

Agenda item 4

For decision – A course of action to control weeds and litter in the town centre

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*Figure 1: Before and after weed clearance Gentle Street*

## Background and current situation

There is a long-standing weed problem in Frome Town Centre. In response to the nature crisis FTC took the decision in 2019 to stop the use of herbicides. Mendip District Council also stopped using them at the time. However, without the adoption of an effective alternative method of treatment, the weed problem in the last 5 years has become much worse. Somerset Council have responsibility for weed removal in the public realm but since herbicide use was stopped there has in practice been no weed management in the town centre other than occasional community-based clearance providing only a localised temporary respite.

As a result, weed growth has increased and the plants have become more established with stronger root network producing more vigorous growth. Consequently, the weeds are more of an unsightly presence within the town centre, even harder to eradicate than 5 years ago and are causing actual damage to the street infrastructure such as slabs of the pavement cracking, or cobbles dislodging, the ground becoming uneven and creating tripping hazards.

In 2023 FTC recruited a ranger to manage the presentation and upkeep of the town centre, with working on the weed problem one of the key aims. The weed management approach has been by means a powered pedestrian weed removal machine and follow on clear-up.

Although this takes time, especially the clear-up stage, the focus this work has been given has made a big difference to the streets when they are cleared.

However, because the weed removal machine only removes the above ground growth, the resilient root network remains, and the weeds simply regrow. Shoots are visible in just weeks and within a short period of time the street is back to the same situation before it was cleared. In fact, by removing the green vegetation this actually *stimulates* plant regrowth and consequently strengthens the roots in the same way as the grass responds with extra vigour when a lawn is cut.

Neither doing nothing, nor even removal by a powered walk-along machine, are effective or sustainable solutions for long term weed management. This paper is a review of the potential options for effective long-term management.

*Figure 2 - Before and after at the Church of St John*



## Review summary

This paper will assess the pros and cons and time/cost/benefit of 4 options:

1. Continue with manual removal (as a benchmark for comparison)
2. Herbicide
3. Foamstream
4. A Street Sweeper vehicle

### Option 1 – Continue as we are

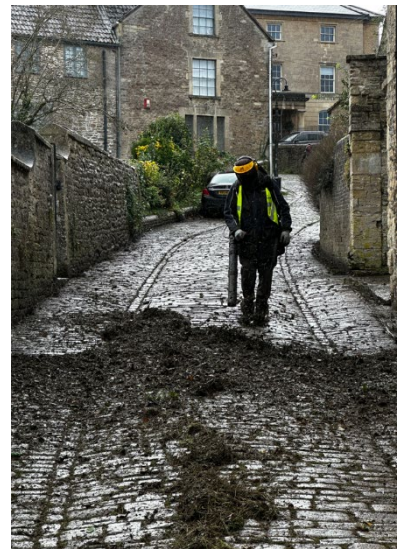
It currently takes approximately 450 hours per year to undertake the manual weed clearance in the town centre area with a powered pedestrian weed remover. This is approximately  $\frac{1}{4}$  of the working time of a full-time post.

While the initial results make a notable impact, the problem simply returns, and the weed vigour actually increases.

It is a moot point whether this option is better than doing nothing though it certainly helps give streets an occasional presentation lift. However, to fund  $\frac{1}{4}$  of a person's role for making no long-term improvement does not seem sustainable.

If we did continue the pedestrian option, the plan would be to speed up the collection of vegetation process with a powered-sweeper. The cost of which is approx. £2k. This option is also part of the Foamstream solution (see below)

*Figure 3 – Clear-up after weed removal*



*Figure 4 Hyundai 100cm Self Propelled Yard Sweeper Powerbrush (HYSW1000)*



Costs, Time and Pros/Cons Summary Option 1 – Continue as we are

Continue as is		
Purchase Price	£2,000	
Running Annual Costs		£400 Brushes £100 Fuel
Running Costs Total	£500	
Total Cost	£2,500	
People Time in Weeks/year	12.6	
<b>Pros</b>	Better than doing nothing Looks great initially	
<b>Cons</b>	Time Weeds remain Damage Unsightly	

Option 2 – Herbicide

Frome Town Council took the decision in 2019 to go herbicide-free to make a positive contribution to the nature emergency. The nature crisis has, if anything, become more acute since 2019. The latest *State of Nature* report (2023) found that the UK is now one of the most nature-depleted countries on Earth with no less than 1 in 6 species at risk of extinction. So, the need to take all possible steps to enable nature to thrive remains just as compelling now as when the decision was originally taken.

