



OUTLINE LANDSCAPE SPECIFICATION

FOR

BURTON WASHLANDS – CENTRAL AREA ENHANCEMENTS

VERSION 2.0 (CLIENT / STEERING GROUP REVIEW)

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In partnership with



Staffordshire
County Council



THE NATIONAL
FOREST



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Introduction

This **Outline Landscape Specification** (OLS), and the associated Central Washlands Landscape Masterplan, have been produced by Galliford Black and Veatch (GBV) on behalf of the Environment Agency, working in partnership with:

- East Staffordshire Borough Council (ESBC)
- Staffordshire County Council (SCC)
- The National Forest Company
- Transforming the Trent Valley Landscape Partnership (TTTV)
- Staffordshire Wildlife Trust (SWT)
- The Trent Rivers Trust (TRT)

The OLS and Landscape Masterplan provide design proposals for enhancements to a central area of the Washlands, which has been prioritised for delivery by the partners. These enhancements are in line with the wider strategic **‘Landscape Vision’** which was developed in 2018 by the Environment Agency and the same partners.

The four key themes of the Landscape Vision are:

- **‘Connecting People and the River’** - *Improving access to the river for everyone, addressing issues of accessibility during flooding and providing facilities that will encourage people to visit the Washlands.*
- **‘Connecting People and Wildlife’** - *Enhancing the habitat value and biodiversity of the Washlands and providing opportunities for people to interact with and learn about the wildlife around them.*
- **‘Connecting People and Heritage’** - *Promoting the heritage of Burton upon Trent and the Washlands and celebrating the history that has made the Washlands the place it is today. Restoring historic landscape features and improving the information available to tell their story.*
- **‘Connecting Land and Water’** - *Improving the land and river as habitats for wildlife. Understanding the natural processes at work in the area in order to work with them, not fight them.*

The Environment Agency is promoting these enhancements to the Washlands in order that their delivery of the Burton upon Trent Flood Defence Improvements (Phase 2) can leave a legacy of wider environmental and community benefit.

This OLS is to be read in conjunction with the following associated information and documents produced by GBV:

- Constraints and Opportunities Plan
- Cost estimates
- Modelling Assessment Report
- Flood Risk Assessment
- Landscape Masterplan (series of drawings)
- Design Strategy (series of documents covering street furniture, signage, lighting, and public art)
- Designer’s Risk Assessment & Hazard Maps
- Public Safety Risk Assessments

- Buildability Method Statement
- Programme for Detailed Design & Construction
- Ecosystem Services Valuation
- Preliminary WFD Assessment
- Environmental Action Plan & Schedule of Consents and Approvals
- Carbon Calculator

The key objectives of this OLS are to:

- Explain the process and issues considered for the proposed landform design, including the interactions between topography and hydrology, and earthworks and scheme costs.
- Define, in outline, the range of hard and soft landscape materials, elements and features of the Landscape Masterplan
- Promote design quality and highlight opportunities for innovation, where possible and practicable
- Assist in defining the cost of the landscape design proposals
- Provide a guide to design and environmental quality standards, and palettes of materials, that can be applied throughout the wider Washlands area
- Provide recommendations and guidance for the future maintenance and management of the scheme and wider area, both short and longer term

This document is structured into the following sections:

- Part 1: Landform and water Concepts
- Part 2: Soft Landscape Specification
- Part 3: Hard Landscape Specification
- Part 4: Maintenance and Management

Under **Part 1: Landform and Water Concepts**, the OLS outlines the process that has been followed, and the issues that have been considered, in the development of the topographical design aspects of the landscape masterplan, and how this interacts with hydrology. As this is the most complex aspect of the masterplan, with numerous constraints and interactions, it is explained in more detail than other sections of the OLS, which are more concise summaries of final proposals.

Under **Part 2: Soft Works**, the OLS provides a series of typologies covering all the proposed soft landscape enhancements and habitat areas. For each type, it provides:

- Species mixes (for the naturalistic/habitat areas) and plant palettes for ornamental / semi ornamental planting areas
- Illustrative photos / images of proposed planting types
- Definition of planting densities & plant sizes, including thumbnail details / planting matrices
- Outline specifications for soil provision and preparation, and planting specifications

Under **Part 3: Hard Works**, the OLS provides palettes and details of proposed hard landscape components, including design philosophy, products / product types, appearance, materials, performance specifications / requirements. The components include:

- Boardwalks
- Public realm
- Street furniture
- Routes and signage

- Lighting
- Play equipment

Under **Part 4: Maintenance and Management**, the OLS sets out the fundamental management and maintenance responsibilities for the various proposed features, confirming ownership and any delegated responsibilities. It includes proposed arrangements for establishment maintenance of soft landscape, and recommendations for longer term management and maintenance of all areas.

Part 1: Landform and Water Concepts

Landform & Water Concepts

CONCEPT AIMS

Landform proposals have been developed through an iterative process involving 3D design and hydrological modelling, along with consideration of constraints such as buried services (Molson Coors brewery owns a network of groundwater abstraction pipes and associated inspection chambers throughout the site) and earthworks costs. The aim of the landform design is to enable water to enter the site earlier than at present (at lower river water levels), to enter a swale and fill a pond / wetland area designed for wildlife habitat without obstructing public use or access.

The concept also aims to allow water to return to the river sooner than at present, as floodwater currently appears to get 'locked' within the site's concave landform long after river levels have fallen, with no (above ground) route back to the river. The addition of more permanent wetland, but with a return route and active flow, aims to mitigate current issues of fish potentially becoming stranded in drying pools, and the smell of stagnant water.

The Modelling Assessment Report (GBV, Dec 2019) provides details of hydrological modelling that has been carried out to support the landform design. This includes a baseline assessment of how the site currently floods, which indicates inundation of the site on approximately 3-4 days of the year. The report highlights that the existing topography prevents floodwater flowing back into the Trent after river levels have dropped, meaning it is retained on site until it evaporates, with much of the site therefore inaccessible to the public for long periods of the year.

