

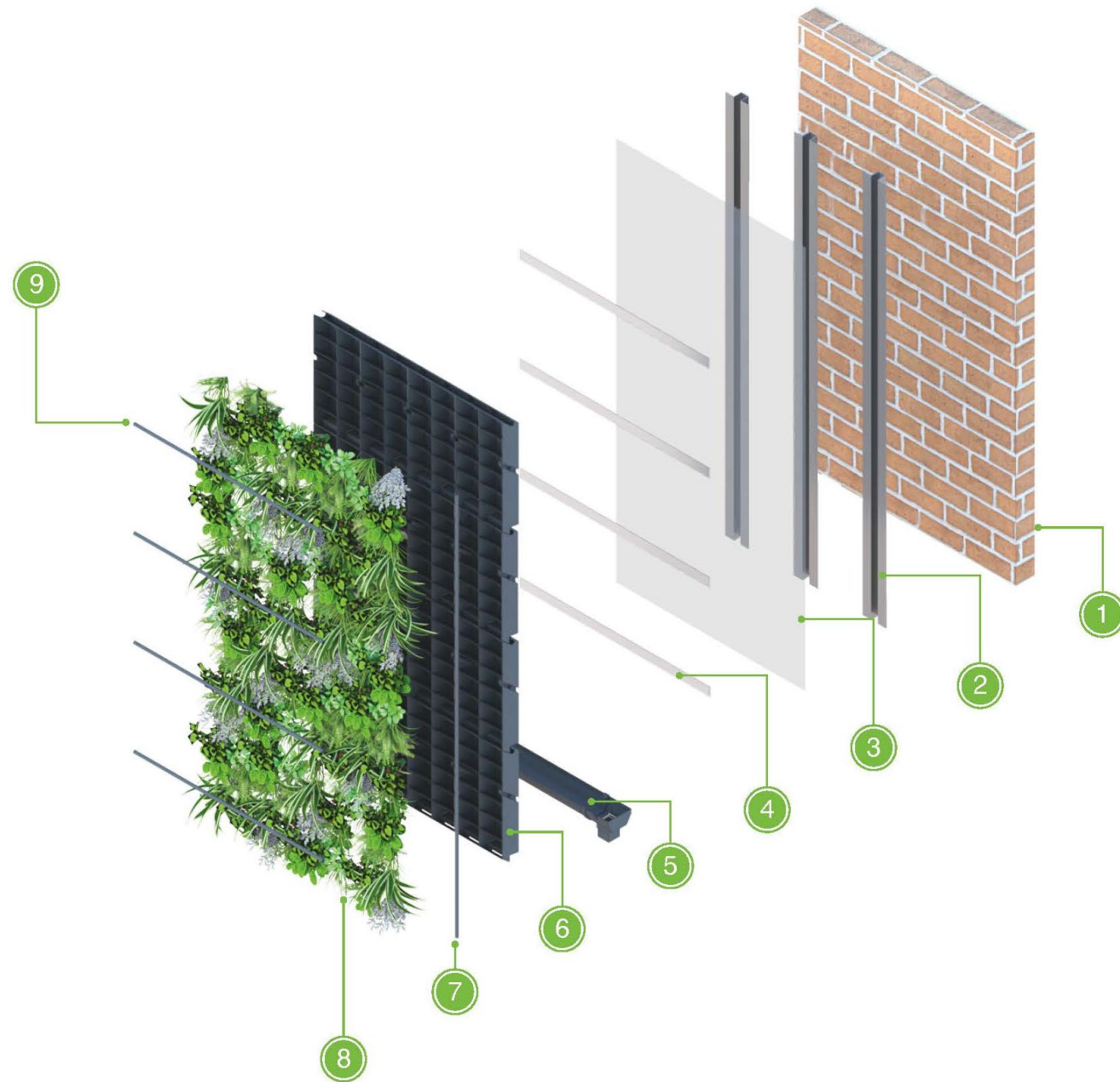
Viritopia Feasibility Design Proposal

Prepared for: Axis
4th July 2025

Your site layout

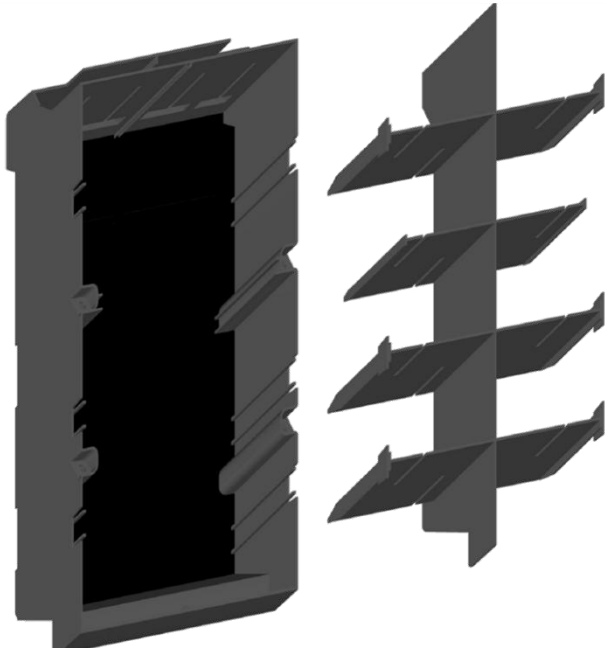


Introducing the ANS Living Wall System™





ANS Living Wall System®



The ANS Living Wall Module is a unique system and living wall solution.

Specification

- 8 modules per sqm
- 80 plants per sqm
- Achieved the highest possible fire rating – B-s2-d0
- Planted and established prior to installation
- 72kg per sqm (fully saturated)

Benefits

- Modular – they can be combined to make living walls of all sizes. Our largest wall is 7300sqm! That is equivalent to 57,600 modules.
- Soil based – It's one of the few soil-based living wall systems on the market and it's 'cells' are designed to allow for root migration and growth.