The question of the use of herbicide is included here due to the results of 5 years of ineffective weed management in an urban situation leading to mounting issues for both town centre care and presentation and infrastructure damage.

As context, Frome is not the only council to be re-assessing its approach to weed management in the light of the effects from a self-imposed policy banning herbicide use. Brighton and Hove City Council took the decision to go herbicide free at a similar time to Frome in 2019 and have also found that manual management was not viable. They had 6 staff employed for weed management at a cost £190k (this included highways).

During the last five years the legal context guiding the use of the main chemical to curb weeds - Glyphosate (Roundup) - has evolved. In 2020 the USA amended their earlier 2015 regulation that had concluded that Glyphosate was carcinogenic to humans. The updated conclusion was

that the health risks principally applied to situations where chemical drift can occur, largely confined to scale agricultural application. Then in December 2023 the European Commission, after reviewing all the safety considerations for health, people, animals and the environment, overturned their 2018 ban, enabling Glyphosate use once again.

In response, in January 2024, Brighton and Hove decided to re-introduce herbicide management for urban weed management situations.

*Figure 5 - Controlled Droplet Applicator Lance*

They use a spraying system called controlled droplet application which includes in the sprayed solution a thickening agent that all but eliminates any residual risk of chemical drift. For the purposes of this review to compare weed management options, this is the approach considered here.



A controlled droplet applicator “lance” and the chemical it uses would need to be purchased. A Glyphosate cartridge, with the anti-drift additives, like the one shown below, costs approximately £27. It will deliver 1,400 linear meters of 1.2m wide spray. Around 6 cartridges would be needed to cover the town centre at a cost of approx. £160.

*Figure 6 - Chemical Cartridge 750ml for lance*



Personal Protective Equipment (PPE) would be required, and this would consist of suitable suit, goggles, gloves, boots, some recommendations also state mask.

Figure 7 - PPE needed for use of Nomix weed lance

Before spraying chemical, professional training and certification would be required.

There are extra requirements when spraying near a water course and any spraying can only be undertaken when there is certainty of no rain within 24hrs to avoid chemical contamination of watercourses through 'run-off'.

The issues with this approach are the health risks, perceived and real, to both people and wildlife. Spraying would be being undertaken in an urban environment requiring a person in a protective suit to be spraying where people ordinarily walk.



Even with all appropriate mitigations, such as working out of hours, having clear signage and a protocol of stopping as soon as anyone was within the safe distance, it could still come across to many as inappropriate and an unacceptable risk. Even if the herbicide ban remained in place for the whole of the FTC green estate, and the use was restricted only to the town centre, where weeds were causing infrastructure damage, it is possible that public reaction would view this as reneging on previously declared policy: a backwards step from the commitment to eliminate herbicide and the pressing need to take all necessary measures to protect nature.

There are also ethical concerns about using a product developed by an organisation that has been convicted multiple times for the proven harmful impact of their chemicals and who have developed some of the most controversial chemical products (DDT, Agent Orange, Bovine Growth Hormone etc.)

Costs, Time and Pros/Cons Summary Option 2 – Herbicide

Herbicide		
Purchase Price	£3,000	
Running Costs		3 passes per year using 6 cartridges
Running Costs Total/year	£482	
Total Cost	£3,482	
People Time in Weeks	2.5	

Herbicide	
<b>Pros</b>	Speed
	Price
	Effective
<b>Cons</b>	Environment
	Ethics of Developer
	FTC Policy - Nature Emergency
	Public reaction

Option 3 - Foamstream

*Figure 8 - Foamstream L12 with Bowser on the Bradshaw G4 Flatbed Electrical Van*



There is one method specifically designed to be an environmentally friendly solution for effectively tackling weeds: Foamstream. This system works by killing the roots of the weeds through the sterilizing effect of heat in the form of boiling water.

The heat in boiling water is sufficient to reach the roots and kill them, however if just boiling water is used, in practice this would not be effective as the water cools too quickly on contact with the ground and air.