Figure: Baseline – existing site flooding

BASELINE

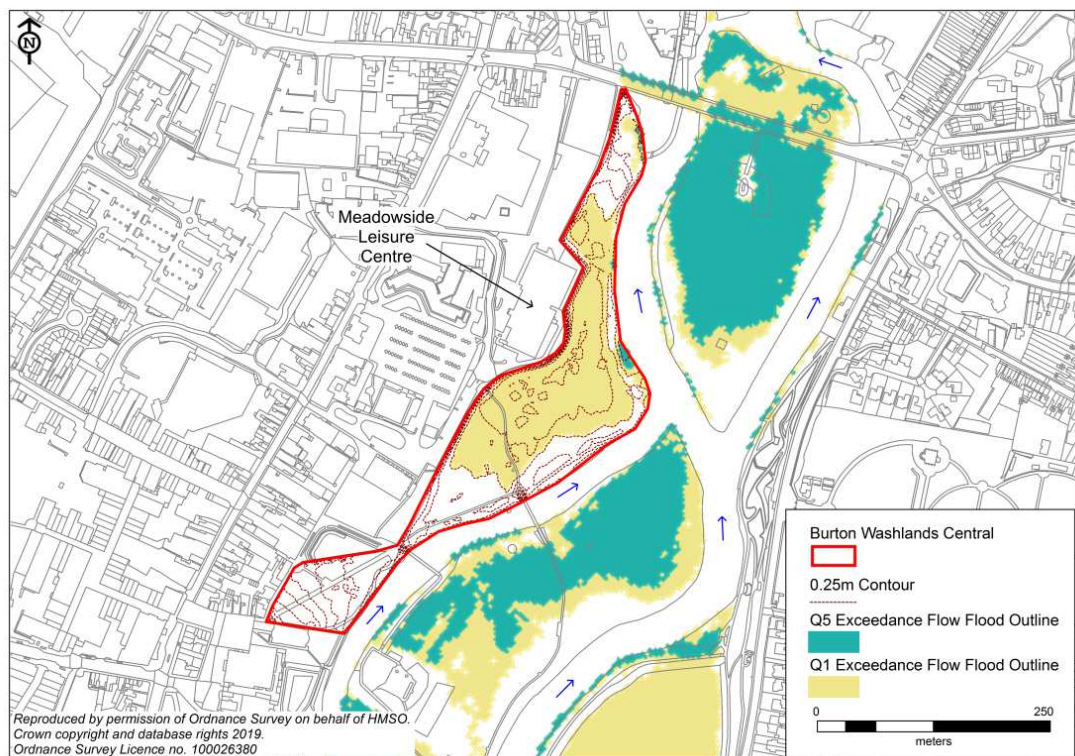
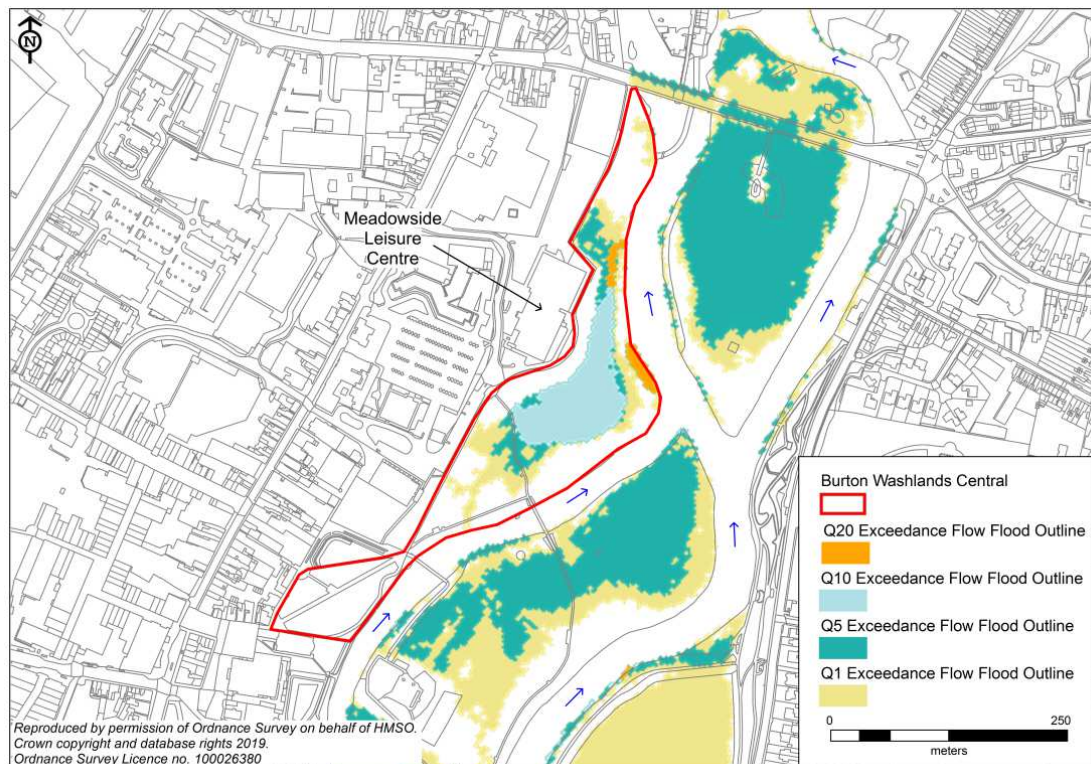


Table: Exceedance Flows

EXCEEDANCE %	AVERAGE NO. OF DAYS EXCEEDED IN A YEAR	FLOW (m ³ /s)
50	182	27.1
20	73	45.0
10	36	66.0
5	18	90.0
1	3-4	110

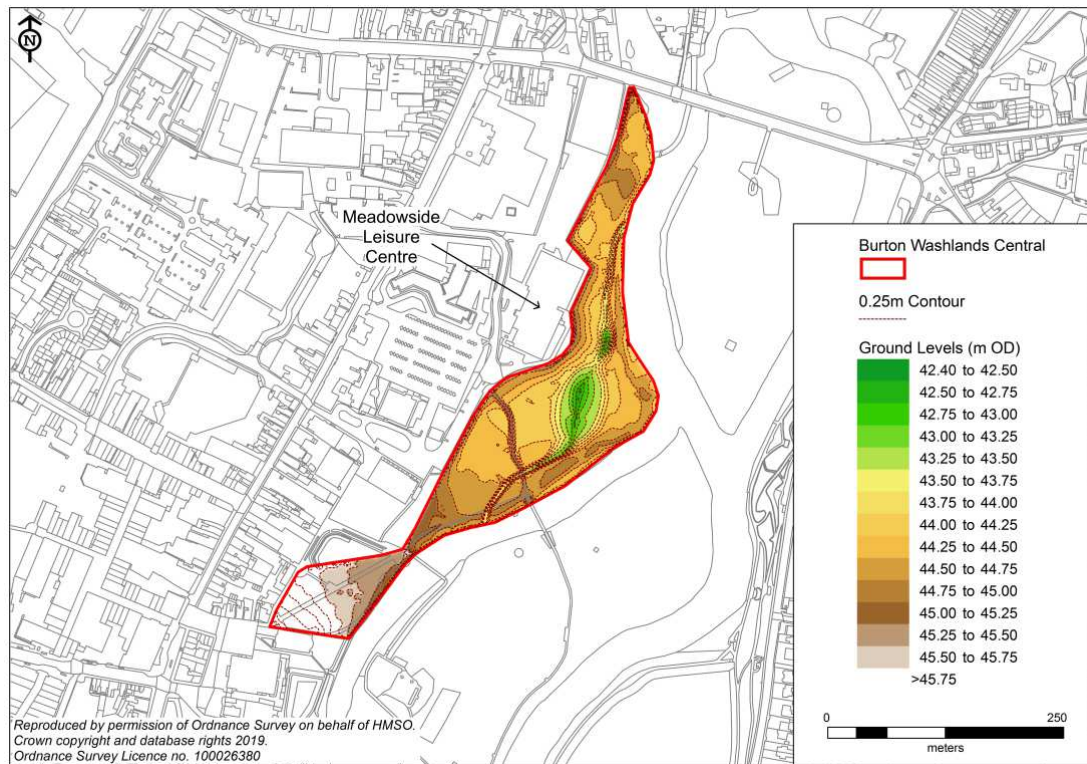
The hydrological effects of a series of (three) landform concepts were then modelled and assessed, with results detailed in the modelling report.

The **initial concept** coarsely defined levels for pond and swale, with a maximum depth of excavation of approximately 0.75m. The swale was expected to fill at around a Q20 exceedance flow (i.e. 20% of the time / 73 days per year).

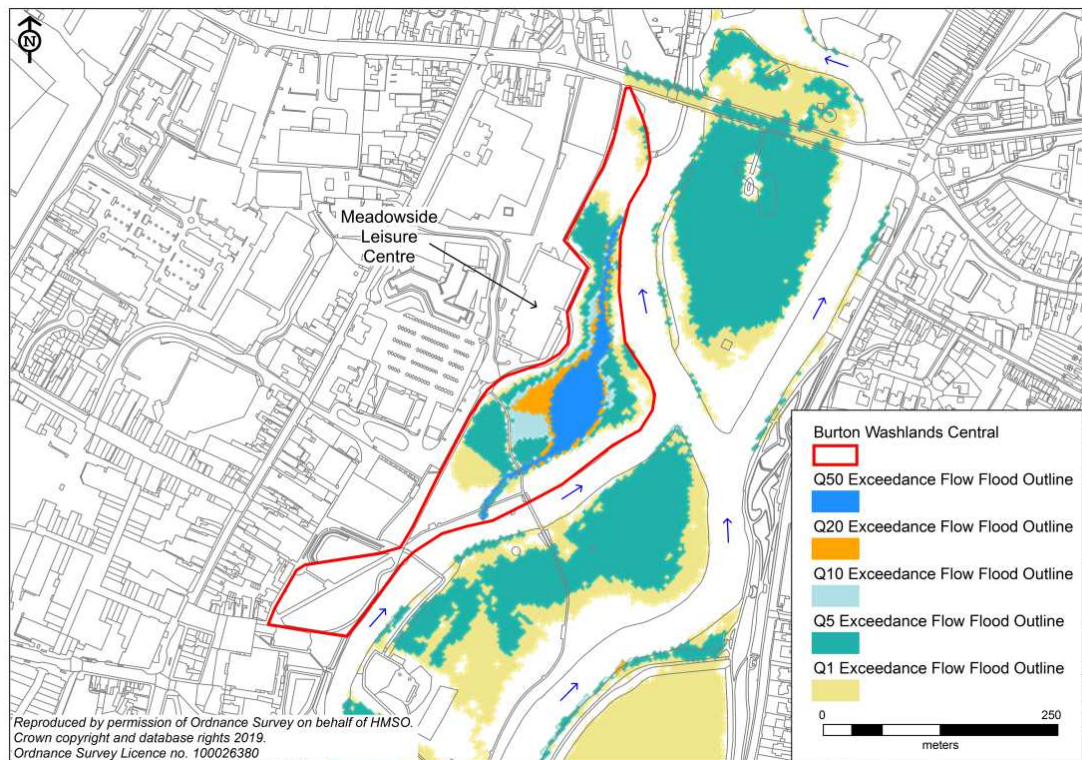
Figure: Initial Concept - Flooding Assessment:

The second stage concept tested a deeper excavation, i.e. a **‘maximal’ approach**, up to approximately 1.8m in the deepest section of pond, and 0.6m – 1.0m in the swale. The swale was expected to fill at a Q50 exceedance flow (i.e. 50% of the time / 182 days per year). It would also generate almost 3x the volume of excavation to the first concept. The levels were more refined than the first stage, modelled in 3D CAD, to support more detailed hydrological assessment and earthworks calculations.

Figure: ‘Maximal Approach’ - Proposed Topography



This maximal approach would mean the pond, at 1.8m depth of excavation, would receive much more groundwater as well as water from inundation through the swale, and would very rarely dry out, if at all. The pond would, at a Q10 exceedance flow, fill to a depth of approximately 1.81m. At this depth the public risks would be greater. A boardwalk crossing the pond at this depth will also be relatively high, at around 2.4m between boardwalk deck and pond bed level, which might require a more heavily engineered, and costly, approach to construction.

Figure: 'Maximal Approach' - Flooding Assessment

The above two concepts both included, as well as excavation of the ponds and swale, the re-use of excavated material on site to reduce off-site disposal costs, whilst helping to control the flow of water by deflecting it from / providing drainage falls from public use areas. Cut and fill calculations were generated to inform this. This on-site re-use was later ruled out, due to Environment Agency regulations against raising levels within the flood plain.

A third stage concept was then produced to test a much shallower excavation, i.e. a **'minimal' approach**, with shallow 'scrapes' (maximum 0.2m deep) rather than formation of ponds. The hydrological effects of this minimal approach are described in the Addendum section of the Modelling Report, which expects inundation of the shallow swale / wetland to only occur at a Q10 exceedance flow (i.e. 20% of the time / 73 days per year). This provides limited change compared to the current baseline situation, although the shallow scrapes would provide some control over the movement of water and additional habitat value. It would generate less than 20% of the volume of excavated material compared to the maximal approach. In consultation with ESBC and the steering group however, a more 'transformational' approach was preferred, and the final landscape Masterplan is based on a level of excavation somewhere between the maximal and minimal concepts.

No significant impact on flood risk is expected from any of the landform concepts modelled.

MASTERPLAN PROPOSAL

The final **Masterplan proposal**, and cost estimates, are based on a compromise between the maximal and minimal approaches. A maximum 1.0m depth of excavation for the ponds, with the swale at around 0.5m depth, are assumed. The proposed pond bed level is 43.3m AOD, and the downstream swale invert level is 43.6m AOD. The swale / pond can be expected to fill at a Q50 exceedance flow (i.e. 50% of the time / 182 days per year). The depth of water in the pond would be limited to around 1.0m, i.e. 0.8m less than the maximal approach. Whilst this would be more vulnerable to drying out during drought conditions, it reduces the risks of deep water within a public open space, and limits the height of boardwalk over bed level, and hence associated construction cost.

Earthworks costs are a key factor in considering the depth of excavation. Cost estimates have been produced for the scheme with reference to earthworks rates from various sources, including GBV's estimators (from the Galliford Try team currently delivering the Burton flood defence improvements), advice from landscape contractor idverde, tendered rates from the Environment Agency's landscape framework, and rates the pricing guidebook 'Spons'. Due to very significant variance between these rates, and uncertainty around the potential for re-use of excavated material off-site (e.g. within the flood defence improvement scheme, or through re-sale of topsoil) it is not possible to establish cost certainty over this aspect until the scheme has been competitively tendered.

Some on-going flexibility over the designed levels is therefore recommended at this stage, with final depths not confirmed until post-tender. This flexibility, within the maximal and minimal parameters modelled and assessed by GBV, will help to manage the cost risks for this aspect of the scheme.

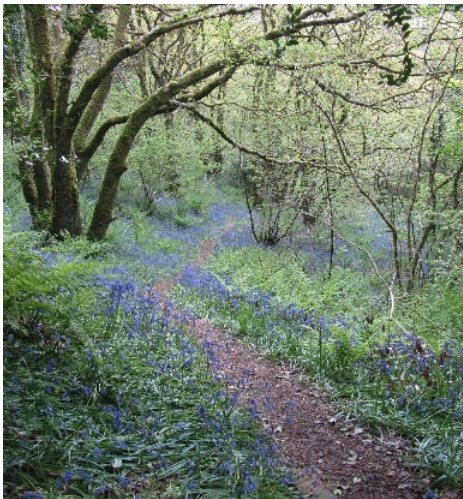
ILLUSTRATION



Part 2: Soft Works

Wet Woodland

WET WOODLAND



Description

Existing woodland of crack willow, alder and elder extended to the south through new tree planting and improved through planting of ground cover species. Shallow inlets from the new wetland area to west are proposed to wet the woodland; the woodland is likely to flood for a short time in spring but will not be permanently waterlogged. Feathers planted at 2 m c/s. Herbaceous ground flora planted as plugs. To be managed by rotational coppicing.

Typical planting type (subject to detailed design) would include the following key species:

Tree Canopy:

Black poplar (Staffordshire origin) *Populus nigra*, Crack Willow *Salix fragilis*

Ground flora: (All Locally Native)

Garlic mustard *Alliaria petiolata*, ramsons *Allium ursinum*, Hart's Tongue Fern *Asplenium scolopendrium*, lady fern *Athyrium filix-femina*, enchanter's nightshade *Circaea lutiana*, foxglove *Digitalis purpurea*, meadowsweet *Filipendula ulmaria*, wood avens *Geum urbanum*, water avens *Geum rivale*, creeping Jenny *Lysimachia nummularia*, dog's mercury *Mercurialis perennis*, lesser celandine *Ranunculus ficaria* and primrose *Primula vulgaris*.

Note for new area of woodland, would need to either a) include sun loving tall forbs to shade the woodland ground flora while it establishes, these would then get out competed by the shade tolerant perennials as the tree canopy closes in. Or b) establish the tree canopy first and plant ground flora later.

Specimen Trees

Description

Extra heavy standard trees. Native species to be used within the floodplain. Semi-ornamental cultivars and non-native varieties may be used outside of the floodplain, e.g. adjacent to Burton Library.

NATIVE SPECIMEN TREES



Image courtesy of PlantPARTNER

Native Specimen Trees

Typical planting (subject to detailed design) would include the following species:

- Alnus glutinosa* common alder
- Betula pendula* silver birch (pictured left)
- Betula pubescens* downy birch
- Carpinus betulus* hornbeam
- Populus nigra* black poplar
- Prunus padus* bird cherry
- Sorbus aucuparia* mountain ash

SEMI ORNAMENTAL TREES

Semi-ornamental Trees

For high impact at gateways to the Washlands such as adjacent Burton Library, e.g. *Betula utilis* var *Jacquemontii* Himalayan birch (multi-stem) (pictured below).