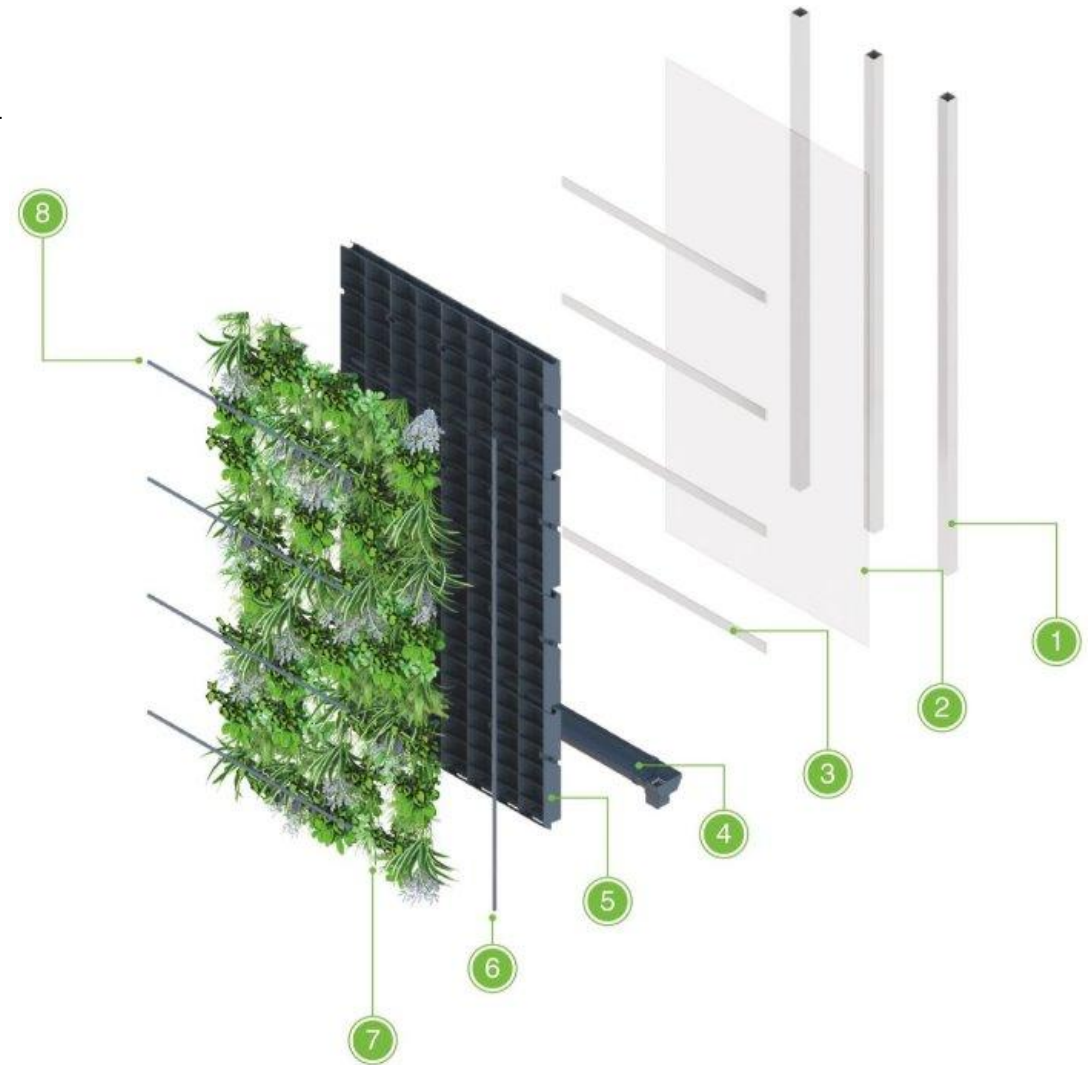


ANS Living Wall Modules being pre-grown at our nursery before installation.

Steel frame build-up

Our steel frame build-up are generally used on a free-standing living wall

1. Indicative Steel Frame (third party)
2. Breathable membrane (by Viriotopia)
3. Aluminium hanging rails (by Viriotopia)
4. Squareline gutter (by Viriotopia)
5. ANS Living Wall Module (by Viriotopia)
6. Irrigation pipe (by Viriotopia)
7. Planting (by Viriotopia)
8. Dripper pipe (by Viriotopia)





Steel frame build-up in action



First fix in progress.
Showing steel frame and
hanging rails



Second fix in progress.
Pre-grown modules
being fixed onto the
wall.



NEC Carpark, Warwick, UK.



Similar installation

A similar installation with bespoke modules and cladding.

The living wall attached directly back to the main steel structure

The cladding was installed using helping hand brackets to allow the cladding to protrude past the living walls foliage



