

arts lettres techniques ARCHITECT

2A Conway Street

*Minor Materials Amendment Application
to vary conditions 5 and 6 of appeal decision*
APP/X5210/A/14/2222767

**Design and Access Statement
Incorporating technical details**

July 2018

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1 Description of existing conditions 5 and 6

1.1 Conway Street appeal conditions 5 and 6

The application concerns the notification received on the 18th July 2018 of a breach of conditions 5 and 6 of an appeal decision granted to the scheme design for the extension to 2A Conway Street by Trevor Latiff Architects that commenced in 2013 and was determined in 2015.

Conditions 5 and 6 state the following:

5) Prior to commencement of the relevant part of the development, a plan showing details of the green roof, including species, planting density, substrate and a section at scale 1:20 showing that adequate depth is available in terms of the construction and long term viability of the green roof, and a programme for a scheme of maintenance shall be submitted to and approved in writing by the Local Planning Authority. The green roof shall be fully provided in accordance with the approved details prior to first occupation, and thereafter retained and maintained in accordance with the approved scheme of maintenance;

6) Prior to the commencement of development, details of a 1.8 metre high privacy screen to the south eastern boundary of the terrace shall be submitted to and approved in writing by the Local Planning Authority. The screening shall be installed in accordance with the details thus approved prior to commencement of use of the roof terrace and shall be permanently maintained and retained thereafter;

This Minor Amendment was advised by Camden Planning to comply with the requirements of Condition 5 and to discharge details for Condition 6 above. The extension shell has been completed to date, the interior is yet to be completed, the clients for 2A Conway Street are aware of their obligation to install the works described prior to occupation.

Selected products are listed in the appendix.

1.2 Technical investigation of viability

2A Conway Street 'Condition 6' (privacy screen) is straightforward and is included on our attached drawing. It is 'Condition 5' - the Sedum roof that is proving a challenge, so below I am setting out how we can install a sedum roof that has long-term viability.

I have been discussing the installation of a sedum roof to ensure that we have a single supply/ install/ maintain contractor involved. Fig. 1 is the original appeal consent showing the sedum roof area indicated. The permission was for a zinc covered 'mansard-like' extension with no visible guttering, draining rainwater onto the surrounding flat roof.

There are already practical issues with this plan as it does not take into account the 300mm recommended drainage perimeter required for a sedum installation (see the standard specification drawing from 'Sky-Garden' Appendix 2.1). This makes the side strip of sedum only 180-220mm wide, the amount of water retaining substrate for such a thin strip means that its chances of long term maintenance is slight.

In addition, when we took over the project we obtained consent to change the roof covering from zinc to lead (Camden ref. **2015/6686/P**). This has unforeseen consequences outlined in our initial correspondence with 'Sky-Garden Ltd' (Fig.2), where the lead in the run-off water poses a threat to the viability of the sedum, in particular if the water from the lead roof and walls is then sitting in the water retaining layer under the soil substrate irrigating the sedum.

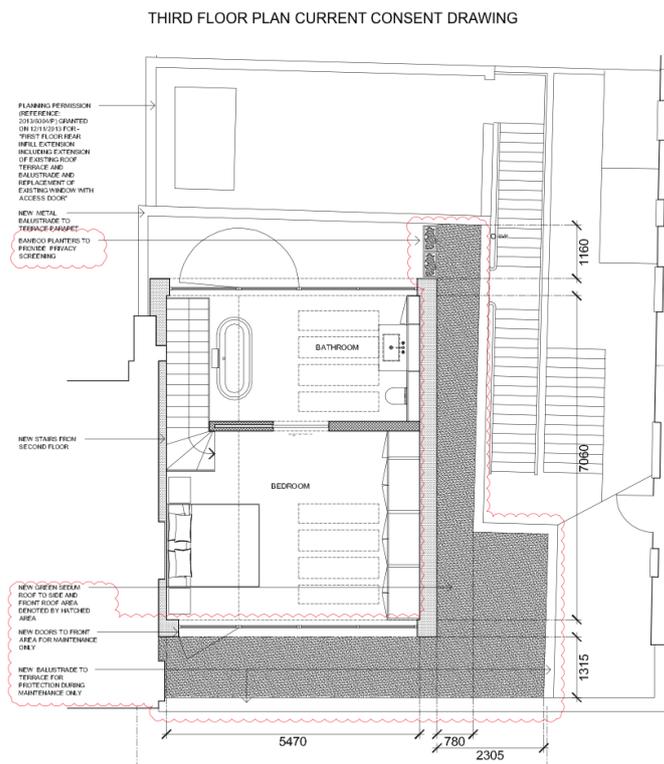


Fig. 1 Plan approved on Appeal showing extent of Sedum Roof

Subject: RE: Conway Street, Fitzrovia, London

From: Jonathan Wiltshire <Jonathan.Wiltshire@sky-garden.co.uk>

To: architect <architect@artslettres.com>

Date: Monday, 23/07/2018 10:13 AM

1 attachment: [Sedum Green Roof Maintenance.pdf](#) 352 KB

Dear Alan,

It would seem to me with the toxicity of lead, even with a gravel border/margin in place to allow the water to drain underneath the drainage board some of the 'run off' from the roof could still cause potential growing issues with the sedum.