Semi-ornamental trees planted as street trees. Typical planting (subject to detailed design) would include the following species:

- Carpinus betulus* 'Frans Fontaine' Hornbeam 'Frans Fontaine'
- Prunus x schmittii* a Flowering Cherry
- Pyrus calleryana* 'Chanticleer' Fastigate callery pear

Semi-Ornamental Planting

SEMI ORNAMENTAL PLANTING

Description

Limited quantity of high-quality planting in key public realm spaces on edge of washlands (e.g. green spaces / raised beds adjacent Burton Library). Limited palette focussed on mass planting of ornamental grasses and hardy perennials.

Avoid woody / shrubby species.

Consider Corten steel as planting bed edging where appropriate.

SEMI ORNAMENTAL SPECIES



Key species include:

- Calamagrostis x acutiflora 'Karl Foerster'
- Stipa gigantea
- Miscanthus spp.
- Verbena bonariensis
- Echinacea purpurea
- Achillea spp.
- Sedum spp.

Dense planting, approx. 5 plants /m², planted as 3L – 5L containerised stock, into min. 300mm depth topsoil, with mm depth ornamental grade bark mulch.

Approx. proposed planting area within masterplan: 400 m²

Amenity Grass

AMENITY GRASS

**Description****AMENITY FINE LAWN GRASS MIXTURE**

Fine leaved, slow growing varieties for a low maintenance grassland.

British Seed Houses seed mix A22:

40% *Lolium perenne* Promotor perennial ryegrass 35% *Festuca rubra* Abercharm slender creeping red fescues

20% *Lolium perenne* Cabrio perennial ryegrass

5% *Agrostis castellana* Highland browntop bentgrass

Sowing rate: 35g/m²

Note:

An allowance has been made in the cost estimates for turfing. It is assumed that the areas within the play area where grass mat safety surfacing is proposed, and other areas of anticipated high intensity use within the play area (i.e. approx. 2,790m²), would be turfed, to encourage rapid establishment.

Areas where seeding would be the more economical and appropriate approach are the more extensive areas of amenity grass throughout the site and alongside footpath edges (i.e. approx 3,000m²).

Wet Meadow

WET MEADOW



Description

Meadow mix for use in areas likely to flood for a short time in spring but will not be permanently waterlogged.

Sow a mix such as Emorsgate EM8 Meadow mixture for wetlands (80% grasses, 20% wildflowers), which has been developed based on the vegetation of traditional floodplain and water meadows. Sowing rate: 5g/m²

Add extra species if desired e.g. to attract bees or butterflies, or to support locally endangered species. Combine with cornfield annual mix sown at 1 g/m² to aid rapid establishment.

Approx. proposed area within masterplan: 19500 m²

EM8 Typical Composition:

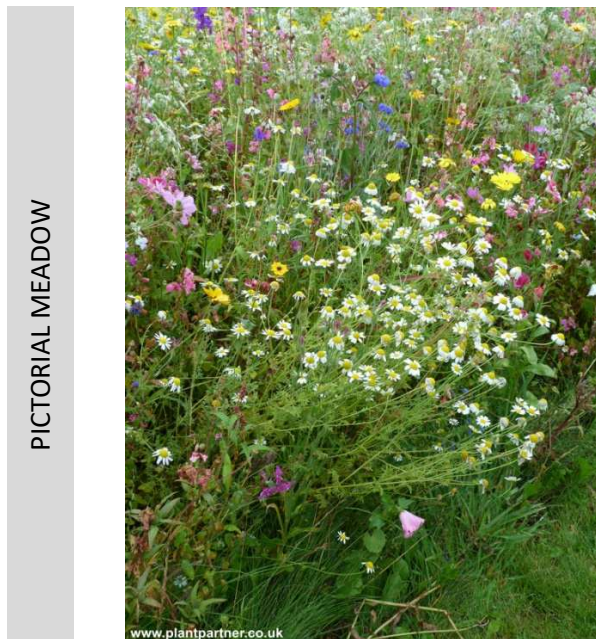
Wild Flowers – 20% of mix (all locally native)

0.2%	<i>Achillea millefolium</i> Yarrow
0.2%	<i>Achillea ptarmica</i> Sneezewort
1%	<i>Betonica officinalis</i> - (<i>Stachys officinalis</i>) Betony
2.5%	<i>Centaurea nigra</i> Common Knapweed
2%	<i>Filipendula ulmaria</i> Meadowsweet
2%	<i>Galium verum</i> Lady's Bedstraw
0.5%	<i>Leontodon hispidus</i> Rough Hawkbit
0.5%	<i>Leucanthemum vulgare</i> Oxeye Daisy
0.7%	<i>Lotus pedunculatus</i> Greater Birdsfoot Trefoil
0.5%	<i>Lotus corniculatus</i> Birdsfoot Trefoil
1%	<i>Plantago lanceolata</i> Ribwort Plantain
1%	<i>Primula veris</i> Cowslip
1.5%	<i>Prunella vulgaris</i> Selfheal
2%	<i>Ranunculus acris</i> Meadow Buttercup
1.5%	<i>Rhinanthus minor</i> Yellow Rattle
1.5%	<i>Sanguisorba officinalis</i> Great Burnet
0.5%	<i>Silene silaus</i> Pepper Saxifrage
0.4%	<i>Silene flos-cuculi</i> - (<i>Lychnis flos-cuculi</i>) Ragged Robin
0.5%	<i>Succisa pratensis</i> Devil's-bit Scabious

Grasses – 80% of mix (all locally native)

10%	<i>Agrostis capillaris</i> Common Bent
1%	<i>Alopecurus pratensis</i> Meadow Foxtail
3%	<i>Anthoxanthum odoratum</i> Sweet Vernal-grass
2%	<i>Briza media</i> Quaking Grass
32%	<i>Cynosurus cristatus</i> Crested Dogstail
1%	<i>Deschampsia cespitosa</i> Tufted Hair-grass
24%	<i>Festuca rubra</i> Slender-creeping Red-fescue
1%	<i>Hordeum secalinum</i> Meadow Barley
6%	<i>Schedonorus pratensis</i> - (<i>Festuca pratensis</i>) Meadow Fescue

Pictorial Meadow



Description

Wildflower only mix comprising native and non-native species for use in 'garden' area by proposed Bargates development.

Species mix chosen to have a high aesthetic impact at this gateway to the Washlands and have a long flowering season which will be of benefit to pollen seeking insects such as bees. Species will need to be suitable for seasonal winter flooding, but this mix will not be used in frequently wet areas.

Masterplan Extract: 'The Meadows'



Note that pictorial meadow composition is dependent on soil tests as part of ground investigation works.

Marginal Planting

MARGINAL PLANTING

Description

Marginal planting is for areas which will be wet for approx. half of the year, up to a depth of 0.5m (occasionally deeper in extreme flood events). This will include the swale and ephemeral wetland. Two marginal mixes are proposed, comprised of locally native species.

To be managed by rotational cutting.



Mix 1 Typical Composition:

Common valerian *Valeriana officinalis*
 Jointed rush *Juncus articulatus*
 Common spike-rush *Eleocharis palustris*
 Yellow flag iris *Iris pseudacorus*
 Lesser Spearwort *Ranunculus flammula*
 Marsh Cinquefoil *Potentilla palustris*
 Marsh marigold *Caltha palustris*
 Watercress *Nasturtium aquaticu*
 Water mint *Mentha aquatica*
 Water plantain *Alisma plantago-aquatica*

Mix 2 Typical Composition:

Common marsh bedstraw *Galium palustre*
 Ragged Robin *Silene flos-cuculi*
 Flowering Rush *Butomus umbellatus*
 Lesser Spearwort *Ranunculus flammula*
 Marsh Cinquefoil *Potentilla palustris*
 Lesser pond sedge *Carex acutiformis*
 Common sedge *Carex nigra*
 Hairy sedge *Carex hirta*
 Water Forget-me-not *Myosotis scorpioides*
 Water mint *Mentha aquatica*
 Water plantain *Alisma plantago-aquatica*
 Yellow flag iris *Iris pseudacorus*

Note that marginal mix composition is dependent on soil tests as part of ground investigation works.

