

# RE WILDING GREATHAM

## Why Re-Wild Greatham ?

As a former farming community within the South Downs National Park, Greatham is perhaps uniquely placed by virtue of its connected linear grass verges, hedgerows, and generous playing fields, and remnant unimproved pasture to restore flower rich habitats.

This was a priority of Greatham Parish Council, it is also a priority of the SDNP, HCC and EHDC as well as being a personal priority of myself as an ecologist, Cllr Susie Harris, Chairman of GVH Committee Josh Dale-Harris and I hope many residents too.

## The National Context - Why are Meadows and wildflower verges so important ?

Wildflower meadows were once in almost every parish in the Country.

It has taken 6000 years to create the species rich grassland which Britain was once famous for. (Source: IGER - Institute of Grassland Research)

Hay meadows are species rich and have unparalleled plant diversity, they can contain as many as 150 species of different wildflower and grasses.

Meadows can also contain upto 40 species per sq Metre including fungi, insects, mammals, birds and herptiles. (Source: *Plantlife 2020*)

- 1/5 of all priority conservation species in the UK are associated with Meadows and unimproved grassland. (Source: *Plantlife 2020*)
- Meadows also prevent flooding by absorbing rain water far more effectively than so called improved grassland.
- Biodiverse meadows lock up and filter out more pollutants purifying air and water
- Meadows and acid grasslands contribute to carbon sequestration and capture far more carbon than even woodlands
- Traditional Hay Meadows and Unimproved Grassland provide a far wider range of amino acids, minerals and beneficial (medicinal) herbs for livestock that improved rye grass / dutch clover pastures and are preferred by grazing animals.
- Meadows and Verges encourage pollinators which we rely on to help produce our food.
- Meadows encourage a greater range of natural predators helping to keep agricultural insects pests at bay.

## Massive Habitat Loss

Yet, the scale of decline has been breathtaking we have lost 7.5 million acres in the UK thats 97% of wildflower meadows have been lost since the 1930s - thats less than a century! (Source: *Plantlife 2020*)

Meadows and unimproved grassland as an habitat cover just 1% of the UK. Source: *Plantlife 2020*)

Fortunately there are plans to try and reverse all this before its too late. The Government target plans [to create or restore 500,000 ha of Meadows by 2045 (Source: *HM GOVT*)

With climate change and mass extinctions happening all over the planet including right here in Britain we have a once in a life time chance to lead by example and put something back.

Hopefully what we do here will become an exemplar to other Parishes right across East Hants District, Hampshire and the National Park.

This is far too important to leave to Governments, farmers or even politicians. It is down to us to make the difference right here in our own communities, I hope you will agree by approving this grant application, that we can do just that, here right now - tonight !

Five areas in Greatham were looked at by ecologist Cllr Adam Carew for potential re-wilding. These are primarily located in the centre and southern end of the village. There is further scope and possibly funds to include more areas in a second phase of re-wilding on the Northern verges and Longmoor Rd which is predominantly acid soil  
At the bridge which is alluvial, at the B3006 and Farnham Rd Gateways.

Of these only 5 areas inspected only 4 were suitable for wildflower plug planting. The fifth is already of exceptional quality and requires minimum intervention and gentle management

The 5 areas are :

- 1. The Southern Verge - Opposite the Old Church Yard / L'Abris fellowship (Greatham Manor)**
- 2. Greatham Old Church (St John's Ruin) Churchyard**
- 3. The Triangle (Green) adjacent to GoC opposite St Johns (New)Church**
- 4. The Bank (Outside Liss Forest Nurseries)**
- 5. Greatham Village Hall Playing Fields**

All Wildflower Plugs are from Landlife flowers unless otherwise indicated

## **RE WILDING GREATHAM - 5 Areas**

### **1. Southern Verge - Petersfield Rd opposite Greatham Manor (L'abris Fellowship)**

The Southern Verge was identified by Cllr Susie Harris for wild flower enhancement. The verge provides a linear connection into the Village from the South and will have an immediate visual impact. In Biodiversity terms it links the Abris Fellowship Fields (which are also planned for habitat re-creation) to the St John the Baptist Churchyard (which has potential as a possible wildlife churchyard) and stands directly opposite Greatham Old Church (also dedicated to St John the Baptist) and the Triangle.

Due to delays regarding the HCC Pollinator Project and uncertainty of timings regarding HCC grass cutting regimes I am recommending hardy prostrate and low growing wildflowers here which are more resilient to mowing. Taller species such as those recommended for the Bank and Greatham Playing Fields - Field Margins can always be added at a later date.

