

**SHREWSBURY TOWN COUNCIL
RECREATION & LEISURE COMMITTEE
8 November 2023**

Officer: Danny Powell – Acting Operations Manager

**IMPACT OF WEATHER ON GROUNDS MAINTENANCE
OPERATIONS DURING 2022/23**

Purpose

- (i) To report on how the Grounds Maintenance operations have been influenced by weather conditions during 2022 and 2023.
- (ii) To consider how these changes to climatic condition will affect grounds maintenance functions going forward.
- (iii) To review recommendations.

Introduction

In 2021 the Head of Operations provided a report to this Committee on the impact changes to climate were having on grounds maintenance operations. This report goes into the more extreme condition the grounds maintenance operations has faced since then, echoing the real impact the climate emergency is having at local level.

In 2022 and 2023 the weather conditions have been opposites. One hot and dry, the other wet and mild. At times this has placed significant strain on being able to maintain the estate in terms of impact on staff, excessive use of machinery and changes to planting conditions.

Weather for 2022/23

The two years could not have been more different. 2022 had some of the highest annual temperatures, with some days above 40c. There was little or no rain during July and August. The year started with New Years Day being 16.3c. Then every month of the year had above average temperatures, with January and February having wet spells. During February we had 3 major storms, Dudley, Eunice and Franklin. 2023 started very similarly, with January and February being mild and wet. During both 2022 and 2023 saw exceptional flooding episodes with both the Quarry and County Ground suffering the greatest open space impact.

Then the weather changed, with March being the wettest since 1981 and April being a cold month. May started with heavy rain, before the rest of the month became fine and dry. This carried on into June which was warm and humid becoming hot for two weeks. After which the summer became wet with average temperatures. September and October have carried on in a similar vein, being wet and warm and no frost yet.

Floral Maintenance.

Plants.

During summer 2022 we found that certain plants struggled with the high temperatures and did not flourish. To combat this, we have started to look at drought tolerant plants and to carry out more sustainable planting (using herbaceous/perennial planting). This year, the work on the plants has had to change massively. Plants that performed well last year, have been poor or failed (particularly Begonias, Salvias & African Marigolds). This is because of the wetter and duller growing conditions; this will be an on-going problem. We cannot foretell the weather for the year ahead. We can overcome this problem in the floral infrastructures by planting with a cross section of plants, some which like dry/hot conditions and others which like wetter conditions. If one dies out the other will flourish. Every year the staff review the success of the planting programmes, to ensure optimum floral benefit.

Watering.

The floral infrastructures during summer 2022, dried out rapidly. Because of this we had several operatives out watering every day. The very high temperatures on several days caused the water in the planter/basket reservoirs to get so hot that it scorched the plant roots, so killing the plants. This year it has been just the opposite. We have only used two members of staff, to carry out all watering duties, but have found that some of the tubs/baskets have again died off. This time reservoirs have over filled because of the rain, and this has drowned the plants. This year staff have had to go round emptying the water out to keep the plants alive.

Grass Growth

Grass maintenance has changed in the last 25 years. In the past come October, all mowers were put away and did not reappear till the following March. Now with milder winters the grass does not stop growing all year round. This is because grass growth is governed by the soil temperature and not the air temperature. Because our winters are now milder, with little frost, the soil temperature stays at a range which keeps the grass growing.

Grass maintenance is carried by a wide range of machines, on many different surfaces with many different sub-surfaces. The difference between one side of the town to the other is hugely significant. It is not unknown for areas like Sundorne to not have started cutting while places like Meole will already be on their second or third cut.

Verge Mowing (Batwing mowers)

In 2022 this started in late March and was full time by a three-man team until end of June. During July, August and September only areas where the grass was growing were cut. This was by a single member of staff, rising to two with the last cut of the season. Verge mowing stopped at the end of September.

In 2023 we started mowing in February, when the ground conditions allowed and stopped in March because of the weather. We restarted in April, with a four-man team and have mown every month until October. Some days have been lost, because the ground has been too wet and during October, we have reduced to a two-man team. With the warm and humid conditions this season, we have at times struggled to keep on top of the grass growth. Some areas have looked uncut, but the grass has grown so quickly, we could have cut it more often. The varying geological conditions across the town also impact greatly on areas which can and cannot be cut. The eastern side of the town has a large clay core, whilst the west is more porous. Therefore Meole, Radbrook and Copthorne can be cut sooner than Sundorne and Harlescott areas.

Large Area Tractor Mowing

During the 2022 cutting season, the tractor was out cutting, when ground conditions allowed every month. Jan-Feb, sports pitches March -June, full time. July-August where required Sept-Nov, sports pitches and certain areas.

In 2023, we have again cut in January and been out every month. Some months we have cut only sports pitches, but since March we have tried to cut the whole round every fourteen days. This has been difficult as the sports pitches and schools we maintain have had to be cut more often. This is because the grass has been growing so quickly. We have had complaints about the amount of lying grass after each cut. On sports pitches we have used a cut and collect to remove any lying grass, but the amount of grass collected can be several cubic meters. This makes it too expensive to carry out on all areas. We have tried lifting the height of cut, but all this achieves, is the length of sward becomes too long and the height of cut must be lowered back and the amount lying grass is worse.