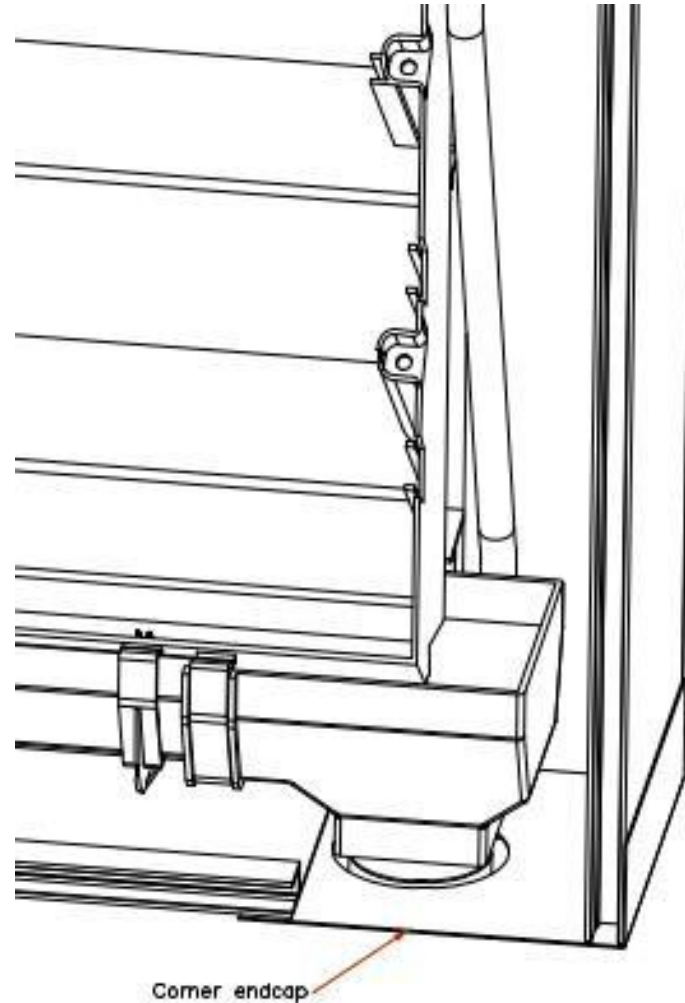
Additional considerations



Drainage detail

A part of the ANS Living Wall System, we will install a square line gutter at the base of the wall.

However, this would need to be connected to a drainage outlet – to be confirmed at design stage.