## Southern Verge (opp L'Abris / Greatham Manor)

Wild Flower	Binomial Latin	Flowering Season	Colour
Autumn Hawkbit	<i>Leontodon autumnalis</i>	Jul-Nov	Yellow
Birds Foot Trefoil.	<i>Lotus corniculatus</i>	Jun-Oct.	Yellow & Red
Common Cats Ear.	<i>Hypochaeris radiata</i>	Jul- Oct.	Yellow
Common Daisy.	<i>Bellis perennis</i>	April-Sept.	White & Yellow
Germander Speedwell.	<i>Veronica chamaedrys</i>	May-July.	Blue & White
Cowslip	<i>Primula veris</i>	March-May.	Yellow
Devils Bit Scabious	<i>Succisa pratensis</i>	July-Oct.	Blue/Purple
Meadow Buttercup.	<i>Ranunculus acris</i>	May-Oct.	Yellow
Primrose	<i>Primula vulgaris</i>	Feb-May.	Pale Yellow
Mouse eared Hawkweed	<i>Pilosella officinarum</i>	May-Oct.	Yellow& Red
Red Clover	<i>Trifolium pratense</i>	May-Oct.	Red/ Purple
Self Heal.	<i>Prunella vulgaris</i>	June-Sept.	Purple
Silverweed	<i>Potentilla anserina</i>	June-Sept	Yellow
Yarrow.	<i>Achillea millefolium</i>	June-Nov.	White/ Pink

## GREATHAM REWILDING PROJECT

### 2. Greatham Old Churchyard. (St John the Baptist Old Church)

Having written management plans for a number of wildlife churchyards I believe minimal intervention, slight changes in ecological management with careful monitoring of this is a small site is key to producing the best results. There has been a Church here since 1282 serving Greatham as its Parish Church until a new Church also dedicated to St John the Baptist was erected in 1875. This means that the Old Churchyard has Mediaeval pasture which has had minimal disturbance p, bar mowing for almost 150 years. My advice as an ecologist to the then Chairman of GOC Committee last year was leave it for year without mowing and see what comes up.

This tiny churchyard is almost certainly one of the last vestiges of Greatham's unimproved grassland habitats it is therefore incredibly value not just as a species rich pasture but as potential source for wild flower seed thus helping to preserve local genetic strains of plant species. Harvesting and growing viable seed is not always easy but there is great potential as donar site to other areas around the Parish. Careful monitoring of plant species, sensitive timing of mowing operations and removal of biomass will all help enhance the existing ground flora. Additions of bird and bat boxes and a water source would further enhance its ecological potential.

#### **No Additional Wild Flower Plug Planted Advised**

there is already sufficient natural biodiversity on this unimproved grassland not to need any wildflower plugs at present. Although I note Josh Dale Harris has already planted some Yellow Rattle here with considerable success !

## **Grazing - Sadly Not Recommended**

Traditionally churchyards were managed by grazing. It was usually one of the Vicar's rights to graze what became to be known as God's acre. Grazing ideally with sheep is by far the best way to manage a Living Churchyard / Wildlife Churchyard.

Although some of the Downs churches are grazed extensively (as opposed to intensively), using rare breed sheep at low stocking density, this is not always practical with busy roads and dogs, so is sadly not advised in this instance.

## **Hay Cut July- Sept**

In terms of management minimum intervention is advised with a late hay cut in late July-September to allow vascular plants maximum time to flower and set seed, providing a rich and diverse nectar source from March-September.

If you are concerned about the grasses getting too rank, you may wish to experiment taking an early cut in June and then a second hay cut in September.

## **Remove Biomass**

The biomass (cuttings) **MUST** be removed. This prevents the build up of thatch and nutrients neither of which are helpful to wild flowers which prefer nutrient poor conditions. If using a lawn mower where possible use a model with a bag. If using a strimmer, which is usually easier with graves stones, it is essential to rake off the mowing afterwards.

The biomass generated can be composted or left in a sunny position which makes an excellent habitat for slow worms and small mammals. Providing there is no ragwort or litter contained within it, the mowings can even be given to livestock as hay. Hay for unimproved grassland is generally preferred by livestock and is better for them than rye grass pasture.

## **Keep Scrub in Check but Don't remove it all together**

Although it has ecological value in its own right, care is required to keep the scrub around the edge of the churchyard in check so it does not result in loss of unimproved grassland habitat. Remove all invasive scrub from the meadow sward such as briar and bramble and young trees so not to lose floristic diversity to ecological succession. Untidy scrubby corners should be retained where practical as they are important for wildlife.

## **Remove Non Native Species**

Remove any garden escapes from the Old Churchyard as they will outcompete native wild flower species.

## **Harvest seed - Donar Site**

As Greatham Old Churchyard is one of the few remaining pockets of unimproved pasture in the Parish my proposal is that it is used as a donar site to provide wild flower seed to other areas in the village. In this case it may be advisable to take a hay cut in July or early August so the sward has had opportunity to set seed but remains dry before the Autumn mists and wetter weather.

## **Mole Hills**

Mole Hills seem to offend some people but should be left as they provide a warmer microclimate for insects and fresh soil, liberating the seed bank and providing bare earth for plants to colonise.

## **Ant Hills**

These should not be mown or destroyed. These are likely to be yellow meadow ants and are indicative of old pasture. These are not only important in their own right but are important for some species of butterfly who lay their eggs in ant nests.

## **Graves in Use**

Graves that are newer or still tended should be treated respectfully.

Families will often prefer newer graves to be mown and kept tidy so as a rule should not be included in management as part of the wildlife churchyard. It is always a good idea to provide a compost area for flowers and a bin for plastics.

## **Ancient Yew**

This female specimen is one of the top 10 yews in Hampshire and is thought to be 1200 years old ! GPC and GOC Committee are already taking advice from the Ancient Yew Group which is to be applauded.