The solution used by the Foamstream system is to create a foam when the water is sprayed, and this foam acts as an insulating layer keeping the heat at the temperature needed to kill the roots for long enough.

The foam is made using natural ingredients such as potato starch and it is not slippery and although it looks white when applied to the street this will only last for at most half an hour.

A demonstration was undertaken in Frome in November 2024 and the system was found to be very effective at killing weeds, even to the scale of large clumps.

The practical challenge of the system is the weight. The smallest unit – pictured above - weighs 240kg (without the water) and even with the smallest water bowser this weight goes up to 750kg.

The system therefore needs to be mounted on a trailer or vehicle. In order to be workable in the small streets of Frome's town centre the trailer option is not viable. So, the machine would need to be purchased together with a vehicle. There could be savings if the vehicle were used for other purposes though this would require the purchase (or regular hire) of a forklift to move the machine on and off the vehicle.

The system does create a limited temporary impact on the street being cleaned. The unit is stationary while a street is worked on with its 60m hose and in a small street this can impact slightly on ease of access around the vehicle. The system does also make an appreciable noise though as a comparison this is much less than common street works.

*Figure 9 - Foamstream in action on Gentle Street*



*Figure 10 - Foamstream system in operation in Frome - Nov 24*





In terms of the time needed, the work is in 2 stages – applying the foam to kill the weeds and a second visit once the weeds had perished to remove the residual dead vegetation. The streets would need to be treated 3 times in the first year (reducing with time to just 2 times/year) and both passes of the process (weed killing then weed removal) would each take approximately one week of time.

As with the “Continue as we are” option, the clear up of the dead vegetation would ideally need to be automated to reduce the time needed to a viable level, and a powered sweeper would also need to be purchased.

There are also additional uses for a system that produces an extremely hot natural soapy spray. It would be effective in helping with the cleaning of dirt and moss/lichen etc. from hard-to-reach places such as the roofs of bus shelters or simply general street furniture cleaning such as benches. There are though alternative options for such cleaning work (such as the high pressure system with the Street Cleaner, though this uses cold water). One point to note is that even with additional cleaning tasks, the system would not be in use for the majority of time. There might be opportunities for renting out the system to other users (though if being moved using a G4 there are practicalities to consider as this will only travel at 30mph).



In summary, Foamstream is a natural weed management solution that is effective. Glastonbury, the first council to go herbicide free in 2015, has been using one of the first Foamstream systems, that is pulled by a tractor and takes 2 people to operate, and it remains effective at treating weeds, albeit with considerations of time and practicality that in practice do limit the frequency the system is actually used.

Although there are cost and time implications, this is a workable system that is a viable environmentally friendly alternative to the current ineffective approach.

*Figure 11 - Results of using Foamstream*



**Above line – Foamstream has killed the weeds – even larger clumps.**

**No treatment below the line**

Costs, Time and Pros/Cons Summary Option 3 – Foamstream

Foamstream		
Purchase Price		£15,900 L12 Purchase Price
		£2,435 L12 extras - rig and hose extension
		£33,200 G4 Flatbed
		£2,000 Weed collector
Purchase Price Total	£53,535	
Running Costs/year		£567 Foam consumable
		£110 Servicing
		£420 Fuel
		£400 Brushes
Running Costs Total	£1,497	
<b>Total Cost</b>	<b>£55,032</b>	
People Time in Weeks	5.3	

	Foamstream
Pros	Environment Effective Other cleaning Extra G4 vehicle
Cons	Noise Cost  Unused most of time

#### Option 4 – Street Sweeper

*Figure 12 - Euromec CR2260 Street Sweeper*



The last approach for weed management is essentially automating, and thereby increasing the power and speed of, the existing pedestrian technique.

Crucially, by speeding up the process and making it possible to cover a much greater area with each pass, it is possible to undertake a town-wide sweep so regularly that the machine can return to the weeds *before* the green shoots have had a chance to regrow and establish themselves.

The roots only remain viable due to the photosynthesis that takes place in the plants' leaves (which creates sugars passed to the roots). Therefore, if the leaves of the plant are continually removed before being established, this will remove the vital flow of nourishment to the roots and the roots will finally perish. The key is being able to do a full tour of the area and return *before* the green shoots regrow.

This is not possible currently due to the time taken by the pedestrian process. However, with a street sweeper vehicle, this speed of cover would be possible.