Irrigation - plant room detail

We have a plant room to manage each irrigation zone.

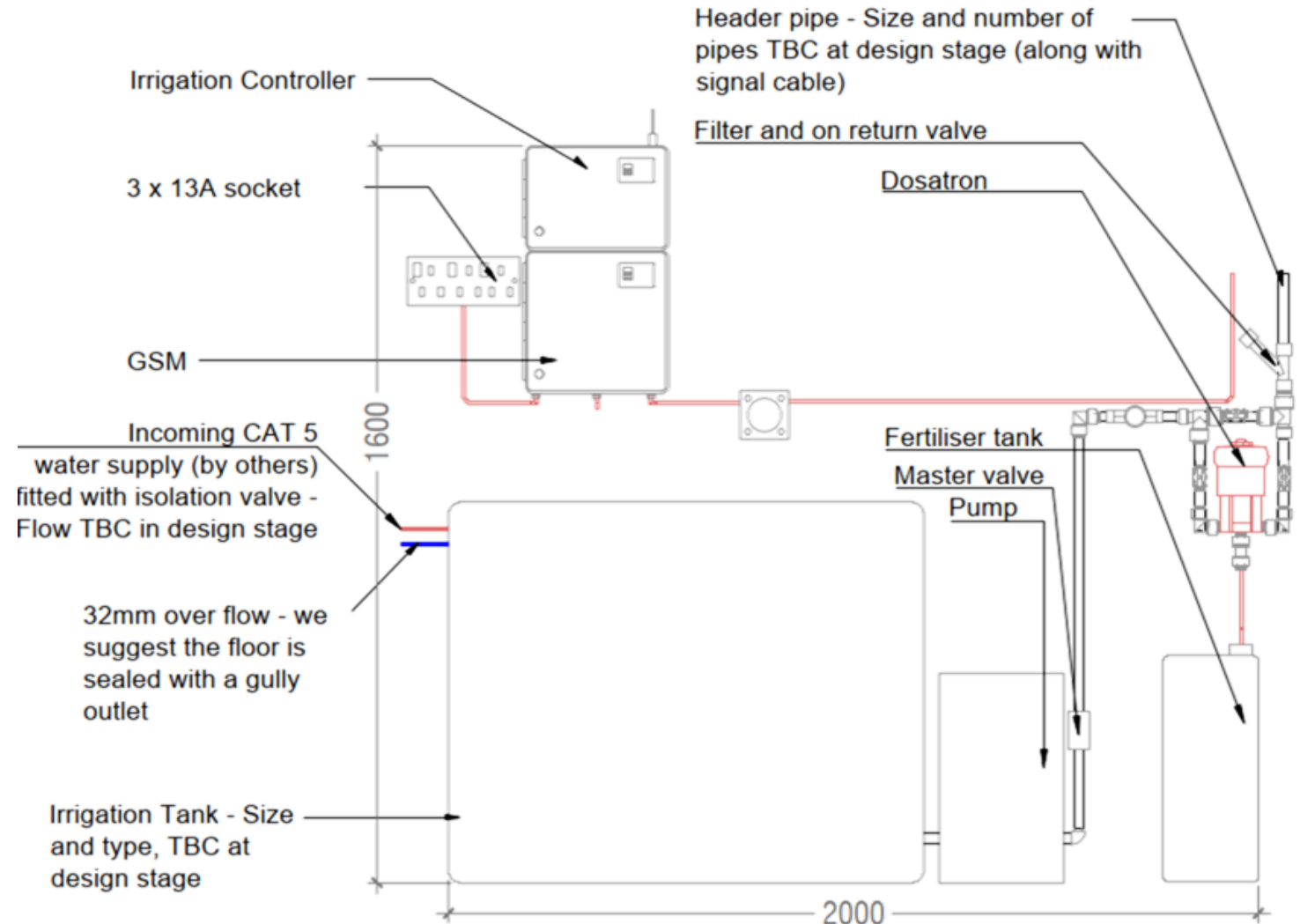
From here the water levels throughout the living wall can be controlled to ensure each zone is getting the required amount, based on surrounding conditions.