## **Enhancing Wildlife**

Bat boxes, hibernacular, nesting boxes, owl boxes even small ponds and bird baths all help to promote biodiversity within a Living Churchyard.

## **Plant Recording & Monitoring**

The site is already recorded with an annual DAFORN survey. This is excellent but to be of use to the management committee it needs to be in a form that is easily understood. (I translated the binomial Latin last year).

I recommend monitoring the sward for a year say Jan to Jan, roughly plotting colonies of the different wild plant species and mowing around them at the right time accordingly. I have found this by far the most successful way to increase wild plant volume and diversity in Wildlife Churchyards.

## **Operatives & Volunteers**

The key to good management of any habitat is to ensure that those doing the mowing know when to do it, what to avoid and what to look for. Passing on basic plant identification and explaining habitat management and the rationale behind it is both beneficial and essential.

## **Management Brief**

A simple management plan or brief would help enormously. In terms of what needs doing when, why and by whom. It needs to be easily understood and can help provide a rolling programme of projects, together with likely costs and timings. It can also help provide a structure and focus for an annual report. It should be reviewed and updated on a 5 year cycle.

## **Interpretation Boards**

Interpretation boards to explain the concept of a Living Churchyard and why it is being managed in a wildlife friendly manner is essential. I previously offered to pay for two interpretation boards At GOC, one for history the other for Wildlife but I understand GPC have already secured a grant from SDNP for this purpose.

### 3. Triangle, Forest Road (Adjacent to St John's Ruin aka GOC)

The Triangle where Forest Road meets Petersfield Road adjacent to Greatham old Church is semi improved grassland in which stands a Pedunculate Oak Tree. It is the perfect place for wild flower plugs that prefer semi shade such as Dog Violets and Lesser Celandines. Recommended species are designed to flower from March through to the end of October and include a number of pollinator species such as Birds Foot Trefoil, Red Clover, Self Heal and Common Daisy. Lower growing varieties have been chosen to help maintain the neat, closer cropped nature of the island.

Wild Flower	Binomial Latin	Flowering Season	Colour
Birds Foot Trefoil.	<i>Lotus corniculatus</i>	Jun-Oct.	Yellow & Red
Common Daisy.	<i>Bellis perennis</i>	April-Sept.	White & Yellow
Dog Violet	<i>Viola riviniana</i>	March-April	Violet
Lesser Celandine.	<i>Ficaria verna</i>	Feb-April.	Yellow
Mouse eared Hawkweed	<i>Pilosella officinarum</i>	May-Oct.	Yellow& Red
Primrose	<i>Primula vulgaris</i>	Feb-May.	Pale Yellow
Red Clover	<i>Trifolium pratense</i>	May-Oct.	Red/ Purple
Self Heal.	<i>Prunella vulgaris</i>	June-Sept.	Purple
Yarrow.	<i>Achillea millefolium</i>	June-Nov.	White/ Pink

### 4. BANK (Outside Liss Forest Nursery)

The bank outside Liss Forest Nursery runs NE to SW and thus is in full sun most of the day. There is already an excellent population of Primroses providing colour in Spring but only sparse wild flowers throughout the rest of the season, giving the impression that it looks uncared for. There is maximum opportunity here to plant taller herbaceous species to boost nectar to attract bees, butter and a host of attendant invertebrates. Wildflower plugs have been chosen to provide maximum nectar and colour.

#### Remove Invasive Scrub

Due to the steep angle and difficulty of mowing scrub has started to invade. This should be removed immediately so not to lose the precious grassland habitat.

#### When to Strim and Rake

The bank can be strimmed now to remove the thatch and any invasive shrubs prior to plug planting. After the wildflowers plugs have been planted the bank should be left for a whole season from March-Sept before it is strimmed or mown again. A late cut and rake to remove the biomass in September should be all that is required before the following year. After the first year it is recommended to mow the bank again in February.

Again the Biomass must be raked off to prevent nutrient enrichment and the build up of thatch. A late hay cut in July - September is preferable. If collecting seeds aim to cut by end of July - end of August to avoid damper weather in September as damp seeds can become unviable.

## Use Mowings to create a Habitat Pile

The resulting biomass could be used to provide a habitat pile. This should be placed in a sunny position at the top of the bank! Sunny corner are usually good options as it looks less untidy. This will provide an excellent habitat for all sorts of wildlife from insects, bank voles to slow worms.

## Attracting Butterflies - Potential Study Site / Donar Site

It is hoped within 1 year the bank will be biologically and visually improved. Within 2 years it may be possible to harvest seed from this site and use it to populate other wildflower verges in Greatham Parish. Providing species extinction does not dictate otherwise I would hope it would be possible to attract butterflies such as Gate Keepers, Common Blues and hopefully Marbled Whites. Taller plants and longer grasses are also favoured by grasshoppers. Despite its proximity to the road, this bank may in time be of use as an environmental study area.

## Interpretation Board

An Interpretation board here will help identify plants and animals aswell as explain grassland ecosystems. It should also explain conservation management techniques. Its mere presence should help reassure residents that the bank is both cared for and being managed for wildlife.

