APPENDIX 1: LEGAL DUTIES FOR WEED CONTROL

Department for Environment, Food and Rural Affairs

1. Guidance note on the methods that can be used to control harmful weeds

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/69296/pb7190-harmful-weed-control.pdf

The five weeds covered by the Weeds Act 1959 are:

- Spear thistle (Cirsium vulgare)
- Creeping or field thistle (Cirsium arvense)
- Curled dock (Rumex crispus)
- Broad leaved dock (Rumex obtusifolius)
- Common ragwort (Senecio jacobaea)

'Primary responsibility for weeds control rests with the occupier of the land on which the weeds are growing. However, under the Weeds Act 1959 Defra can take action where there is a risk of injurious weeds spreading from neighbouring land. Further information on these responsibilities is contained in the Defra leaflet "The Weeds Act 1959 - Preventing The Spread of Harmful Weeds"...'

2. Guidance : Stop invasive non-native plants from spreading

https://www.gov.uk/guidance/prevent-the-spread-of-harmful-invasive-and-non-native-plants

The most commonly found invasive, non-native plants include:

- Japanese knotweed
- Giant hogweed
- Himalayan balsam
- Rhododendron ponticum
- New Zealand pigmyweed (this is banned from sale)

You do not have to remove Japanese knotweed from your land, but you could be prosecuted or given a community protection notice for causing a nuisance if you allow it to spread onto anyone else's property.

APPENDIX 2: EU AND HSE CURRENT ADVICE ON GLYPHOSATE USAGE

HSE guidance and FAQ's:

http://www.hse.gov.uk/pesticides/topics/using-pesticides/general/glyphosate-faqs.htm

Has glyphosate been subject to regular regulation checks?

The UK has a rigorous approvals process for pesticides. The main aim of the process is to protect the health of people, creatures and plants and to safeguard the environment.

All companies wishing to obtain approval for their pesticides are required to submit substantial data dossiers to support their applications. The extensive range of studies undertaken on pesticides is aimed at establishing acceptable safety for people, animals and the wider environment. This process has been applied to glyphosate which has been approved as safe and efficacious for a number of years now.

Is glyphosate subject to any continuing review of its safety?

In addition to the UK process, all pesticides are subject to the regular EU wide initial approval and review programme for active substances. The review programme makes sure that the data supporting their approvals meets modern safety standards.

Glyphosate is currently approved for use as a herbicide (weed killer) in the EU. Approval was granted in 2002, based on a review of mammalian toxicology, ecotoxicology and other data. The current approval expires on 31 December 2017 at the latest*. Further detailed information about the EU regulatory process with respect to Glyphosate can be found on the Official Journal of the European Union

(*was reviewed by the EU in November 2017; approved by appeals committee 27th November 2017; guidance FAQ's have not been updated on HSE website yet)

What controls are in place on the use of glyphosate in parks and public spaces?

The risks associated with the use of pesticides in amenity areas such as parks are specifically considered as part of the authorisation process.

Legally enforceable conditions of use are imposed on the way products can be applied, to ensure the public are not exposed to levels of pesticides that would harm health or have unacceptable effects on the environment. It is important that users (or those who cause or permit others to use pesticides) not only comply with the authorised conditions of use but also use products in a responsible and sustainable fashion.

The responsible use of pesticides in amenity areas as part of an integrated programme of control can help deliver substantial benefits for society. These include: management of conservation areas, invasive species and flood risks; access to high quality sporting

facilities; and safe public spaces (for example, by preventing weed growth on hard surfaces creating trip hazards), industrial sites and transport infrastructure.

Why does the government not ban Glyphosate?

The Government feels that the regulatory process for authorising plant protection products (PPP) is a robust system. The authorisation process takes into account all scientific knowledge available.

All products which contain glyphosate must be individually authorised in Member States. Applicants for authorisation must show that their products are effective, humane and pose no unacceptable risks to people or the environment. If their products were to pose such risks, they would not be authorised; or if such effects were discovered later, they would be withdrawn.

Neither the EU's assessment of glyphosate as an active substance nor the UK's assessments of applications for authorisation of products which contain it have found the substance unacceptable for use.

Status of glyphosate in the EU

https://ec.europa.eu/food/plant/pesticides/glyphosate_en

Current status of glyphosate in the EU

On 12 December 2017, the Commission renewed the approval of glyphosate for 5 years, following support by a qualified majority of Member States in an Appeal Committee held on 27 November 2017.

Therefore, glyphosate can be used as an active substance in Plant Protection Products (PPPs), until 15 December 2022, subject to each PPP being authorised by national authorities following an evaluation of their safety.

What's next for glyphosate?

The EU pesticides legislation requires that the approval of all active substances must be periodically reviewed, starting with a scientific assessment by a rapporteur Member State, which is followed by a peer-review process overseen by the European Food Safety Authority (EFSA).

Three years before expiry of the approval (i.e. by 15 December 2019), companies wishing to maintain the approval of glyphosate will have to submit an application for renewal.

