NAFAS Guide to Mechanics

Mechanic	Details	Pros	Cons and Recommended Solutions
Floral Foam	A plastic (phenol-formaldehyde) foam, available in various shapes and styles. Also available in black which is identical except for the colour. Dry-Sec made from polyurethane also available for artificial or dry materials.	• Available in a large variety of shapes. • Quick water saturation and low drainage. • Easy to use material, which makes it suitable for all levels of ability. • Plant materials are secure in position, if placed correctly. • Creates good downward movement with straight-stemmed plant material.	• Foam is made of micro-plastic which does not degrade, and harms aquatic life. • There is some evidence that of inhalation of foam dust is unhealthy. • Not suitable for soft-stemmed plant material. • Not as effective as water for longevity of plant material. • Water which has come into contact with foam should not be introduced to waterways, it should be sifted through tight weave fabric first. • The bricks should also be disposed responsibly in landfill, not at home and not in green waste.

Biodegradable Foam	Foam still made of plastics with enhanced ability to attract micro-organisms to assist breakdown. Available in “brick” form.	• Easy to use material, which makes it suitable for all levels of ability. • Creates good downward movement with straight-stemmed plant material.	• Cannot be safely home composted; bricks must be composted industrially. • Releases micro-plastics more rapidly into the environment and is therefore more harmful to aquatic life. • Not suitable for soft-stemmed plant material. • Not as effective as water for longevity of plant material. • Water which has come into contact with foam should not be introduced to waterways. Instead, it should be sifted through tight weave fabric first. • The bricks should also be disposed of responsibly.
Floral Fibre	Brick made from basalt (volcanic rock) fibres with a compostable binder. Available in “brick” form.	• A biodegradable alternative to other foam bricks, which can be used in a similar way. • Basalt is a naturally occurring material, which is readily available. • Bricks biodegrade to harmless dust which is a good soil improver.	• Basalt fibres must be heated to high temperatures to create floral fibre bricks, creating a large carbon footprint. • Not suitable for soft-stemmed plant material. • Not as effective as water for longevity of plant material. • Holes may need to be made to insert softer stems. • Brick fibres tend to collapse if plant material too heavy. In this instance it is recommend that the brick be secured with netting.

Terra-Brick	Made from compressed coir with a compostable binder Available in bricks. Also available some shapes within cardboard holders.	• Biodegradable. • Suitable for short-stemmed designs. • Suitable for funeral work.	• Bricks tend to crumble. • Not suitable for soft-stemmed plant material. • Not as effective as water for longevity of plant material.
Oshun Pouch	Expandable floral pouch that is 100% compostable. Oshun Pouch expands when soaked in water. At the time of writing, Oshun Pouch is only available in USA. Patent pending	• Sustainable material and biodegradable. • Optimal mechanic for sympathy designs. • Optimal mechanic for same-day designs.	• Single use material. • Holes need to be made to insert stems. • Not suitable for large designs.
Sand	Commercial sand / Art sand contains chemicals which damage plant life and must not be used. Only play-sand, or bird tray sand should be used to avoid harmful chemicals. Sand needs to be damp, as if making sandcastles. Heavy stems will require a greater quantity of sand to remain upright.	• Holds plant material almost as well as foam bricks. • Plant material kept in sand has good longevity. • Many flowers dry naturally if left in sand. • Sand can be cleaned and re-used. • Completely natural material which can be easily returned to the environment.	• Large designs can be heavy, which may impact on portability. • Not easy to create downward movement • Does not hold as firmly as foam • Care must be taken to get correct concentration of water.

Various:	Gravel Pebbles Glass Shells	All available to purchase from wholesalers or online. Should be placed in containers of water.	• Holds slender stems reasonably well. • Has decorative, aesthetic qualities as well as mechanical use. • Textures, colours, shapes, and sizes can enhance design, for example to colour co-ordinate. • Sustainable and re-usable.	• Large designs can be heavy, which may impact on portability. • Not as firm a hold as sand or foam • Must be cleaned in between uses to avoid bacterial growths.
Moss		Available commercially (sphagnum) or taken from garden. **Moss must never be taken from the wild.**	• Holds moisture well. • Material can be shaped according to design requirements. • Totally biodegradable.	• Sometimes requires binding with wire to maintain its shape. • Can be difficult to insert stems. • Not suitable for soft-stemmed flowers. • Not always sustainably sourced.
Wire Netting		Either chicken mesh (galvanised steel) or copper mesh (bronze net). Mesh is shaped into two-tier system to hold stems. Ideal gauge is 25cm (2”).	• Allows plant material to sit in water. • Optimal mechanic for loose-style arranging. • Suitable for garden flowers and hollow stems. • Can be adapted to fit any style or size of container. • Can be cleaned and re-used many times.	• Wire can damage stems and let in bacteria. • Difficult to create downward movement if plant material is straight stemmed. • Susceptible to rust/degradation unless mesh is plastic-coated, which is not sustainable.
Aluminium Wire		Available in various colours and styles. Available in two gauges. Frogs and curls can be created to hold plant material.	• Very malleable. • Has decorative, aesthetic qualities as well as mechanical use. • Colours can be used to enhance design. • Good for light-stemmed designs. • Can be re-used many times. • Recyclable	• Too soft to hold heavy material. • Aluminium must be mined, and wire formed, with the resultant carbon footprint. • Not biodegradable.