## BANK (Outside Liss Forest Nursery)

Wildflower	Binomial Latin.	Flowering Season	Colour
Autumn Hawkbit.	<i>Leontodon autumnalis</i>	Jul-Nov	Yellow
Black / Lesser knapweed.	<i>Centaurea nigra</i>	Jun-Oct.	Purple
Birds Foot Trefoil.	<i>Lotus corniculatus</i>	Jun-Oct.	Yellow & Red
Common Vetch	<i>Vicia sativa</i>	May-Oct	Pink
Common Cats Ear.	<i>Hypochaeris radiata</i>	Jul- Oct.	Yellow
Common Agrimony.	<i>Agrimonia eupatoria</i>	June-Sept.	Yellow
Common Mallow.	<i>Malva sylvestris</i>	June-Oct.	Pink/ Purple
Common Toadflax	<i>Linaria vulgaris</i>	Jul-Nov.	Pale Yellow
Cowslip.	<i>Primula veris</i>	April-Jun.	Yellow
Field Scabious.	<i>Knautia arvensis</i>	July-Oct.	Pale Blue
Greater knapweed.	<i>Centaurea scabiosa</i>	June-Sept.	Purple
Great Mullein.	<i>Verbascum thapsus</i>	June-Sept.	Pale Yellow
Goatsbeard.	<i>Trapopogon pratense</i>	May-Aug.	Yellow
Hedge Woundwort	<i>Stachys sylvatica</i>	June-Oct.	Purple
Lesser Stitchwort.	<i>Stellaria graminea</i>	Jun-Sept.	White
Lady's Bedstraw.	<i>Galium Verum</i>	May-Sept.	Yellow
Meadow Buttercup.	<i>Ranunculus acris</i>	May-Sept.	Yellow
Meadow Cranesbill.	<i>Geranium pratense</i>	May-Aug.	Blue
Musk Mallow	<i>Malva moschata</i>	Jun-Oct.	Pink
Nipplewort	<i>Lapsana communis</i>	June- Sept.	Yellow
Ox Eye Daisy.	<i>Leucanthemum vulgare</i>	May- Sept	White & Yellow
Primrose	<i>Primula vulgaris</i>	Feb-April.	Pale Yellow
Purple Toadflax.	<i>Linaria purpurea</i>	Jun-Oct.	Purple
Red Campion.	<i>Silene dioica</i>	April-Oct.	Deep Pink
Red Clover	<i>Trifolium pratense</i>	May-Oct.	Red
Self Heal.	<i>Prunella vulgaris</i>	Jun-Oct.	Purple
Vipers Buglos	<i>Echium vulgare</i>	Jun-Oct.	Blue
Yarrow.	<i>Achillea millefolium</i>	Jun-Oct.	White/ Pink

## 5. GVH PLAYING FIELDS

Greatham Village Hall playing fields appear to be semi-improved pasture.

According to National Vegetation Classification NVC - this is MG7 Grassland which includes improved swards, recreation grounds and amenity grassland.

The ground flora is typified by a hard wearing rye grass mix with dutch (white) clover ley, to fix nitrogen. This gives the grass a vibrant green colour and tends to be species poor in floristic make-up.

In ecological terms Greatham Village Hall playing fields should probably be classified as semi-improved. The good news is that there is remnant MG5 Hay meadow habitat still extant.

There are still encouraging quantities of meadow butter cup, common birds foot trefoil and black / lesser knapweed with occasional common sorrell and hop trefoil occasional in the sward, all of which are classic examples of plants that characterise MG5 Mesotrophic grassland, such as clay soil with greensand. I recommend not to add any of the existing species above as wild flower plugs to the proposed meadow in order to protect local genetic diversity.

### Plug Planting on GVH Playing Fields

Plug planting is the quickest and most reliable method for creating species rich grassland.

For MG5 Meadow re-creation I propose three separate zones on the GVH playing fields.

Having spoken to the Chairman of Greatham Village Hall Committee he is broadly supportive of this approach.

### 5.1. WILD FLOWER MEADOW

I proposed this should be created towards the top of the playing fields so not to interfere with recreation and kickabouts. This ensures that the meadow area is more secluded being away from the Village Hall and Car Park so more inviting for wildlife and passive enjoyment. It also gives GVH Committee the option of managing the rest of the playing field nearer the village hall more intensively should they so choose eg shorter grass for sports and ball games with more frequent mowing

I have carefully selected wildflower plugs that are suitable for MG5 Grassland so the meadow area is close as possible to natural habitat. Over the years, with the expansion grants for agri environment schemes and urban meadows numerous seed merchants have jumped on the bandwagon providing hay meadow mixes that not only include species totally unsuitable to the habitat but non native species as well. Similarly providing a wild meadow seed or plug mix suitable for southern England is far too broad as it takes no account of different habitats and the species requirements of the plant within them. There are numerous examples of bedstraw for example, the trick is to get the correct species for the correct habitat.

I propose we use the more species poor areas for enhancement with wildflower plugs.

These need to be planted in droves rather than mixing species like a meadow seed mix.

This is because pollinating insects are far more attracted to a number of plants in the same species than just one. Plant colonies can cross fertilise and expand which provides even more wild flowers and attendant wildlife as the meadow matures.