Water inlet:

- Rainwater or mains water

Allow for:

- 240v power supply, 3x13A IP rated power socket
- CAT-5 water supply
- Floor gully



Plant room – precedent images

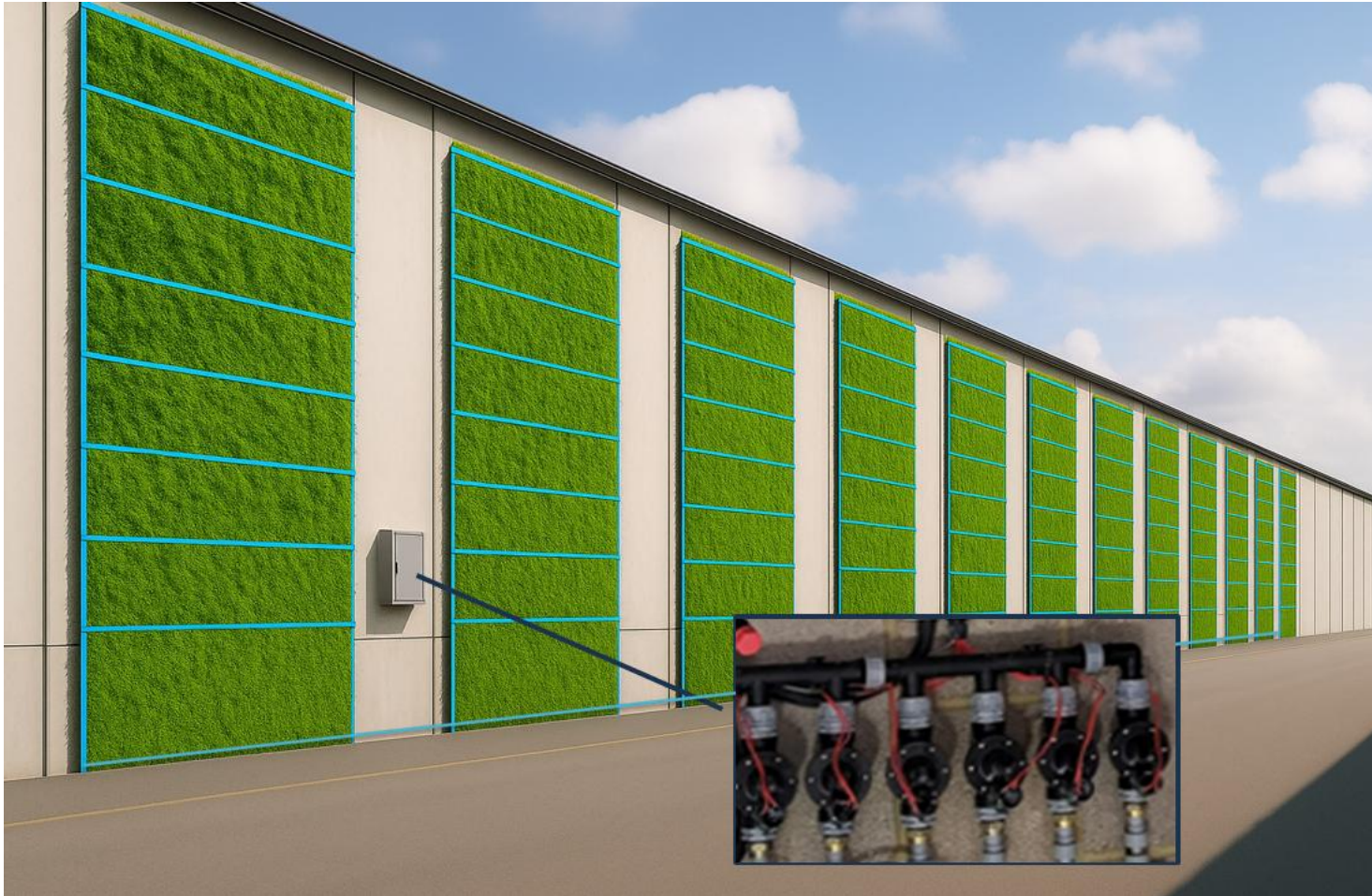


In situ, with water tank



Reference for an external kiosk.
Size and design may vary and will be project specific.

Pipe routes



With multiple living walls are being installed, a main irrigation feed is brought along the perimeter of the building, either