

**Restoration Plan**

**Restoration Strategy**

- Promoting an ecologically rich environment, that embraces a low input/sensitive approach to ensure protection of existing, vulnerable species and habitats.
- Altering the landform to accommodate landfill of inert waste, whilst accommodating mitigation methods to conserve Sand Martin nesting grounds.
- Restricting access to allow the site to regenerate naturally after planting and merge with the surrounding landscape of Oxted, Surrey.

**Biodiversity is promoted through:**

- Introducing a range of environments throughout the site, composed of a variety of native species, common to the local area.
- Forming ecological niches, offered through complex arrangement of habitat areas and ecotones.
- Creating opportunity to manage the natural regeneration of the site and to promote a variety of vegetation types, such as: Woodland 'Shaw' or dense, wooded tree-belts, mixed grasslands of Calcareous Meadow species, wetland and marginal wetland planting, as well as encouraging hardy, pioneering, or ruderal plants.

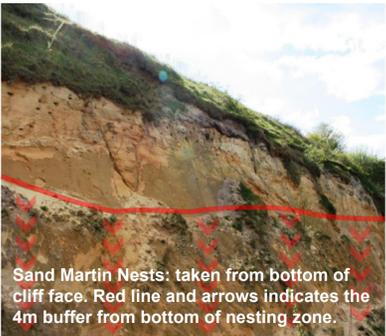


Existing Site Conditions: taken from south west corner adjacent to the top of the cliff face.



Existing Sand Martin Nests: photo taken from bottom of the batter, showing Sand Martin nests within Cliff Face.

**Illustrative Restoration Plan - 1:1000 @ A1**



Sand Martin Nests: taken from bottom of cliff face. Red line and arrows indicates the 4m buffer from bottom of nesting zone.



Sand Martins: Stock photo of Sand Martin within natural habitat.

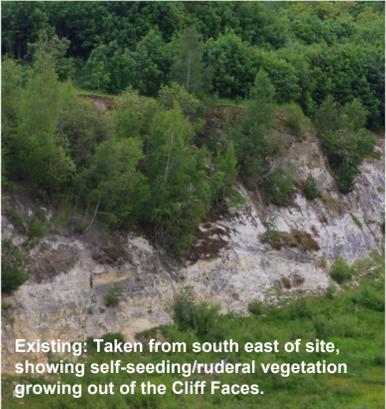
**Sand Martin Habitat Replacement and Mitigation:**

Sand Martins (*Riparia riparia*) are an increasingly rare migrant to British shores. Their habitats and nesting grounds can appear throughout both naturally occurring landscape features such as sandbanks and cliff faces, as well as man-made structures and active quarries. Whilst these diminutive birds often seek out quarry walls as ideal nesting grounds, their vulnerable and threatened status affords them full protection under the Wildlife and Countryside Act of 1981.

The discovery of Sand Martin's within Coney Hill Quarry requires a particularly sensitive approach when dealing with any change to the existing landform. Therefore, all alterations to the landform within the quarry basin will be carefully designed to avoid damaging the Cliff Face and the Sand Martin's nests. A 4m buffer zone below the level of occupied burrows will be maintained, creating a gradual incline below the Cliff Face. This will allow for both landfill operations to be accomplished, as well as avoiding any damage to the Sand Martin's nests. Temporary nesting towers will be used within wetland areas, whilst landfill operations are being completed.

**Habitat Creation and Retention:**

The landscape proposals have been selected to support a breadth of different habitats. These vary from the dense, wooded tree belts that encircle the site (including the retained tree and hedgerow shrubs), through to calcareous meadow and wetlands. The species selected represent typical examples of locally abundant species, and utilises existing vegetation wherever possible.



Proposed: Wetland vegetation, including flowering emergent species and rushes.



Existing: Typical photo of Weald landscape, found throughout surrounding area.



Revision Details		BY	Notes
DATE	REV	NP	Amends to title & key.
30/08/2016	B	WH	In-fill planting added.
14/08/2016	C	WH	Culverts and Drainage added.
20/12/2016	D	WH	Notes Changed.
03/03/2017	E	WH	

Key:	
	Ownership Boundary
	Sandpit Site Boundary
	Access Site Boundary
	Proposed Landform (Contours Shown at 1m intervals AOD)
	Approx. Fill Area (From Draft Permit)
	Stock-Proof Fence
	Main Access Gate
	Field Gate

Temporary Sand Martin Nesting Towers	
	Existing Shrub and Tree Growth (Existing prior to landfill planting and retained following construction operations)
	Proposed Shrub and Tree Planting
	Tall Ruderal Vegetation and Shrubs (Existing and Retained)

Habitats:	
	Existing Shrub and Tree Growth (Existing prior to landfill planting and retained following construction operations)
	Mixed Grassland
	Proposed Wetland/Pond Area (Indicative Form)
	Proposed Woodland 'Shaw' and Shrub Planting

	Cliff Face (Bare ground habitat creation with enhancement)
	In-fill Planting (Off-site planting to extend woodland shaw, after yr 1)
	Open Drains with Culverts
	Below Ground Drainage Pipe

**General Notes:**

- Rolling restoration, commencing at Stage 1 to occur between approx. 1-4 years.
- Final restoration of site commencing at Stage 2 to occur at approx. years 5-8.
- Landfill and interburden to be used for progressive restoration.
- Batter to be returned to maintain Sand Martin nesting, leaving a 4m buffer zone from the bottom of Sand Martin nests.
- Safety measures including fencing and signage will be installed as appropriate.
- Locations of temporary Sand Martin nesting towers to be decided on site by ecologist.
- Proposals are indicative and planning purposes only.

**Drawing Notes:**

- This plan to be read in conjunction with landscape proposals: SHF.089.001.L.0.001.E & 003.E; SHF.089.001.L.0.004.D & 005.D.
- For details of Landscape Management, Specification and Plant Schedules refer to relevant reports.

SCALE	PROJECT NO.	PROJECT
1:1000@A1	SHF.089.001	Oxted Sandpit, Oxted, Surrey
DATE	DRAWING NO.	DRAWING TITLE
September 2016	SHF.089.001.L.D.002.E	Restoration Plan
DRAWN	CHECKED	CLIENT
WH	SF	Ential

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