Fine Turf

Cutting took place all year round, to different frequencies, depending on fixtures. We have aerated more, to let the rain into the soil profile and to reduce the amount of standing water on playing surfaces and to reduce water runoff, in heavy rain. The timing of work is now more weather dependent and has to change daily because of the weather. Wet ground we have to keep machinery off, the long hot periods of 2022, do we cut or not to protect the sward. Both have led to complaints from users.

Mobile Round and Rural Mowing.

These were cut to the same time frequency as the verge mowing.

School Mowing and Private Contracts Mowing.

Across the two seasons, these were cut to the specification the client had set. We did reduce the number of cuts during the summer of 2022. We then reduce the cost to the client. This year a number of schools have asked that the frequency of cutting be increased and paid accordingly.

Hedge and Shrub bed maintenance.

The hot dry summer of 2022 reduced the grow on both the hedges and shrubs. This then reflected in the amount that had to be trimmed off that autumn. 2023 has seen growth return to normal and in places, hedges have grown more. In places this excessive growth has seen hedges needing to be cut as a matter of urgency and the volume of growth could extend the cutting season into December.

Trees

Erratic climate conditions are beginning to have an impact on tree stock especially with sudden changes in short periods. In times of hot arid weather, limbs are more prone to failing and the Tree Team has had to undertake emergency work to make huge branches safe. Last year saw many trees go into stress. As an example the harvest of acorns was immense as all Oak trees sought to provide new growth.

As conditions change further and the council's tree stock matures further, more inspections will be required. In areas like the Quarry, the presence of deadwood in the trees and the extremely high footfall, means that the trees need to be managed carefully.

Pests and Diseases.

We are seeing more pests and disease affecting trees due to the warmer climate. There are many species of invertebrate pests which could not survive in the UK previously but are now settling further north each year. Many of our trees are not resilient to these pests due to lack of exposure, so maybe hit harder than the same species living in more southern countries. Coupled with other stresses such as drought and flooding occurring more frequently, this is taking a toll on their survival. This has resulted in more tree problems and the trees will need to be inspected regularly.

Conclusions

Planting and watering.

We have developed a plan to plant more sustainable and drought tolerant plants across our sites. The poor growth of some bedding plants has always been an issue because of the weather. Each year is different and our displays, to the public look good. We change our watering policy, depending on the weather conditions each year and now purchase planters with a water reservoir and capillary matting to combat the hot weather.

Grass Mowing

Mowing has now become a twelve month of the year operation. The only time it stops is when the ground conditions are too wet and damage to the surface would happen (muddying and rutting). To not mow through the autumn/winter months, whilst the climate is ideal for grass growing, would cause excess wear on the machines, when mowing restarted. Large amounts of lying grass, would kill the sward underneath. The long grass would trap litter and other debris, the litter would be cut up and any other debris would damage mower blades. The mowing of long grass causes the machine to work harder, so using more fuel and oil. The cut grass gets carried on to footpaths and roads and long uncut grass looks untidy. The continuation of mowing through the autumn/winter has the detrimental effect, that the staff carrying out this operation are usually deployed to shrub bed and hedge cutting work during autumn/winter. It also comes at a cost to the Town Council as we are only paid by Shropshire Council to mow from April-September.

Hedge and Shrub maintenance.

The amount of growth is influenced by the climate, because of this the length of time to carry out the operation, fluctuates from year to year. In 2023, shrub and hedge pruning is going to be a longer season. This also increases the amount of green waste we produce.

Staff Welfare.

During summer 2022, we had some staff absent through headaches and other minor illness symptoms following days of extreme heat. Many of our operatives work on uncovered ride on machinery or out on playing fields, for the whole day. Whilst they wear hats and sun protection and take regular breaks in the shade. The heat from machine engines means they are working in air several degrees higher than the ambient temperature. The summer of 2023 has found these operatives working out in the rain all day. They are issued with waterproof PPE, but they still return to the depots at the end of the working day soaked through.

New Technology

The Grounds Maintenance Industry continues to embrace new technology. Staff keep abreast of new ways of working through continued engagement with sector bodies including the Midlands Park Forum and the Grounds Management Association. Staff regularly attend sector shows like Saltex to review new initiatives and the Team regularly have the opportunity to test new machines.

Staff have recently been testing white-lining machines that are able to mark out sports pitches using GPS technology. Whilst the equipment is not cheap to purchase, the time taken to mark out a pitch is significantly less and given staff mark out 64 football pitches alone the return on investment makes the consideration of purchase a very viable option.

Matters for Consideration

Over this winter season the Operations Managers will look to undertake the following work:

- (i) Review how grass verges are maintained with Highways Colleagues with a view to leaving some verges to grow wild;
- (ii) Review the Town Councils Tree Management Plan and in particular the tree inspection regimes in prime locations;
- (iii) Review the choice of planting to develop more sustainable and resilient planting schemes;
- (iv) Review the impact on machinery particularly taking note of repairs and servicing, fuel used and the replacement/depreciation period of kit;
- (v) Review new technology to potentially free up staff and improve efficiency;
- (vi) Review the effect on staff of climatic conditions and to maintain an estate in ever changing adverse conditions.

RECOMMENDATIONS

- (i) That the contents of the report are noted;**
- (ii) That Officers report back to the Committee on plans for the 2024 Growing Season;**
- (iii) That Officers feed into the Finance & General Purpose Committee budget process any operation needs.**