The challenge is to find a street sweeper vehicle that can manage the tight winding roads of Frome Town Centre yet has the power (and reliability) for the task. We trialed the CR2260 on 22 January 2025. It is a petrol powered 35 horse power articulated machine and it was found that it had the manouverability to cope with Frome's town centre lanes and the brush system the suction power to collect the weeds.

One practical benefit with this particular brand is that it has the fastest system for changing attachments and very quickly (under a minute) the sweeper configuration can be switched between the system for difficult weed removal or the set-up for more general weed sweeping.

The machine should be able to access nearly all of the town centre (St John's steps being the obvious exception, as well as the narrow side of Cheap Street). It should take approximately 2 days to cover the whole town so it would be practically possible in terms of time/capacity to redo the whole town every 2 weeks – quickly enough to prevent green shoot growth.

The sweeper system is efficient because it undertakes the clearance/sweeping and time-dependant collection simultaneously (using a suction hose by the brushes). With the pedestrian approach it takes about 6 times as long to sweep up as it does to clear and this stage would be happening automatically.

*Figure 13 - The CR2260 copes with narrow lanes due to 1.1m width*



*Figure 14 - The heavy duty weed brush about to be attached*



*Figures 15 and 16 - Before and after of two lanes cleaned near Waterloo. The street with the dense weeds (righthand pictures) would have taken several hours to clear with the existing technique. The sweeper took approximately 20 minutes.*



*Figures 17 and 18 - The sweeper managing to clear moss/lichen on the steeper cobbles of Gentle Street without struggling with the slope or damage to the cobbles.*



Figures 19 and 20 - The sweeper also features a mobile high powered suction hose for clearance in difficult to reach areas (eg under benches) and a high power pressure washer for any immediate impromptu cleaning needed .



There are some practical considerations for the use and storage of the vehicle as the vehicle only travels at 10mph and so (unless a flatbed trailer were purchased) would need to stay close to the town centre and be stored there rather than the ranger base/depot. The vehicle can fit in, and be stored over night, in the FTC ranger container stationed next to the Cheese and Grain.

This is possible due to the small dimensions (just 1.1 x 2.4m) of the vehicle, making it the machine of choice compared to the two larger alternative competitor options (Karcher MIC 35 and the Hako Citymaster 650), both also more expensive.

The hopper that collects the sweepings would need to be regularly emptied and for practicality this would also have to be a town centre based process. The recommended option, currently

Technical specifications	Basic machine	
Length	mm	2400
Width	mm	1070
Height with cabin / roll bar (ROPS)	mm	1960 / 2000
Weight with cabin / roll bar (ROPS) <sup>1)</sup>	kg	940 / 910
Payload	kg	670 / 700
Gross vehicle weight (GVA)	kg	1610
Turning radius (kerb to kerb)	mm	1640
Turning radius (inside)	mm	600
Engine: Kubota petrol WG-972-G-E4	hp/kW	33 / 24
4 wheel drive		Standard

<sup>1)</sup> Includes: 75 kg driver and 90% fuel capacity

being being explored, is a covered skip placed in the Market Yard car park next to the container FTC provides to the Independent Market for storage. As this is Somerset County land permission is being sought for this.

The daily refuelling would need to be on a manual system on the same basis as is currently in place for the ride-on mower. The time and cost implications of all these considerations are included in the overall time calculation shown below

Figure 21 - Possible location for skip



The obvious advantage of sweeping the whole town centre fortnightly, in addition to the clearance of weeds, is the presentation and tidiness of Frome getting a reset so regularly. This would enable a long held aspiration for enhancing the appearance of the town.

The machine would be in use for street sweeping approx ¼ of the time which would allow its use also on the wider estate to make a significant contribution to speed/capacity for undertaking certain laborious manual green works tasks. For instance at the moment all FTC hedges are cut by hand but there is a hedge cutting attachment to the street sweeper vehicle that could be used to automate much of this process. There are other attachments that could increase the contribution of the machine to the works across the wider FTC estate (rather than the road network that would remain the responsibility of SC), such as the gritting of Victoria Park paths, or even snow removal. Any additional attachments would require future expenditure in the order of some £ks each.