Wetland Planting (permanently wet)

WETLAND PLANTING



Description

Floating and submerged species for the permanently submerged, deeper water levels. Species chosen to be locally native.

Steep shelf down to 1.5m depth central area which will be open water with no planting.

Floating species such as: Amphibious bistort *Persicaria amphibia*
(This species is rooted with floating leaves and can be used as a monoculture stand between 10cm and 1m depth.)

Submerged species such as: Curled pondweed *Potamogeton crispus*

Note that ground investigation works are being undertaken to determine if there will be permanently wet areas and how deep they will be. Possibility to line if not naturally permanently wet. Wetland planting composition is dependent on ground investigation.

Part 3: Hard Works

Boardwalks

BOARDWALKS



Description

All components made of fire-retardant recycled plastic, supplied by Centriforce or equivalent UK-based recycled plastic supplier.

Centriforce:

14-16 Derby Road, Liverpool L20 8EE

0151 207 5100

OUTLINE SPECIFICATION

Typical Width: 1.5m, with 2m wide passing places at approx. every 100m, with guardrail on one side of the passing place. Passing places to also function as / viewing / interpretation points.

Handrails (as image above) to be provided where boardwalk >0.6m above adjacent ground level and / or areas of permanent / semi-permanent standing water >0.3m deep. Handrails to be at 1100mm with secondary rail at 750mm. Low edge protection provided in other sections. Approx. boardwalk level: 44.8 OD (i.e. similar to level of the existing footpath on riverward side of flood wall adjacent to Meadowside Leisure Centre).

Applicable standards: relevant parts of BS4592 (Industrial Type Flooring and Stair Treads) applied to determine standards for structural loading and flexibility. Textured / non-slip finish to boardwalk surface.

Signage to be provided at boardwalk entrances: no cycling; & warning of sudden drops / varying water levels.

PSRA recommends provision of double-sided water level gauges.

MASTERPLAN EXTRACTS



Public Realm: Burton Library

PUBLIC REALM



Description

The Burton Flood Risk Management Scheme (FRMS) will impact on the Burton Library steps / threshold paving area, creating an opportunity for enhancements. Public realm design here aims to promote increased community use of the space as a gateway to the washlands, reflect the library's future role as a Washlands Visitor Centre, promote use of the library Café and improve the connections to the Washlands.

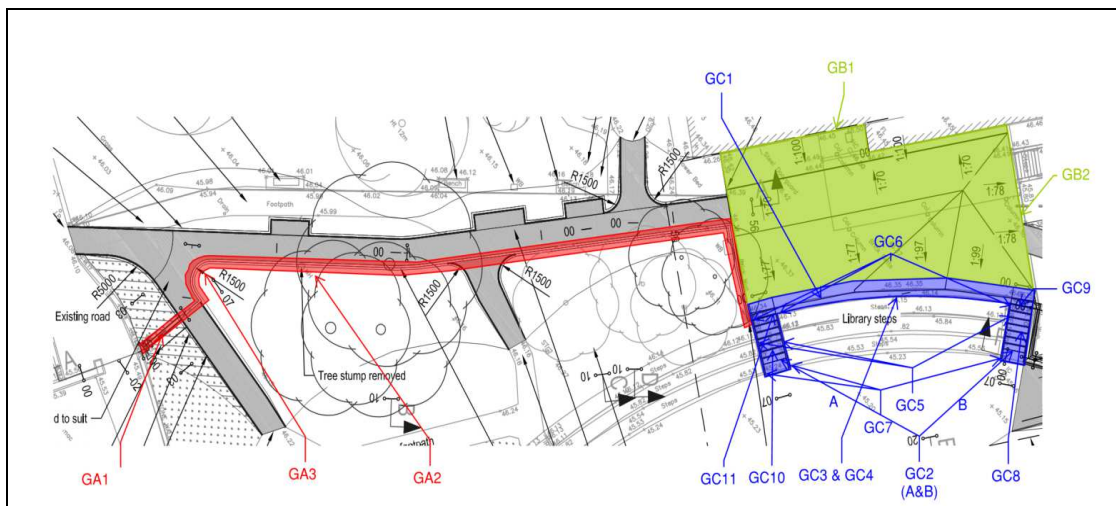
OUTLINE SPECIFICATION

Library threshold paved area to be upgraded, replacing original (1970s) terracotta block paving with high quality contemporary materials, using granite paving. 'Kobra', 'Royal White', and 'Crystal Black' granites by Hardscape (or equivalent) are recommended, with a flamed finish.

All flights of access steps and ramps to be upgraded with improved compliance to BS8300-1 access standards including consistent dimensions of treads and risers, tactile paving at top and bottom of each flight, contrasting colour 'nosings' to steps and provision of new handrailing. All steps and surfaces to be in corresponding granite materials. Amphitheatre seating terraces to be upgraded in corresponding granite. Oval open space at bottom of amphitheatre to be enhanced as a focal space / gateway to the washlands with granite sett trims and resin bound surface dressing.

The plan below indicates the areas to be upgraded within the delivery of the FRMS (in 2020), using the palette of materials proposed here. The washlands enhancement scheme aims to fill in the gaps to achieve a consistently enhanced space.

FRMS INTERFACE



Public Realm: Meadowside Drive

PUBLIC REALM



Description

Parking areas for Burton Library and Meadowside Leisure Centre and use for pedestrian access, with a natural pedestrian 'node' at the top of the flood wall ramp; the proximity to the Listed Water Tower and Conservation Area location create heritage sensitivities. Proposals are focussed on more co-ordinated street furniture (mainly bollards), lighting, street tree planting, upgrading of existing raised beds / planting, and re-surfacing (limited to key areas). This combination of improvements is aimed at freshening up the area without extensive (and high cost) re-surfacing works.

OUTLINE

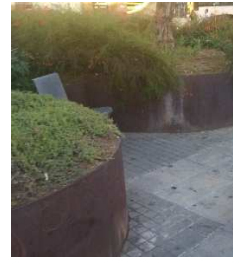
Upgrading (corten overcladding) of brick raised beds, and replanting within beds using palette of grasses and perennials for year round interest.
Re-surfacing of dated block paving: simple palette of tarmac, with granite sett trims.
New street trees and planting limited to existing areas.
Existing bollards replaced with co-ordinated, but understated products to help unify streetscape appearance.