Josh Dale Harris as Chairman of GVH Committee has indicated where he thinks the area of wild Flower Meadow should go.

## 1. Greatham Village Hall Playing Fields :- MG5 Grassland - Wild Flower Meadow

Wild Flower	Binomial Latin.	Species Diversity	Flowers	Height	Colour
Autumn Hawkbit.	<i>Leontodon autumnalis</i>	-			
Birds Foot Trefoil.	<i>Lotus corniculatus</i>	Present.	May-Oct.	20-30cm	Yellow
Black / Lesser knapweed.	<i>Centaurea nigra</i>	Present.	May-Oct.	50 cm	Purple
Common Daisy.	<i>Bellis perennis</i>	Present.	May-Sept.	2.5-5cm.	White & Yellow
Common Sorrell. Red	<i>Rumex acetosa.</i>	Present.	May-July.	5-40cm	White &
Cowslip.	<i>Primula veris</i>	-	March-May.	10-15 cm	Yellow
Common Mouse-ear	<i>Cirsium fontana</i>	Present	April-Sept.	5-35cm.	White
Common Cats Ear.	<i>Hypochaeris radiata</i>	-	Jul- Oct.	20-40cm	Yellow with Red
Common Vetch	<i>Vicia sativa</i>	-	Jun-Aug.	15-70cm.	Pink
Germander Speedwell.	<i>Veronica chamaedrys</i>	-	April-July.	10-20cm.	Blue
Greater knapweed.	<i>Centaurea scabiosa</i>	-	June-Sept.	40-50cm.	Purple
Hop Trefoil.	<i>Trifolium campestre</i>	Present	June-July.	5-20cm.	Yellow
Lesser Stitchwort.	<i>Stellaria graminea</i>	-	May-Aug.	20-40cm.	White
Meadow Buttercup.	<i>Ranunculus acris</i>	Present.	May-Jun.	25-35cm.	Yellow
Meadow Cranesbill.	<i>Geranium pratense</i>	-	Jun-Aug.	75cm	Blue
Ox Eye Daisy.	<i>Leucanthemum vulgare</i>	-	May-Sept.	40-65 cm	White & Yellow
Primrose	<i>Primula vulgaris</i>	-	Feb-April.	10-20 cm	Pale Yellow
Red clover	<i>Trifolium pratense</i>	-	May-Sept	20-60cm	Red
Rough Hawkbit.	<i>Leontodon taraxacoides</i>	-	June-Sept	10-40 cm.	Yellow
Self Heal.	<i>Prunella vulgaris.</i>	-	Jun- Sept.	10-15 cm.	Purple
White clover.	<i>Trifolium repens</i>	Present	May-Oct.	10-30cm.	White
Yarrow.	<i>Achillea millefolium</i>	-	Jun-Oct.	20-50 cm	White

**Key :- Present** - indicates that the plant is already in sufficient quantity not to add plugs of that particular species in order to preserve local genetic strains.

## 5.2. DAMP MEADOW AND FLUSHES - MG5 SUB COMMUNITY

There are some areas of the playing fields that are wetter than others. This could be due to springs or areas of water retention in the clay. These wetter areas provide a wonderful opportunity to use a slightly different array of wildflower species more suited to damp grassland which will enhance biodiversity in terms of the habitat mosaic. At a later stage you may even consider recreating pockets of rush pasture with scrapes in the upper fields which can be particularly attractive to birds like snipe.

## 2. GVH Playing Fields - MG5 Sub-Community - Damp Grassland

Wild Flower	Binomial Latin.	Species Diversity	Flowers	Height	Colour
Birds Foot Trefoil.	<i>Lotus corniculatus</i>	Present	May-Oct.	50 cm	Yellow
Common Agrimony.	<i>Agrimonia eupatoria</i>	-	Jun-Sept.	50 cm	Yellow
Common Sorrel.	<i>Rumex acetosa</i>	Present.	May-July.	5-40cm	White Red/Pink
Lady's Bedstraw.	<i>Galium verum</i>	-	Jun-Sept.	50-70cm.	Yellow
Lady's Smock.	<i>Cardamine pratense</i>	-	April-May.	40-45cm.	Pink/ Mauve / White
Meadowsweet.	<i>Filipena ulmaria</i>	-	Jun-Aug.	80-120 cm	Cream
Meadow Buttercup.	<i>Ranunculus acris</i>	Present	May-Jun.	25-35cm.	Yellow
Meadow Vetchling.	<i>Lathyrus pratensis</i>	-	May-Aug.	30 cm	Yellow
Purple Loosestrife	<i>Lythrum salicaria</i>	-	Jun-Aug.	1-1.2m.	Purple
Red Clover	<i>Trifolium pratense</i>	-	May-Sept.	20-60 cm.	Red
Ragged Robin.	<i>Lychnis flos-cuculi</i>	-	May-Jun.	75-100cm.	Pink
Silverweed	<i>Potentilla anserina</i>	-	Jun-Aug.	5-15cm.	Yellow
Tufted Vetch.	<i>Vicia cracca</i>	-	Jun-Sept.	50-80cm	Purple

**Key :- Present** - indicates that the plant is already in sufficient quantity not to add plugs of that particular species in order to preserve local genetic strains.