Traditional Flower 'Frogs'	Ceramic or glass flat-based hemispheres with holes for stems.	• Allows plant material to sit in water. • Good for loose style arranging • Some mantle vases come with original Frogs pre-shaped	• Design potential is limited to size of Frog and number of holes. • Only available second-hand.
Holly Chapple Pillow Egg Cages	Re-usable plastic grids similar to traditional "rose bowl". Pillows come in three sizes and are made of specific, re-usable plastic containers. Eggs come in two sizes. Can be used for hand-tied designs.	• Works well with the custom Holly Chapple containers. • Similar principle to chicken mesh, but kinder to stems and not liable to rust. • Can be cleaned and re-used many times	• Limited availability in the UK. • Made from 100% recyclable and reusable material. • Looks like plastic. • Does not fit all containers.

Tape Grids		A grid constructed over the top of a container using transparent tape.	• Allows plant material to sit in water. • Invisible mechanic. • Ideal for tall or very wide vase designs to hold stems in place. • Uses less plastic than Floral Foam.	• Single-use plastic, therefore, creates a high level of plastic waste with each design.
Twig Grids		A grid constructed over the top of a container using twigs or small branches. Twigs and branches can also be attached to each other to form a frame. Can be used in bouquets.	• Allows plant material to sit in water. • Has decorative, aesthetic qualities as well as mechanical use. • Good for rustic style designs. • Reusable and totally biodegradable. • Can be easily sourced at no cost.	• Not suitable for geometric designs. • Requires access to garden or large enough supply of material.
Twigs And Leaves		Straight twigs (e.g. cornus) or large firm leaves can be packed into the base of a container to hold stems or tubes of water.	• Allows plant material to sit in water. • Has decorative, aesthetic qualities as well as mechanical use. • Totally biodegradable. • Can be easily sourced at no cost.	• Bacteria may grow on materials over a prolonged time. • Not as versatile as brick mechanics. Requires access to garden or large enough supply of material.
Hand-Made Supports:	Twig Balls	Pliable stems (e.g., cornus, willow) which can be woven and formed into shapes. These shapes can sit in containers and hold stems, like chicken mesh.	• Can be custom formed for large containers and taken over the top for extra support. • Has decorative, aesthetic qualities as well as mechanical use. • Totally biodegradable. • Can be easily sourced at no cost.	• Not uniformed spacing so may not hold quite as securely as chicken mesh. • Time consuming to make but can be purchased. • Bacteria may grow on materials unless left to dry out in between uses. • Can become brittle and will need replacing.
	Kubari	A Japanese technique of splitting and using stems or branches to create a holder for plant material.	• Allows plant material to sit in water. • Totally biodegradable. • Can be easily sourced at no cost.	• Care must be taken when cutting and measuring. • Can be difficult when creating large, many-flowered designs.

				• Requires access to garden or large enough supply of material.

Wood Wool		A by-product from the timber industry, typically sold for use as packaging. Similar usage as moss and can also be used to hold material in a container with water.	• Some evidence to suggest it aids flower life. • Relatively inexpensive. • Re-usable after rinsing and drying out.	• Not suitable for precise placement designs.
Natural:	Wreath Rings Frames	Made from pliable material such as vines, willow, cornus, straw, or hay.	• Twine can be used to bind on plant material that cannot be inserted into the gaps. • Can be used without moss as long as the plant material will remain turgid out of water. • Totally biodegradable.	• No way of holding a water source unless moss is used. • Most material requires binding onto frames.
Test Tubes:	Glass Perspex Plastic Grave Vase Cones	A few sizes available from florists. Perspex cones can be purchased. Grave Vase Cones hold more water and are available in two sizes.	• Allows plant material to sit in water. • Available in different shapes and sizes. • Have decorative, aesthetic qualities as well as mechanical use. • All are reusable once cleaned. • Mass designs can be achieved using wire mesh - 5mm (½") that holds the tubes.	• Glass test tubes can break easily. • Glass production has high carbon footprint. • High up-front cost for Perspex tubes • Some tubes require drilling to fix. • Perspex/Plastic does not biodegrade. • Do not hold a lot of water so need re-filling. • Using test tubes in mass designs is time consuming and requires higher outlay for structure to hold the tubes/cones.