On 15 April 2019, Member States in the Standing Committee on Plants, Animals, Food and Feed endorsed the Commission's proposal to designate four Member States as joint rapporteurs for the next assessment of glyphosate. This Assessment Group on Glyphosate (AGG) comprises France, Hungary, the Netherlands and Sweden. Commission Implementing Regulation (EU) 2019/724 was formally adopted on 10 May 2019.

APPENDIX 3:

HEALTH AND SAFETY EXECUTIVE: KEY MESSAGES ON RISK OF HAND ARM VIBRATION (HAVS)

http://www.hse.gov.uk/vibration/hav/keymessages.htm

- HAVS is preventable, but ***once the damage is done it is permanent***.
- HAVS is serious and disabling, and nearly 2 million people are at risk.
- Damage from HAVS can include the inability to do fine work and cold can trigger painful finger blanching attacks.
- The costs to employees and to employers of inaction could be high.
- There are simple and cost-effective ways to eliminate risk of HAVS.
- The Control of Vibration at Work Regulations focus on the elimination or control of vibration exposure.
- The long-term aim is to prevent new cases of HAVS occurring and enable workers to remain at work without disability.
- The most efficient and effective way of controlling exposure to hand-arm vibration is to look for new or alternative work methods which eliminate or reduce exposure to vibration.
- Health surveillance is vital to detect and respond to early signs of damage.

APPENDIX 4 – SAFETY DATA SHEETS

Safety data sheet comparable from a vegetable product (left) to a current glyphosate product

Katoun Gold (waste vegetable & Vinegar)

SECTION 10: Stability and reactivity

10.1. Reactivity
The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability
Stable in use and storage conditions as recommended in item 7.

10.3. Possibility of hazardous reactions
No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid
Do not freeze. Store at temperatures above 5°C.

10.5. Incompatible materials
Oxidizing agent. Strong bases.

10.6. Hazardous decomposition products
Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral)	: Not classified
Acute toxicity (dermal)	: Not classified
Acute toxicity (inhalation)	: Not classified

Katoun Gold	
LD50 oral rat	> 2000 mg/kg
LD50 dermal rabbit	> 2000 mg/kg

nonanoic acid (112-05-0)	
LD50 oral rat	> 2000 mg/kg
LD50 dermal rat	> 2000 mg/kg

Skin corrosion/irritation	: Not classified
Serious eye damage/irritation	: Irritating to rabbits on ocular application
Respiratory or skin sensitisation	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
STOT-single exposure	: Not classified
STOT-repeated exposure	: Not classified
Aspiration hazard	: Not classified

Glyphosate

Section 10: STABILITY AND REACTIVITY

10.1. Reactivity
Not reactive.

10.2. Chemical stability
Stable under recommended storage conditions.

10.3. Possibility of hazardous reactions
Hazardous Decomposition Products:
Thermal decomposition can lead to release of irritating and toxic gases and vapors.
Possibility of Hazardous Reactions:
None under normal processing.

10.4. Conditions to avoid
For quality reasons: Keep out of reach of direct sunlight, store under dry conditions, partly used bags should be closed well.

10.5. Incompatible materials
10.6. Hazardous decomposition products
None under normal processing.

Section 11: TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects
Acute Toxicity
Product Information:

Inhalation:	May cause irritation of respiratory tract.
Eye Contact:	May cause irritation.
Skin Contact:	May cause irritation.
Ingestion:	Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.
Unknown Acute Toxicity:	65% of the mixture consists of ingredient(s) of unknown toxicity.

Skin Corrosion or Irritation	See also section 3.
Serious Eye Damage or Eye Irritation	See also section 3.
Sensitization	See also section 3.
Mutagenic effects	See also section 3.

Carcinogenicity The table below indicates whether each agency has listed any ingredient as a carcinogen.