### 3. Hedge verge or field margin along the outer perimeter.

This perimeter of the playing fields is heavily used by dog walkers and do not need to be mown as frequently as the central fields for sports and recreation. This presents us with an excellent opportunity for taller wildflower species and rank grasses such as cocks foot which are attractive to small mammals and their predators eg barn owls, kestrels, foxes.

### 5.3. GVH PLAYING FIELDS - FIELD MARGINS - WILD FLOWER PLUGS

Wild Flower	Binomial Latin.	Species Diversity	Flowers	Height	Colour
Birds Foot Trefoil.	<i>Lotus corniculatus</i>	Present	May-Oct.	50 cm	Yellow
Black / Lesser knapweed.	<i>Centaurea nigra</i>	Present	May-Oct.	50 cm	Purple
Tufted Vetch	<i>Vicia cracca</i>	-	Jun-Sept.	50-80cm	Mauve - Purple
Meadow Cranesbill	<i>Geranium pratense</i>	-	Jun-Aug.	75cm	Blue
Meadow Buttercup.	<i>Ranunculus acris</i>	Present	May-Jun.	25-35cm.	Yellow
Greater knapweed.	<i>Centaurea scabiosa</i>	-	June-Sept.	40-50cm.	Purple
Greater Stitchwort	<i>Stellaria holostea</i>	-	April-June.	40-50cm.	White
Hedge Bedstraw.	<i>Gallium mollago</i>	-	Jun-Sept.	50-70cm	White
Musk Mallow	<i>Malva moschata</i>	-	July-Aug	40-60cm	Pink & Purple
Ox Eye Daisy.	<i>Leucanthamum vulgare</i>	-	May-Sept.	40-65 cm	White & Yellow
Purple Toadflax.	<i>Lineria purpurea</i>	-	June-Oct	50-70cm	Purple
White Dead Nettle.	<i>Lamium album</i>	-	March-Nov	30-45cm	Greenish White

**Key :- Present** - indicates that the plant is already in sufficient quantity not to add plugs of that particular species in order to preserve local genetic strains.

#### **5.4 MEADOW RECREATION - TRIAL TURF STRIPPING (1 Yr Project)**

In addition to wild flower plug planting I propose that Greatham Parish Council and Greatham Village Hall Committee seriously consider turf stripping two trial areas of no more than 20 metres square as a method of Wildflower meadow creation.

1. For MG5 Wild Flower Seed 2. For MG5 Grass Mix Seed.

Turf stripping (ie removal of the layer of top soil) followed by wild flower seeding is generally considered to be the most successful way to recreate unimproved grassland. (Pywell et al, 2007)

If it is found after a year this has been a success then the decision can be taken where to extend these or not.

Before starting It is important to consult the GVH Deeds and AHBR database (SMR - Sites and Monuments Register) to ensure there are no underlying utilities or archaeological remains.

Turf Stripping can be done by hand with spades and forks unless someone has access to small Kabota or Digger.

Once the top soil has been removed the ground should be scarified with a rake.

The seed is then measured out usually at 4g-5g per metre square. It can be mixed with sand to ensure a more even distribution.

Local examples of Turf Stripping can be seen at Noar Hill NNR and around the SPA Heaths And Commons that surround Whitehill & Bordon. Sometimes a turf-stripped area may be temporarily fenced off or electric fenced to fend off Grazing animals such as livestock, deer and rabbits, in order to allow plants an opportunity to establish.

I certainly think a trial area is worth serious consideration !

##### **5.4.1 WILD FLOWER SEED MIX - LANDLIFE LW5 MIX FOR MG5 SOILS**

I recommend that an area of no more than 20m square is turf stripped and seeded with wild flower mix.

The best I could find which did not contain rye grass, unsuitable or non native species is the LW5 Wildflower mix from Landlife.

This contains mostly perennials to provide permanent meadow and colour from May through to September / October and has the RHS Perfect for Pollinator stamp of approval.

I am not advocating using a meadow mix that includes grasses as they tend to out compete flowering plants. It is far better to get the wildflowers established first before adding grass seed. Grass seed can be added at a later providing they are of appropriate species and perennial rye grass free. I propose a second area of turf stripping to sow wild grass seed separately, please see below.

Sowing rate is 3/5g per Sq M. - I would go for 5g for better density / success rate as using more seed there is more chance of success 20 sq m. = 100g seed for £22

LW5 mix includes the following species:

Wildflower.	Qty as a %.	In Flower	Height	Annual/Perennial
Black / Lesser Knapweed	9	May-Oct.	50 cm	P
Betony.	2.	July-Sept.	50 cm	P
Black Medick.	6	May-Oct.	5-15 cm	A
Common Agrimony.	10.	Jun-Sept.	50 cm	P
Common Sorrel.	5.	May-July.	5-40cm	P
Cowslip.	1.	March-May.	10-15 cm	P
Field Poppy.	1.	May-July.	20-30cm	A
Field Scabious	8.	July-Sept.	20-30cm	P
Greater Knapweed	5.	June-Sept.	40-50cm	P
Hoary Plantain.	2	May-Sept.	10-15cm	P
Lady's Bedstraw.	3	Jun-Sept.	50-70cm	P
Meadowsweet.	2.	Jun-Aug.	80-120 cm	P
Meadow Buttercup.	5.	May-Jun.	25-35cm.	P
Ox Eye Daisy.	3	May-Sept.	40-65 cm	P
Ribwort Plantain.	3.	April-Sept.	20-35 cm	P
Ragged Robin.	4.	May-Aug.	40-65 cm	P
Salad Burnet.	7.	Jun-Sept.	15-50 cm	P
Self Heal.	5.	Jun- Sept.	10-15 cm	P
Tufted Vetch.	3.	Jun-Sept.	50-80cm	P
White Campion.	3.	May-Oct.	35-55 cm	P
Wild Carrott	3.	Jun- Oct.	75-95cm	P
Wild Clary	3.	May-Aug.	30-40cm	P
Yarrow	3.	Jun-Oct.	20-50 cm	P
Yellow Rattle	4.	Jun-Sept.	15-40 cm	A

Personally I would not have included the clary as its unusual, the hoary plantain as it prefers chalk, the poppy as its annual and needs cultivated / arable ground and the ribwort plantain as it grows everywhere. Yet this is the best seed mix I can find for the soil.

#### 5.4.2 GRASSES

Turf strip area of least botanical interest removing best wildflowers to replant. Rake  
Sow grass seed 5g to sq Metre Either in Autumn (Sept / Oct) or Spring (March / April) Roll or lightly trample in. Water regularly as required. Allow grass to grow until end of August / Sept then mow to a height of 1-2 inches and remove biomass (compost hay crop or use for donor seed eg on adjacent plot). It is worth mowing again in Spring to encourage the grass to tiller.

Suitable Grass, Sedge and Rush Species for our project include : -

Grass Species	Binomial Latin
Common Bent.	<i>Agrostis capillaris</i>
Creeping Bent	<i>Agrostis stolonifera</i>
Crested Dog Tail.	<i>Cynosurus cristatus</i>
Meadow Foxtail.	<i>Alopecurus pratensis</i>
Red Fescue.	<i>Festuca Rubra</i>
Meadow Fescue.	<i>Festuca pratensis</i>
Smooth Stalked Meadow Grass.	<i>Poa pratensis</i>
Rough Stalked Meadow Grass.	<i>Poa trivialis</i>
Sweet Vernal Grass	<i>Anthoxanthum odorata</i>
Timothy.	<i>Phleum pratensis</i>
Yorkshire Fog.	<i>Holcus lantanus</i>

#### RUSHES

Soft Rush.	<i>Juncus effusus.</i>
Hard Rush	<i>Juncus inflexus</i>
Field Wood Rush.	<i>Luzula campestris</i>

#### SEDGES

Glaucous Sedge.	<i>Carex flacca</i>
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These can be bought separately.

The closest grass seed mix I have been able to find is **Emorsgate Seeds Grass Mix EG4** for clay meadows, which should be sown at 5g per sq metre :-

5g per Sq M x 20m Sq = 100g = 0.1kg = £5 ! Which is remarkably inexpensive.

#### EMORSGATE EG 4 GRASS MIX

This grass mix includes :

English Name.	Botanical Latin	% of Seed Mix
Common Bent.	<i>Agrostis capillaris.</i>	12.5
Crested Dog Tail.	<i>Cynosurus cristatus.</i>	32.5
Meadow Foxtail.	<i>Alopecurus pratensis.</i>	1.25
Sweet Vernal Grass	<i>Anthoxanthum odorata.</i>	3.75
Red Fescue.	<i>Festuca Rubra.</i>	30
Smooth Stalked Meadow Grass.	<i>Poa pratensis.</i>	12.5
Meadow Barley.	<i>Hordeum secalinum*.</i>	1.25
Smaller Cat's Tail.	<i>Phleum bertolonii *.</i>	5
Quaking Grass	<i>Briza media *.</i>	1.25

\* The bottom 3 species are not on my list. Quaking Grass is the prettiest of all UK grasses but usually occurs on Limestone, Chalk or calcicolous clay: Greatham is a mix of clay and greensand so likely to be more neutral - acidic; so it may not survive. Smaller Cat's Ear is a smaller and less frequent version of Timothy so is eminently suitable. Meadow Barley is common in the South so is also suitable.

## 5.5. BULBS - Snakeshead Fritillary.

In addition I would like to offer GPC / GVH Committee 500 Snakeshead Fritillary bulbs. These need to be planted this Autumn for next Spring (April-May). Although they are a native flower they are particularly rare in the wild and on the Red Data List but due to their attractive dusky pink and white nodding flowers are often planted in parkland and gardens. I think it would be inappropriate to mix them with other meadow plants but as they are highly visually attractive I would suggest they are planted where they can be seen and appreciated close to the Village Hall and Car Park without compromising land set aside for sports and games.

Wildflower Name	Binomial Latin	Height	Flowering Season	No.	Type.	Cost.	Supplier
Snakeshead Fritillary	<i>Fritillaria melegris</i>	20-30cm	April-May	500	Bulbs	£60	Meadowmania

## 6. COSTS

### 6.1. Wildflower Plugs

NB. all plugs are from Landlife unless otherwise indicated.

