#### Wildflower Turf Ltd

## Wildflower Turf Roof Turf: WFT-Roof-34 SEED SPECIFICATION – 20% grass / 80% flowers

## Subject to seed availability

	FLORA		
1	Autumn Hawkbit	(Leontodon autumnalis)	Р
2	Betony	(Stachys officinalis)	P
3	Bird's foot Trefoil		
4	Black Medic	(Medicago lupulina)	A/P
5	Bladder Campion	(Silene vulgaris)	Р
6	Cat's ear	(Hypochaeris radicata)	P
7	Clustered Bellflower	(Campanula glomerata)	Р
8	Common Knapweed	(Centaurea nigra)	Р
9	Common Sorrel	(Rumex acetosa)	P
10	Common Toadflax	(Linaria vulgaris)	P
11	Common Vetch	(Vicia sativa)	Р
12	Cowslip	(Primula veris)	Р
13			P
14	Hoary Plantain	(Plantago media)	P
15	Lady's Bedstraw	(Galium verum)	Р
16	Meadow Buttercup	(Ranunculus acris)	Р
17	Meadow Cranesbill	(Geranium pratense)	Р
18	Meadowsweet	(Filipendula ulmaria)	Р
19	Musk Mallow	(Malva moschata)	Р
20	Ox Eye Daisy	(Leucanthemum vulgare)	Р
21	Perforate St John's Wort	(Hypericum perforatum)	Р
22	Ragged Robin	(Lychnis flos-cuculi)	Р
23	Red Campion	(Silene dioica)	Р
24	Ribwort Plantain	(Plantago lanceolata)	P
25	Rough Hawkbit	(Leontodon hispidus)	<u>Р</u> Р
26		Salad Burnet (Sanguisorba minor)	
27	Self-heal	(Prunella vulgaris)	Р
28	Small Scabious	(Scabiosa columbaria)	Р
29	Thrift	(Armeria maritima)	Р
30	Tufted Vetch	(Vicia cracca)	Р
31	Viper's Bugloss	(Echium vulgare)	В
32	White Campion	(Silene latifolia)	Р
33	Wild Marjoram	(Origanum vulgare)	P
34	Wild Red Clover	(Trifolium pratense)	Р
35	Yarrow	(Achillea millefolium)	P
	GRASSES		
36	Sheep's Fescue	(Festuca ovina)	P
30	Sheeh s i escae	(1 Estuca Ovilla)	Г

Key: P = Perennial; B = Biennial; A = Annual



## 1. Wildflower Roof Turf

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1.1	Wildflower Roof Turf is a soil-free wildflower turf system developed to reduce irrigation, reduce water run-off, improve insulation and cooling of buildings and thrive in an exposed environment. This turf is nursery grown to produce a mat of wildflower plants that retains 100% of its root system.	
1.2	The turf is made up of UK native wildflowers and grasses, with a minimum of 75% wildflowers although bespoke mixes are produced to order.	
1.3	The soil-less growing technique uses an inert, pH modified, low nutrient, compost based growing medium that is compatible with all Wildflower Turf Limited products.	
1.4	A fine degradable net is incorporated in the root zone of the turf to provide stability and strength, whilst maintaining a relatively lightweight roll ranging from 15-20kgs/m² (depending on maturity and moisture content when lifted).	
1.5	Once installed, the saturated weight of 1m² of turf only (excluding any substrate) is 35kgs.	
1.6	Turf size will vary with application but is generally $1m \times 0.64m = 0.64m^2$ slabbed OR $1.62m \times 0.77m = 1.25m^2$ rolled per turf on pallets. Larger $2 \times 20m (40m^2)$ roll sizes are also available. They can each weigh between 750-900kgs each and will need special machinery to offload and roll out on site.	

2. Wildflower Roof Turf Preparation and Installation

2.1	Ensure the roof structure is of sufficient strength and suitably designed to support the combined saturated weight of the turf, the substrate and irrigation system. The combined saturated weight of Wildflower Roof Turf and Wildflower Substrate is 130kgs/m². If unsure, consult a structural engineer or specialist contractor.	Roof stability
2.2	Lay a waterproof membrane over the entire roof area. Consult a roofing contractor for an appropriate system. Pay attention to sealing around roof lights, vent stacks and other similar features where there is a higher risk of water ingress. The whole roof must be watertight and care taken not to puncture the membrane when installing any growing medium, turf or bulbs.	Waterproof membrane
2.3	Adequate provision must be made for drainage at the bottom of the roof slopes. This can be achieved by leaving a small gap in the retention feature or a strip that is back-filled with gravel or similar material. Wildflowers need moisture but like	Drainage



a free-draining environment. Avoid levels that will allow standing water to prevent waterlogging.