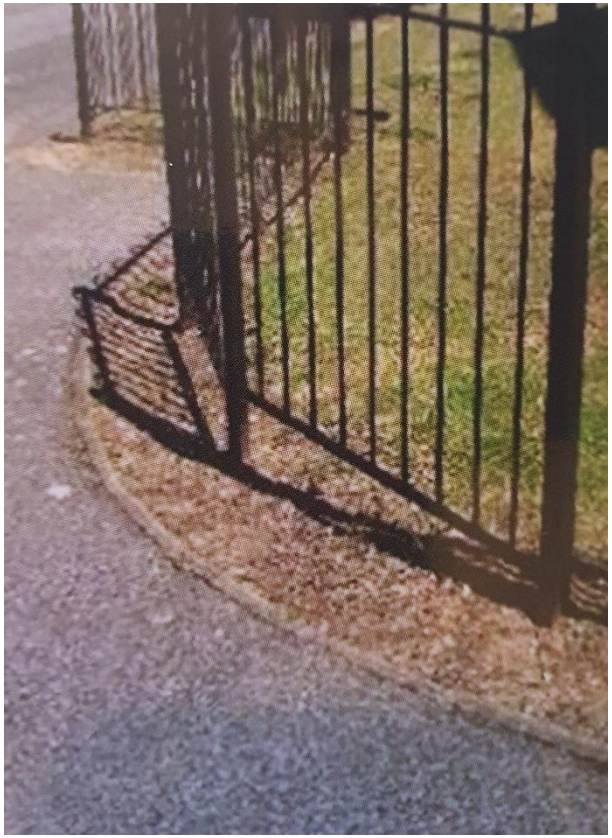
Reproductive Toxicity

Teratogenicity	No known effects under normal use conditions.
STOT - Single Exposure-Category 3 (H335)	No known effects under normal use conditions.
STOT - Repeated Exposure	None under normal use conditions.
Aspiration Hazard	None under normal use.

APPENDIX 5: VISUAL IMPACT OF PRODUCTS

Pictures of Katoun Gold Bio products when applied & glyphosate when applied – will still protect staff from vibration have the same appearances of a visible spray line.

Katoun Gold



Katoun Gold

Glyphosate

APPENDIX 6: FOAMSTREAM

Low-pressure process combines hot water and our biodegradable foam. The foam is made from natural plant oils and sugars. The active ingredient in Foamstream is the heat from the hot water. The foam insulates the hot water, ensuring the heat is not lost to the atmosphere. This ensures the heat covers the plant for long enough for it to kill or severely damage the plant. The longer a plant is kept in the kill zone (temperatures above 57˚C) the better. By providing a layer of insulation, Foamstream holds the heat from the water in the kill zone for long enough to penetrate the leaf's waxy outer layer, and travel down the stem and into the roots. This severely damages the plant, either killing it or causing it to die back.

Tested: Medway in 2014 and Southwark, LB Hammersmith & Fulham, London Borough of Kensington & Chelsea, Croydon and Bromley.

Result: Although can be an effective product on weed treatment, it also comes with a very significant carbon footprint, van's running omitting fumes (NOx), a generator running omitting fumes(NOx) and uses up to 1000 litres of water per hour.

APPENDIX 7: OTHER LA EXPERIENCES

1. Thanet

Thanet project 2017, with East Malling Research, KCC – testing 38km of highway areas (hard surfaces)

Three types of testing:

- Chemical only: herbicide x 2 applications per year
- Integrated with 1 chemical application
- Manual / Thermal & mechanical

	Advantages	Disadvantages
Chemical	○ Quick ○ Efficient ○ Cost effective ○ A fixed number of treatments per growing season ○ Fewer greenhouse gas emissions	○ Pesticide losses to the environment ○ Potential for herbicide resistance ○ Public perception of spraying chemicals
Integrated	○ Reduced risks associated with pesticide use ○ Less pesticide PPE required	○ Increased greenhouse gas emissions ○ Monitoring required ○ Increased costs (x2)[2] ○ Increased no. of treatments (2-6)
Non-chemical	○ Avoid the risks which may arise from pesticide use ○ No pesticide PPE required	○ Greater greenhouse gas emissions ○ Increased monitoring ○ Greater costs (x8)[2] ○ Persistent perennial weeds ○ Increased number of treatments (3-6)

Result: An integrated approach was adopted

2. Brighton and Hove

A team of 8 have been testing alternatives to glyphosate for weed removal, including hand weeding, hot foam and infra-red treatment. The services have been hand removing for the last year but have also been struggling to fully comply to a tidy environment and do have ongoing concerns for hazards to the public.

3. Bristol

Action has been *pledged* to reduce usage of glyphosate but no actual action to date. There is also a sizable petition (3,721) from local residents and the issue has been debated for many years.

4. Lambeth

Only uses herbicide treatments on highways, not in parks, open spaces or cemeteries. Japanese knotweed and other noxious weed problems are still dealt with by chemicals. Alternatives being tested include, hot water treatments, flame guns, mechanical weed rippers and hand weeding.

5. **Glastonbury**

Became the first Council to ban herbicide use in 2015, alternatives used such as foam stream.

6. **Lewes**

Glyphosate still in use but only in conjunction with alternatives, mainly for noxious weeds. No herbicides used in play areas or cemeteries. The result is a 90% reduction in glyphosate use last year

7. **Hammersmith and Fulham**

First London Council to ban glyphosate in 2016, apart from use on noxious weeds. Alternatives used include, hand weeding, foam stream, flame burners and acetic acid (foam stream the preferred option).

8. **Nottingham City**

Currently, review of us of glyphosate and plans to introduce wild flower routes into the City

9. **Croydon**

Signed the pesticide free pledge and is exploring alternative to glyphosate “regardless of cost” this year.

10. **Other Authorities** currently looking into the use of glyphosate include:

Trafford, Edinburgh, Wirral, Bury Frome, Derry City, North Somerset, Hackney, Islington and Midlothian

11. **Other countries**
    a. France and Holland have an integrated approach
    b. France, Holland, Germany and Belgium have banned ***DOMESTIC*** use