WILDFLOWER.	VERGE.	GVH.		PLUGS			No.	COST
		TRIANGLE.	BANK.	MEAD	WET	F.M.		
Autumn Hawkbit.	X	X.	X	X.			25	£18
Birds Foot Trefoil.	X		X	X.	X	X	25	£18
Black / Leaser Knapweed			X	X.		X	25	£18
Common Agrimony.			X		X		25	£18
Common Cats Ear.	X		X	X			25	£18
Common Daisy.	X	X		P			150	£80
Common Mallow.			X	X			25	£18
Common Toadflax			X				25	£18
Common Sorrell				X	P		25	£18
Common Vetch			X	X				£17.50 NS
Cowslip	X		X				25	£18
Devils Bit Scabious	X						25	£18
Dog Violet		X					30	£21 NS
Field Scabious.			X				25	£18
Germander Speedwell.	X.			X				FREE AC
Greater Knapweed.			X.	X.		X	25	£18
Greater Stitchwort						X	5	£5 NS
Great Mullein.			X				5PTS	£15 NS
Goatsbeard.							5	£5 NS
Hedge Bedstraw.						X	25	£18
Hedge Woundwort			X					FREE AC
Hop Trefoil				P.			-	
Lesser Celandine.		X					75B	£20.25NS
Lady's Bedstraw.			X		X		25	£18
Lady's Smock.					X		10	£18 NS
Lesser Stitchwort.			X	X			10	£11.50 NS
Meadowsweet.						X	25	£18
Meadow Buttercup.	X		X	X	X	X	25x18	
Meadow Cranesbill.			X	X		X	25	£18

WILDFLOWER.	GVH.		PLUGS				No.	COST
	VERGE.	TRIANGLE.	BANK.	MEAD	WET	F.M.		
Meadow Vetchling.							25	£18
Mouse eared Hawkweed	X	X.					25	£18
Musk Mallow			X			X	25	£18
Nipplewort							FREE AC	
Ox Eye Daisy			X	X.		X	150	£85
Perforate St John's Wort			?				N/A	
Primrose	X	X.	P.	X			25	£18
Purple Loosestrife					X			£18
Purple Toadflax.			X			X	FREE AC	
Ragged Robin.					X.		25	£18
Red Campion.			X				25	£18
Red Clover	X	X	X	X	X		25	£18
Rough Hawkbit.							25	£18
Self Heal.	X	X.	X	X			25	£18
Silverweed	X				X		FREE AC	
Tufted Vetch.		X.		X.	X.		25	£18
Vipers Buglos		X					25	£18
White (Dutch) Clover.				P			-	
White Dead Nettle.						X	5 Pts	£15NS
Yarrow	X	X	X				25	£18
Yellow Rattle				P			-	
							Sub Total	£964

### Key.

Verge - in front of Abris Field opposite Greatham Manor and Old Church. Short sward

Triangle - Triangle of grassland next to GOC. Semi shade due to Tree. Short sward

Bank - Sunny Bank opposite Greatham Village Hall

GVH - Greatham Village Hall Playing Fields

Mead - Meadow area Creating MGV5 Habitat at top of fields.

Wet - Wet area or Flush allows for different species to promote biodiversity

FM - Rough Field Margin around Playing Fields allows taller plants & hedge species

No. - Number of Plugs

Cost - Cost of Plugs ordered from Landlife Flowers unless indicated otherwise

X Wildflower Plugs of this particular species required for this area.

N/A Not Available at present

P Wildflower already present in quantity. No plugs as will mess up gene pool.

FREE AC. Cllr Carew will provide local provenance species from his wildlife garden

NS. - Naturescape. Plug Plants not available from Landlife so order from NS

PTS - Pot grown plant instead of Plug 9cm. More expensive. Only form available.

B - Bulbs instead of plugs also plant Sept/Oct

## 6.2. SEEDS & BULBS

LANDLIFE	LW 5. Wild Flower Mix for MG5 Grassland	0.1kg(100g)	£22
EMORSGATE	EG 4. Wild Grass Seed for MG5 Grassland	0.1kg(100g)	£5
MEADOWMANIA	Snakeshead Fritillary Bulbs	x500.	£60
			<hr/>
			£87
		Postage & Packing	£13
		Sub Total.	£100

## 6.3 INTERPRETATION BOARD

The Acorn Workshop, Bognor Regis PO2 3BW	
Woodland A2 Interpretation Panel Frame (Oak) - Lectern Style	£265
A2 PrimaDura Panel (10yr Warranty).	£140
Delivery.	£100
	<hr/>
	Sub Total £505

964  
100. +  
505

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**TOTAL. 1579**

I therefore have great pleasure in inviting Greatham Parish Council to apply to me for a grant of £1579

## 7. SOURCES :

Plantlife Website  
IGAR - Institute of Grassland Research  
HM Govt Defra Website  
Rodwell. J. British Plant Communities NVC Classification Vols 1-3  
Phillips R. Wildflower of Britain  
Rose F. The Wild Flower Key  
Fitter & Fitter Wild Flowers of Britain & Ireland  
Blakesley D & Buckley P. Grassland Restoration and Management  
Baines C. - Habitat Restoration  
Carew A - Wildlife Churchyard Management Plans (Various)