at ground level or on the roof. This main feed is usually a 32mm or 40mm

A valve box will reduce the main feed to smaller 16mm irrigation pipes to feed the living wall.

The value boxes should be located in a hidden area, but allow access for maintenance

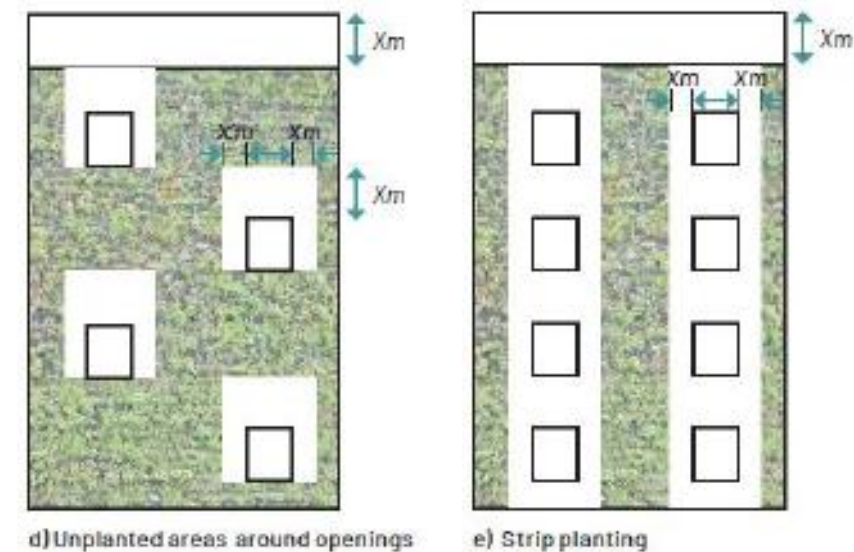
Fire classification

Class B – S2 – D0

- Class B – Limited Combustibility
- S2 – Produces a large amount of smoke
- D0 – No flaming particles or droplets produced

