other extraneous material in general should be removed by hand.

### 3.12 Hard Surfaces, Boundary Treatments & Elements

Hard surfaces within this management plan encompass footpaths and parking areas. These features should be maintained as follows:

- The site should be inspected regularly and any litter removed;
- Any graffiti or vandalism should be removed/rectified as soon as possible, since if it is left unattended the problem tends to escalate.
- All problems with hard elements should be attended to as a matter of urgency.
- Routine maintenance of the hard elements and surfaces should be carried out in accordance with a programme, since this allows budgeting for the work.
- Some weed control will be required on hard surfaces, particularly those which are not sealed (such as areas of compacted gravel). Weed control should be carried out if the surfaces are hazardous for pedestrians or unsightly, but residual herbicides should not be used.
- Elements including all boundary treatments such as fences hard surfaces, street furniture and lighting should all be inspected regularly for defects, damage, trip hazards and vandalism in accordance with manufacturer's recommendations. Repairs and replacements should be carried as a matter of urgency to maintain site safety.
- Drainage channels should be kept clear of silt and other debris throughout the year.

## 4.0 Routine Operations

### 4.1 Maintenance Schedules

The schedules are compiled for the annual maintenance routines associated with each of the landscape elements identified in Section 3.0 above. Reference document M2685-MS-21.09-01 Management Schedules for details.

The frequency and timing of most landscape maintenance operations will depend upon the weather and growing conditions. The operations described are therefore for guidance only, and should be carried out according to the requirements of the site conditions and therefore not treated as a rigid programme.

If maintenance is undertaken by an external contractor, payments should be linked to work actually completed, rather than paying an unvarying monthly maintenance sum which is a twelfth of the total. In this way, expenditure will match the requirements of the site more accurately. All operations should therefore be regarded as provisional items. Whether specific operations are carried out should be judged against the conditions on site at the time.

### 4.2 Further Information

If any additional information or advice is required regarding the landscape design intentions or maintenance requirements please contact the designer Barnes Walker Ltd. 0161 946 0808