TYPICAL EXAMPLES

Broxap 'St Helens' cast iron



Corten steel raised beds



Replacement street lighting



Planting



Tarmac / granite setts



Street Trees / discreet & DDA compliant



Public Realm: Special Paving & Artwork

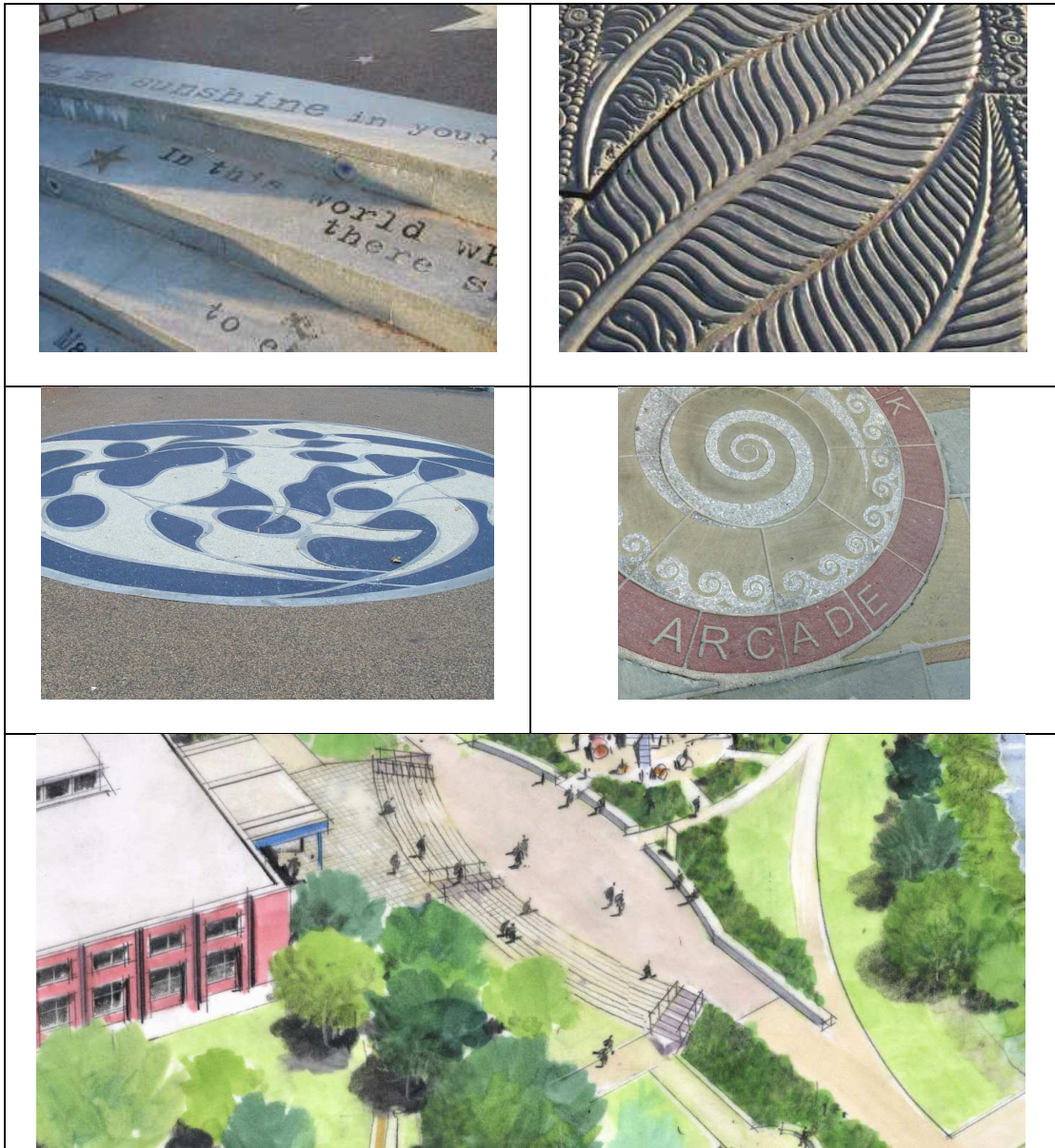
PUBLIC REALM

Description

Robust / resilient methods of integrating feature paving and artwork into the streetscape. Examples below include water jet cut, laser cut and sandblasted stone examples. These can provide ways of weaving community engagement into the fabric of the scheme, whilst providing, in small, limited focal areas, unique local interest and interpretive features.

Incorporating etched words and symbols, developed through local community engagement, within a stone seat top to the dwarf wall opposite the amphitheatre and/or the new amphitheatre terraces themselves, is recommended as a means to integrate locally meaningful narrative within the project.

TYPICAL EXAMPLES AND FOCAL SPACE



Street Furniture

STREET FURNITURE



Description

Replace existing (mainly steel) furniture with new high-quality units from a co-ordinated range of street furniture, combining some hardwood with steel (and / or corten), reflecting the Washlands Vision and ESBC's Public Realm Improvement Plan. Retain heritage style within Garden of Remembrance.

TYPICAL EXAMPLES

Greenspace south of the library



Logic 'Ambleside' Curved Seat
Corten Steel / Hardwood

Greenspace south of the library



Logic 'Thirlmere' Bench
Corten Steel / Hardwood

Nodal points / interpretation areas



Logic 'Ambleside' Straight Seat
Corten Steel / Hardwood

Washlands greenspaces & play area



Logic 'Ambleside' Pic Nic set
Corten Steel / Hardwood

Washlands greenspaces & play area



Logic 'Ambleside' dual litter bin
Corten Steel / Hardwood

Garden of Remembrance



Broxap Square standard steel litter bin

Routes & Signage

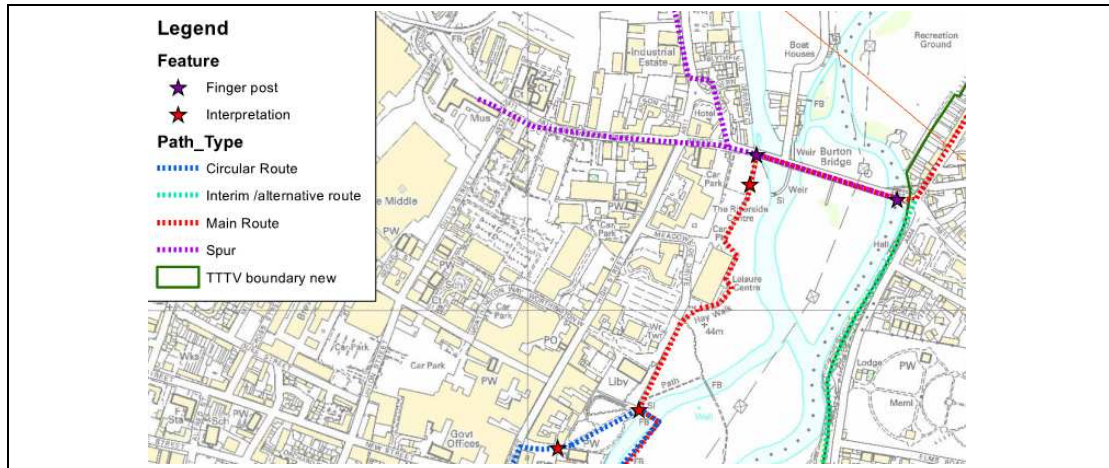
ROUTES & SIGNAGE



Description

Collaborative route planning with TTTV / TRT / ESBC to ensure the Trent Valley Way, locally promoted cycle routes, circular walks and trails are well co-ordinated within the masterplan site area. New associated signage designed to reflect contemporary street furniture suite, incorporating the existing Washlands logo.

LOCATION



TYPICAL EXAMPLES

Welcome / orientation gateway signage



Waymarking / fingerpost signage



A1 Interpretation Board – Oak Framed



A1 Interpretation Board – Corten base



'Rubbing' nature trail markers



Existing good quality signage to be relocated



Lighting

LIBRARY THRESHOLD

DW Windsor

Retrofit LED Solutions



Description

Existing street and open space lighting to be replaced with LED units to provide improved light coverage, greater security, improved efficiency, and more co-ordinated appearance. Proposed enhancements include up-lighting of mature trees within Garden of Remembrance and architectural lighting of Water Tower and Andressey and Burton Bridges.

TYPICAL EXAMPLES

Public Realm / library area



DW Windsor 'Sky'

Meadowside Drive / car parks



DW Windsor 'Kirium Pro' (double head)

Garden of Remembrance



DW Windsor 'York'

Garden of Remembrance – central path



DW Windsor 'Kirium' bollard with uplighters

Handrail with LED lighting:



DW Windsor 'Garda'

Replacement up-lighting of Water Tower:



DW Windsor 'Sabre'

Leisure Centre



DW Windsor 'DW400'

Andressey / Burton Bridges



DW Windsor 'Iska Pro'

Play Area

PLAY AREA



Description

Replacement of existing play area / all equipment, with new scheme embracing principles of natural play and Play England's guide, '*Design for Play: A guide to creating successful play spaces*'. Design principles reflect natural environment of the Washlands with use of timber materials and integration of landform, planting, and natural habitats within the play area, promoting opportunities for children to engage with nature.

OUTLINE DESIGN SPECS

Equipment and area to be compliant with BS1176. Play area for older children to be open / unfenced; play area for younger children to be enclosed with low hedge. Play area sited on higher ground, with landform / swale proposed to keep it free of flooding for longer. No sand or 'loose fill' surfaces. 'Grass mat' safety surfacing where required for all equipment. Some waterplay included, with water taken from potable mains supply, discharging into 'play swale' feature. Equipment selection and cost estimates from Richter Spielgerate / Timberplay.