2.4 It is recommended to lay the Wildflower Roof Turf on WFT-Substrate. It is a soil-less, lightweight and free-draining substrate specially formulated to suit all Wildflower Roof Turf installations.

Substrate

2.5 Option A: Loose substrate on a flat roof

Substrate laying options

WFT-Substrate can be supplied in 1m³ bulk bags (400kgs) or 2m³ bulk bags (800kgs). The substrate needs to be laid evenly at 100mm depth plus 10% for settlement (110mm depth in total).

To retain the loose substrate, lay a strip of geo-textile membrane along the inside of the substrate retention feature (e.g. upstand or barge board). This also allows water to drain without washing out any substrate in the process.

# Option B: Loose substrate & substrate sacks on flat roofs

For flat roofs, WFT-Substrate can also be supplied in degradable substrate sacks (approx. 450mm x 450mm x 100mm per sack). Allow 5 sacks per m² and lay two lines around the perimeter of the rood and along the ridge. Backfill the remainder of the area and any voids between the sacks with loose substrate to the same level as the sacks allowing 10% extra for settlement.

#### **Option C: Substrate sacks only**

For pitched roofs, WFT-Substrate can be supplied in Non-Degradable sacks (650mm x 400mm x 100mm). Allowing 4 sacks per m², cover the whole roof area. You might need to open a couple of bags to brush the substrate in, to ensure that gaps and voids are properly filled. The non-degradable sacks will help to give permanent structural strength to the root zone.

When using loose substrate, provision must be made for a retaining system at the eaves and sides of the roof. This can be in the form of a wooden batten/barge board with accompanying fixing brackets or an engineered metal L shaped strip attached to the roof structure. Your roofing contractor or specialist should advise you on the design and construction of this feature. In addition to the eaves retention it is advisable to install a line of our woven substrate sacks around the perimeter of the roof to provide initial containment of loose substrate whilst the turf establishes a root system

Substrate retention



2.6

throughout the WFT-Substrate. See Section 2.5 Loose substrate & substrate sacks on flat roots. 2.7 The turf needs to be laid on a minimum of 100mm (4 inches) Laying the turf plus 10% for settlement of WFT-Substrate. When laying the turf, care should be taken to ensure that all joints are butted up correctly. Do not overlap the turf at the joints and do not create tension so joints pull apart or shrink. Ensure the turf roots are in contact with the WFT-Substrate and there are no air pockets underneath. 2.8 Once laid, water the turf thoroughly, for the first couple of Watering weeks (weather dependent), until the turf is rooted in. Ensure the soil underneath the turf is damp to be sure you have given it adequate water. Do this by lifting a corner of the turf. Do not allow the turf to dry out while it establishes, which should take approximately 2-3 weeks (weather dependent). Do not over water the turf, but ensure the substrate is damp. Over watering can promote grass domination in the sward. It is important to water the Wildflower Roof Turf occasionally during extended dry spells. Once well established the Wildflower Turf will tend to cope with most circumstances however the limited depth of growing medium does restrict the availability of water for the plants and additional consideration should be paid to irrigation. 2.9 If the roof is relatively large then a drip irrigation system can Irrigation be installed (optional). Pipes should be laid on top of the substrate and underneath the turf at root level across the gradient of the roof slope with T joints to a vertical supply/feeder pipe. Please refer to Wildflower Turf Ltd for more information if required.

#### 3.0 Wildflower Roof Turf Maintenance

3.1	addition of a light dose of fertilizer in the spring may improve plant development if required. Please refer to Wildflower Turf Ltd.	Fertilizer
3.2	Once established Wildflower Turf requires little maintenance. For the annual maintenance cut in the Autumn, it is important to cut the meadow down to 1 to 2 inches (25mm to 50mm) from the surface and remove all cuttings. This can be done by strimming and raking and collecting the cuttings. Make sure these tools are sharp. The cut is an important part of the meadows life cycle and ensures re-growth and species diversity year on year. Cuttings should not be left on the meadow, as they add undesirable fertility to the growing medium and can suppress the next year's growth. It is also important to remove any leaf litter that might fall onto the	Annual Maintenance



	area. Take care to avoid damage to the roof membrane or any drip irrigation pipes.	
3.3	The annual maintenance cut should be done in late September, early October. There is no need for a set date, but this timing will allow the plants in the meadow to regenerate before the first frost typically in November. You can choose to cut only half of the meadow area at one time to allow time for fauna to migrate to the uncut meadow. Allow some regrowth of the cut area before cutting the second half, but aim to have finished all cutting by the end of the first week of October. Over time alternate the areas that are cut early and the areas that are left as this will benefit species diversity.	Timing the cut
3.4	One cut (annual maintenance cut) is advised, however a second or third cut through the growing season is acceptable and offers an opportunity to tidy excess growth.	Number of cuts