Design Amendments

- Cavity barrier can be installed behind the wall – e.g. a non-combustible backing board.
- Fire breaks can be designed and installed horizontally or vertically throughout the entire area of the living wall.
- Steel flashings/trims could be installed around door or window frames, and any other openings.
- A living wall can be designed with natural fire breaks, please see image on the right.



Class B – S2 – D0

Note: This fire rating is for the entire system – plants included.



Maintenance

Maintenance of a living wall would usually consist of monthly health check visits and larger horticultural cutbacks, which happen twice per year using access equipment.

Monthly visits

Tasks include:

- Assess the soil moisture levels and calibrate with seasonal requirements
- Inspect for a pest or a disease and treat if required
- Remove any weeds where reachable
- Light pruning or shaping of plant species where reachable
- Ensure the correct operation of the irrigation system
- Ensure filters are kept clean
- Ensure that the plant nutrient is topped up on each visit
- Clean the area below the living wall of any fallen debris

Horticultural cutback visits

Access equipment is used to complete the following tasks:

- To complete all tasks as per the monthly visits, however, we can now reach all areas of the living wall.
- Spring visit: all plant species are pruned harder to remove old growth and allow space for new.
- Autumn visit: require much lighter pruning. More of a general tidy up
- To inspect dripline and ensure all drippers are flowing the correct rates
- To replace any plants which may have perished
- To ensure the gutters are clean and tidy of any fallen debris



Mini-showcase

Here are some examples of unique projects we have installed. You can find our detailed case studies on our website.



Museum of the Future
Dubai, UAE



Khalifa Avenue (World's largest Living Wall)
Qatar, UAE



Eden New Bailey (Europe's largest Living Wall)
Manchester, UK

Contact us

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(Enter via Baltic Street West)

www.viritopia.com

Appendix – NBS Specifications





NBS Specification – Steel frame build-up

NBS Link: <https://source.thenbs.com/product/ans-living-wall-steel-frame-build-up/k9BB2R5xQbUNvA26FPrNyL/myfgfeNFvQ1dmM9LegU4LD>

Application – Modular living wall system

Description – Modular living wall system with steel frame build up

System build-up:

- Steel Frame
- Breathable membrane.
- Hanging rails.
- ANS LW Modules.
- Dripper pipe.
- Mechanical fixings.

General Information

- Color – Black
- Finish – Matt
- Material - Polypropylene
- Shape – Rectangle
- Length – 100mm (Depth)
- Width – 250mm
- Height – 500mm
- Uniclass - [Ss_45_40_95_54 Modular unit vertical planting systems](#)
- CAWS - Q38/120 Modular green wall system

Primary structure – Steel frame, size and spacing TBC as per structure calcs

Breather membrane - Cortex® 0520FR Class B Breather Membrane

Secondary support structure

- Hanging rails – Standard mullion length: 3000 mm. Standard C rail length: 3600 mm

Irrigation - Living wall irrigation with tank. Aster drip line.

The irrigation system includes the following components: GSM unit, irrigation controller, valves, Irrigation tank with submersible pump, 25 litre irrigation tank and Dosatron.

Growing medium – Organic substrate

Planting – 80 plants per m2

Gutters – Squareline gutter

System accessories – Cortex® UV Façade Tape, Cortex Double-Sided Façade Tape

Fixing – DrillFast® Stainless DF3-SS or similar

Design – as per drawing

Colours – Black, RAL colour

Controller – Heron, or similar approved

Lighting – can be developed with horticultural lighting expertise

Weight – 72kg per m2

Fire performance – B-s2-d0