Figure 22 - Hedge Cutting attachment



*Figure 23 – Gritting attachments*



*Figure 24 - Snow Blower Attachment*



#### Videos

- Weed removal [here](#)
- General sweeping [here](#)
- Hedge cutting [here](#)
- Gritting/snow work [here](#)

The one limitation it would be important to emphasize is that the person and vehicle capacity/speed of this compact sweeper means that it would only be viable for operation in the town centre (or surrounding FTC land). The street sweeping of wider Frome, and the main road through the town, would remain the responsibility of the County Council. Likewise, given the small size, there would not be an expectation that the vehicle would be suited to travelling beyond Frome.



Testimonial

The City of London authority that manages Westminster have one of these machines and they commented:

*“It is very effective, and the weed brush arm gives good reach and articulation ... Manoeuvrability is very good and compact dimensions, no complaints regarding climbing as the machine is stored in our multi storey facility without issue ... Sweeping and suction power are good for the machines size, ideal for town centre work... The machine’s reliability is comparable with competition with no red flags. Parts availability hasn’t been an issue when required... After sales are good, if we have a problem, we can’t fix they aim to be there the next day to check it over”*

Costs, Time and Pros/Cons Summary Option 4 – Street Sweeper CR2260

Street Sweeper - Euromec City Ranger CR2260		
Purchase Price	£64,220	
Running Costs		£3,400 Servicing (4 Visits) £1,200 Brushes £500 Fuel £2,000 Skip @ C&G
Running Costs Total	£7,100	
Total Cost	£71,320	
People Time in Weeks	6.3	

CR 2260	
Pros	Environment Streets clean Other Cleaning Powered options for wider estate works
Cons	Cost

Comparisson of all 4 options: Costs/Benefits and Pros/Cons

	Foamstream	CR 2260	Herbicide	Continue as is
Equipment Costs	£53,535	£64,220	£3,000	£2,000
Running Costs	£1,237	£7,100	£482	£400
People Time in weeks	5.3	6.3	2.5	12.6

	Foamstream	CR 2260	Herbicide	Continue as is
Pros	Environment Effective Other cleaning Extra G4 vehicle	Environment Streets clean Other Cleaning Powered options for wider estate works	Speed Price Effective	Better than doing nothing Looks great initially
Cons	Noise Cost Unused most of time	Cost	Environment Public reaction FTC Policy - Nature Emergency Ethics of company	Time Weeds remain Damage Unsightly

Conclusion

Of the 4 options only Foamstream and the Street Sweeper meet FTC’s ethical considerations and policy on the environment and are effective/sustainable.

Of these two options the advantages of the Street Sweeper are:

- Cleans the street allowing a fortnightly presentation reset of the town centre
- Will be regularly used for cleaning but for other tasks too – the asset will earn its keep
- Can benefit the wider estate being used to make a big efficiency contribution for other practical tasks such as hedge cutting.

With the Street Sweeper it would be possible for the town centre to be cleaned fortnightly and the weeds brought under control, both key aims of the council. Automation would improve outcomes while taking only about half the time currently given to these tasks.

The downside is the higher cost, but the proposal is that the benefit of the town centre being regularly cleaned to a very high standard every fortnight with effective weed management means that the cost/benefit is worthwhile.

## Funding

The purchase price for the new capital equipment would be funded using the 2025/26 £25k devolution budget for improved street cleansing (600-7962) and the remainder of the Saxonvale EMR 356 that has £40,677 remaining.

The operating costs for the first year can be sourced by carrying forward £7k from the 2024/25 Town Ranger's budget (600-6979) allocated for town centre repairs. The future running costs (2026/27) would then become part of the annual Town Centre expenses budget reviewed annually by council

<b>Funding</b>	
Devolution - Improved Street Cleansing	£25,000
Remainder Saxonvale EMR	£40,000
<b>TOTAL</b>	<b>£65,000</b>

### Recommendations

1. Purchase a Euromec City Ranger CR2260 Street Sweeper at a cost of £64,220 with a view to undertaking a fortnightly street clean of the town centre that in time will control weed growth.
2. The funding for the capital purchase will come from £25k from the 2025/26 budget for improved street cleansing (600-7962) and £40k from the remaining Saxonvale budget (EMR 356).
3. The running costs of approx. £7.1k in year one would come from the town centre budget (600-7969) and in future would form part of the annual Town Centre expenses budget reviewed annually by council