Consider option to 'nominate' single supplier within delivery contract, providing for consistency of quality, provision of supplier design support, and aftersales / maintenance support.

ROSPA post-Installation inspection and confirmation that area is 'fit for use' to be provided by contractor prior to practical completion.

KEY EQUIPMENT PROPOSED

Large pyramid tower / tunnel slide



Climbing Forest



Climbing Structure



Cableway



KEY EQUIPMENT PROPOSED	<div>Cradle nest swing</div> <div></div>	<div>Waterplay</div> <div></div>
	<div>Sheep (standing)</div> <div></div>	<div>Snail queen</div> <div></div>
	<div>Tractor & Trailer</div> <div></div>	<div>Suspension bridge</div> <div></div>

Burton Library: Architectural Enhancements

BURTON LIBRARY



Description

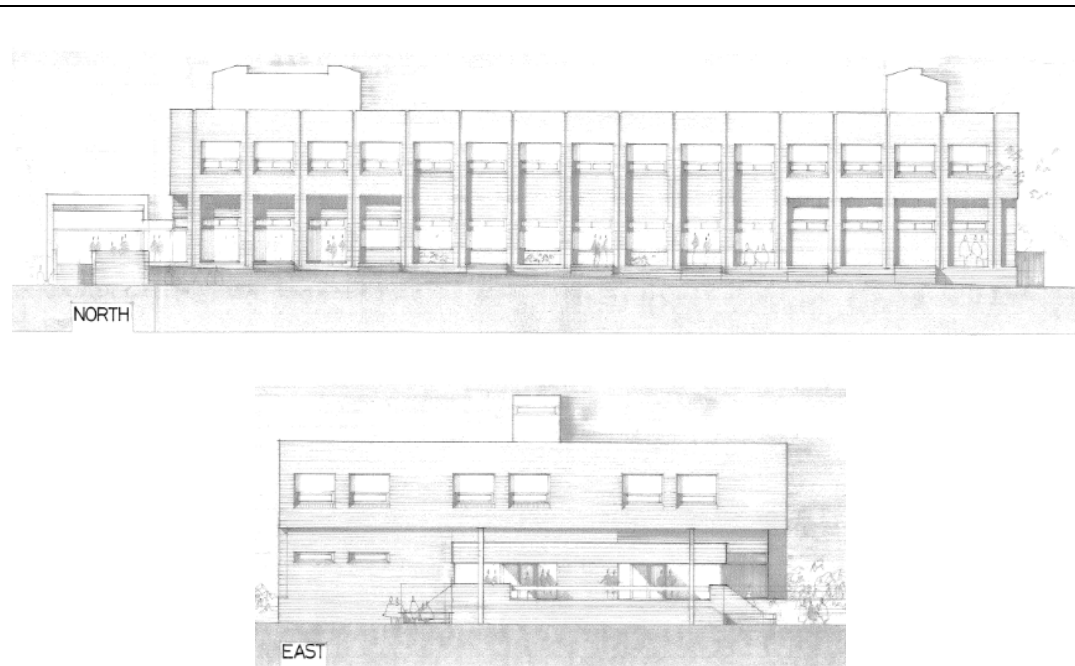
Enhancements to the façade / entrances of Burton Library, in combination with associated public realm, was proposed in the Landscape Vision to elevate the status of this 1970s building, and designed to promote increased community use, role as a Washlands Visitor Centre, use of Café and potential new functions for Staffordshire County Council offices. It is not currently proposed to be delivered under the central area enhancements, but may follow in the future.

CONCEPT & DEVELOPMENT

Concepts developed during the Washlands Vision project included cladding of the east and north library façades and replacement of the existing entrance canopy for a more welcoming and contemporary appearance, improving the connections between this public realm and the Washlands. ESBC has instructed that this element is not likely to be delivered under the washlands central area enhancement scheme. In public consultation about the Masterplan it was suggested that the amphitheatre should be promoted as a performance space and improved canopy structures could help with this.

Should these elements be taken forward for delivery in the future a recommended first stage would be appointment of an architect to help develop a design brief specifically for this element, including reviewing all options / development of further concept sketches for consideration before moving forward with design development of a preferred option.

EXISTING ELEVATIONS



Part 4: Maintenance and Management

Maintenance and Management Strategy

Table 3.1: Maintenance responsibilities

Component	Land owner	Asset manager	Maintenance delivery
WASHLANDS GREEN SPACES (inc. Garden of Remembrance)			
Vegetation /trees / habitats / planting / within green space	ESBC / Molson Coors	ESBC	ESBC to deliver maintenance through external contractor.
Footpaths & boardwalks within green space			
Street furniture within green space			
Signage & interpretation within green space			
Play area / equipment within green space			
Public Right of Way alongside greenspace	SCC	ESBC	ESBC
Street lighting	SCC / ESBC	SCC / ESBC	SCC / ESBC
PUBLIC REALM: MEADOWSIDE DRIVE			
Street lighting	SCC	SCC	SCC
Street furniture	ESBC	ESBC	ESBC
Hard surfaces			
Street trees / planting			
PUBLIC REALM: LIBRARY STEPS / TERRACES / RAMP			
Street furniture	ESBC	ESBC	ESBC
Street lighting			
Hard surfaces			
Street trees / planting			
DECORATIVE / ARCHITECTURAL LIGHTING			
Andressey Bridge	ESBC (TBC)	ESBC (TBC)	ESBC (TBC)
Burton Bridge	ESBC (TBC)	ESBC (TBC)	ESBC (TBC)
Water Tower	Molson Coors	Molson Coors	Molson Coors

Establishment Aftercare

It is recommended that, following directly on from the construction contract, a post-installation establishment maintenance contract with the same contractor, with parallel defects liability periods, is used to ensure successful establishment of each component.

Recommended Durations for Establishment Aftercare:

The following durations are proposed:

- All hard landscape, hard structures, play equipment, street furniture etc: 12 months defects period
- Amenity grass: minimum 12 months / until successful establishment
- Wildflower meadow: 12 months / until successful establishment
- Ornamental / shrub & wetland habitat planting: 5 years
- Woodland planting: 5 years
- Specimen tree planting: 5 years

Establishment Aftercare – Key Operations

Amenity Grassland (including mown grass paths, and 1m strips between footpaths and meadow areas):

- Grass cutting (March to October)
 - 12-month duration prior to handover
 - Minimum 10 cuts during 12-month period
 - The first cut after winter/ spring shall be carried out when the grass reaches 75mm; then cut to a height of 40mm
 - Maintain a short sward and preventing encroachment onto paths
 - Arisings to be swept clear from adjacent paths immediately
 - All arisings collected and removed off site and composted if possible.
- To include where required strimming around trees, bushes and any other obstructions such as play equipment, benches, inspection chambers etc. Ensure no strimmer damage to play equipment or other structures.
- Over-seed and re-establish any areas of unsuccessful seeding as soon as practicable. This may include patch repairs to any damaged areas caused by public use and maintenance vehicles.

Wildflower Meadow:

- Grass cutting (March to October)
 - 12-month duration prior to handover
 - Cut 4 times during 12-month period
 - Cut to a height of 50-70mm
 - Cut either late March to mid-April or late October to mid-November dependent on flowering times.
 - Cuttings to be left in-situ for up to 7 days to shed seed, then bailed, collected and removed off site and composted if possible.
- Weed control prior to setting seed by most effective treatment, if required.
- Over-seed and re-establish any areas of unsuccessful seeding as soon as practicable. This may include patch repairs to any damaged areas caused by public use and maintenance vehicles.

Woodland areas:

- Duration: 5 years

- Minimum 4 maintenance visits per year, to include checking, straightening and re-firming planting as required
- Remove any damaged branches, pruning to suit species
- Check and re-firm / replace as required tree shelters / protective fencing
- Hand weed around all planting; remove any weeds / grassy vegetation from within tree shelters
- Apply slow release fertiliser, in September
- Ensure 2m vertical clearance is maintained over boardwalks at all times, pruning branches of pre-existing trees / woodland as required
- Remove any tree shelters and / or protective fencing within year 5
- Prune mature vegetation to remove growth that may form a possible hazard / obstruct paths as required.
- Selective, rotational re-coppicing of existing coppiced trees
- Arisings to be collected and removed immediately to local habitat stockpile.
- Selective thinning during winter (after 3 years and 5 years). Arisings to park facility for composting. Any arisings able to be sectioned into 1m lengths to be stacked within local habitat stockpiles
- Replace any defective planting each winter.

Wetland habitat planting:

- Duration: 5 years
- Minimum 4 maintenance visits per year, to include rotational cutting appropriate to species, and checking and re-firming planting as required
- Remove any damaged branches, pruning to suit species
- Hand weed all planted areas
- Replace any defective planting each winter.

Shrub planting:

- Duration: 5 years
- Minimum 4 maintenance visits per year, to include checking, straightening and re-firming planting as required
- Remove any damaged branches, pruning to suit species
- Hand weed all planting beds
- Apply slow release fertiliser, in September
- Arisings to be collected and removed immediately to local habitat stockpile.
- Replace any defective planting each winter.

Litter Picking:

- Duration: 5 years
- Minimum 4 maintenance visits per year
- Collect all litter from site, remove and dispose off site.

Watering:

- Duration: 5 years (planting) and 12 months (seeding)
- All planting and seeding areas shall be watered as required following planting, to ensure healthy establishment
- Allow for up to weekly watering visits during summer in year 1, and fortnightly visits in subsequent years
- Indicative watering rates:
 - 25 L/m² for woodland and shrub planting,

- 50 L per individual tree.

Specimen tree planting

- Duration: 5 years
- Minimum 4 maintenance visits per year, to include checking, straightening and re-firming trees as required
- Adjust tree ties and re-firm tree stakes as required
- Remove any damaged branches, pruning to suit species
- Hand weed maintaining a 1m diameter weed free around tree
- Apply slow release fertiliser, in September
- Arisings to be collected and removed immediately to local habitat stockpile
- Replace any defective planting each winter.

Hard landscaped areas inc play equipment, street furniture and other structures:

- 12-month duration
- Minimum 6 visits per year
- Sweep all hard surfaces clean and remove arisings
- Inspect all surfaces and structures and report any damage to CA.

Long Term Management: Strategy, Vision and Quality Standards

ESBC's key **strategy and vision** for the wider washlands area are:

- To develop the Washlands and the surrounding areas into a regional tourist destination with activities for family and friends.
- To enhance the wildlife and conservation of the area, whilst increasing opportunities for education, health and well-being activities.

To help achieve the above, a long-term goal worthy of consideration is to achieve **Accredited Country Park** status for the whole of the washlands within the East Staffordshire area.

Country Park Accreditation

Country Parks are areas for people to visit and enjoy recreation in a countryside environment. Managers can apply (free of charge) to Natural England for accreditation for their Country Parks. Accreditation shows potential visitors that your Country Park has essential facilities and services that you would expect to see in a country park.

Natural England accredited Country Parks receive:

- a certificate to display to visitors
- a logo to use on signs, online and in printed marketing
- a place on a national register of Country Parks.

Essential criteria for Country Park status are:

Your park must be:

- at least 10 hectares in size
- defined by a clear boundary – marked on a map, whether it's open or fenced in
- accessible – less than 10 miles from a residential area
- free to enter
- inclusive and accessible – show how you've met equality and disability needs and provided for varied groups
- predominantly natural or semi-natural landscape, e.g. woodland, grassland, wetland, heathland or parkland, with no more than 5% of the area built upon (excluding car parks)
- signposted and easy to navigate – visitors should be shown where they can go and what they can do and directed along footpaths, bridleways and cycle routes
- visibly staffed, e.g. litter collection and maintenance
- available for public or educational events
- near public toilets – either on-site or a 2-minute walk away
- informed by the local community – the public should have some influence over the management and development of your site.

Additional criteria include having achieved, or working towards, **Green Flag Award** status, which is another ESBC aspiration for the quality of green space management within the washlands.

Green Flag Award

The Green Flag Award scheme, run by the Civic Trust, has several categories of green space, including country parks, nature reserves, and recreational parks, but all have the following general aims:

- To ensure that everybody has access to quality green and other open spaces, irrespective of where they live.
- To ensure that these spaces are appropriately managed and meet the needs of the communities that they serve.
- To establish standards of good management.
- To promote and share good practice amongst the green space sector.
- To recognise and reward the hard work of managers, staff and volunteers.

To achieve Green Flag status for the washlands as a whole a comprehensive, integrated management plan for the whole area, in accordance with the Green Flag criteria, would need to be produced and implemented. The washlands (as a whole) would best be promoted under the Green Flag Awards as a country park, i.e. a stepping stone between town and countryside, providing access to and conservation of nature for the benefit of visitors from the surrounding urban areas. It might alternatively be possible to pursue a Green Flag Award for the washlands area, or part of it, as a nature reserve. Other, more traditional green space categories within the Green Flag Award scheme are less likely to be a good fit for the vision of the washlands.

Management Plan

Regardless of Green Flag Awards and Country Park accreditation, the long-term management of the washlands, including the central area enhancements, should be set out in a comprehensive, integrated and appropriately detailed management plan. This should include as a minimum:

- A clear definition of the area subject to the plan
- Definition of roles and responsibilities for delivering the management
- How the plan will be reviewed and monitored
- Wider policy / strategic context and linkages (how the management plan supports these)
- Partnerships & Community Involvement – how partners and the wider community have been involved in developing the management plan, and how they will be involved in delivering it
- Site description and baseline information - what's there now, what condition is it in, what data and records are available for the assets and facilities within the area, what surveys and records of the ecology are available etc
- Management vision and goals
- Management objectives – clear measurable objectives in terms of key themes, such as landscape, ecology, heritage, recreation, visitor and community facilities
- Work plan – setting out clearly and specifically what will be done, where, and by whom, to deliver each of the objectives.
- Monitoring and review – arrangements for and current information from the monitoring and review process, including resources and finances, ensuring the plan kept up to date.

Whilst there are opportunities for savings to be found in the management of the wider washlands areas, through the transition to a more naturalistic and ecological landscape, the central area has been designed as a more intensive 'demonstration zone' and is expected to receive fairly intensive public use. As such, and as a gateway into the washlands from the Town centre, it should receive a relatively intensive level of long-term maintenance.

Long Term Management: Play Area

The Proposed play area is a 'flag ship' scheme and a major capital investment. Some key operational management expectations are set out below.

RECOMMENDED ANNUAL OPERATIONS

Annual independent inspections

- Annually, arrange for independent playground inspection and report
- Undertake all corrective actions within time periods as specified in inspection reports.

Technical Checks

- Undertake technical checks of play equipment once per month, to include testing and inspection of all moving parts
- Any safety hazards to be fully rectified immediately where possible
- Any play equipment found to be unsafe to be made safe / disabled immediately and reported to Area Manager
- All follow-up corrective actions to be undertaken within time periods as specified in inspection reports.

Non-technical inspections

- Undertake non-technical visual checks of play area min. once per week
- Any safety hazards to be fully rectified immediately where possible
- Any play equipment found to be unsafe to be made safe / disabled immediately and reported to Area Manager
- All follow-up corrective actions to be undertaken within time periods as specified in inspection reports.

Routine Maintenance

- Undertake routine maintenance visits min once per month
- Ensure all play equipment and safety surfacing is in good order, clean operational, and the area is free from litter, debris, dog fouling, glass and other hazards
- Ensure all horticultural maintenance including grass cutting, weeding and pruning is undertaken in accordance with specifications.

Appendices

- Landscape Masterplan
- Hydrology Technical Note
- Modelling Assessment Report
- Flood Risk Assessment
- Constraints and Opportunities Plan
- Cost Estimates
- Designers' Risk Assessment & Hazard Maps
- Public Safety Risk Assessment
- Buildability Method Statements
- Programme for Detailed Design & Construction
- Ecosystem Services Valuation
- Preliminary WFD Assessment
- Environmental Action Plan
- Schedule of Consents and Approvals
- Carbon Calculator