For this reason I would not like to guarantee the successful growth within this context.

If you still wished to take on this risk a 200-300mm gravel border around the base of the lead could potentially ameliorate the contact as the water could drain through the gravel border and out under our system to the roofs downpipes.

I trust this answers the questions you had?

Warm regards,

Jonathan Wiltshire

Business Development Manager

T: 01242 620905 M: 07889400554

Cheltenham – London - Manchester



The UK's leading independent green roof specialist

Fig. 2 Email concerning lead toxicity

We have therefore discussed how best to install a sedum blanket that is viable long term. Drawing 'RHR Plan and Section' at 1:50 and 1:20 as required by the Condition proposes a water run off/splash back exclusion area of 700mm, concentrating the sedum in a single area on top of the existing raised surface that protects the single ply membrane. The sedum would have its own water retention layer above the existing drained cavity so it would not be exposed to contaminated water.

We feel this is a correct response to the Condition 6 requirement to provide a detailed planting plan that has long term viability within the area (inexpertly) defined in the appeal drawings. It is noted that Condition 7 of the Appeal approval places clear restrictions on use, so the fact that sedum does not cover the entire surface as drawn should not be considered a deterrent to leisure use, as Condition 7 is in itself that deterrent:

7) The green roof to the front and side of the roof extension shall not be used as an amenity space. It shall be accessed for maintenance purposes only;

We have included reference to Condition 6 as it was part of the enforcement, details of the planter and bamboo proposed for the privacy screen, to be in place prior to occupation, is included in the drawn element of this Minor Amendment Submission, and in Appendix 3.1 below.



Fig. 3 *Bambusa shibataea* 'Kumasaca'

Details of the maintenance of the bamboo privacy screen below are taken from the Royal Horticultural Society and should be followed by the client in order to sustain the screen:

Container cultivation

Smaller bamboos should be grown in a large pot (at least 45cm (18in) across and deep) in loam based potting compost such as John Innes No 3. Controlled release fertiliser pellets and water retaining gel in the compost will be used. During summer frequent watering water and feed with a liquid feed is required. Watering to be reduced and feeding stopped in winter. Client to ensure that bamboo plants in containers do not try out in winter, however, since the foliage is prone to wind scorch. In very cold weather, insulate containers with bubble wrap or move them to frost-free conditions. To ensure fresh new growth, divide the bamboo every couple of years using a saw to cut through the rootball, retaining the younger rhizomes and canes.

Ruscus-leaved bamboo such as *Bambusa shibataea* 'Kumasaca' (Fig. 3) are low-growing evergreen bamboos, very slowly spread to form clumps of vegetation with slightly sinuous, slender canes and lance-shaped leaves. *S. kumasaca* is a dwarf, compact bamboo, forming dense, leafy clumps with pale green canes to 1.5m in height, maturing to dull brown. with dark green leaves to 10cm in length

4 Conclusion and summary

The proposal to vary the area of sedum on the approved plan is in response to both an initial misunderstanding of the requirement for sedum roofs to maintain a 300mm drained perimeter – leaving unviable 200mm wide strip of sedum blanket along one of the three areas of the roof, and secondly the consequences of having the roof covering changed from zinc to lead under a minor amendment approval.

The existing roof has a drained cavity below the proposed sedum moisture retaining layer, so by removing the lead contaminated water from both root take up and splash-back from the mansard-type construction, the area of sedum proposed is viable long-term as required by the original Condition 5.

The bamboo screen noted in Condition 6 will be provided as per the details enclosed within this minor amendment. The species proposed grows to 1.5 metres which, within a planter of 0.45 metres high x 1.0 metres long and 0.45 metres wide (as recommended by the RHS), gives a screen of adequate height and density.

Appendix 1: Requirements of the Design and Access Statement

The following is guidance by Camden for the contents of a DAS. As the current application is limited to a variation of an area of sedum roof coverage some aspects of the requirements below are not pertinent to the application.

a description of the existing property or site:

for example, key features, character, age and previous alterations that have been undertaken

an explanation of the design principles and concepts behind the proposed development for example, the scope of proposed development

a description of the intended use of the proposed development

a description of the layout of the proposed development:

for example, how properties and public/private spaces will be arranged on the development site and their relationships with one another

details of the scale of the proposed development:

for example, the height, width and length of new properties and public/private spaces

a description of how public/private spaces will be landscaped in the proposed development

a description of the appearance of the proposed development:

for example, what materials and architectural styles will be used

an explanation of how local context has influenced the overall design

details of the proposed access to the development site and how equal and convenient vehicular and disabled access to buildings, spaces and the public transport network will be ensured and maintained

For developments that involve carrying out work on a listed building, the design and access statement should also include the following information:

an explanation of how the historical and architectural importance of the listed building – in particular its physical features and setting – has been considered when designing the proposed development

Appendix 2: Technical specification - sedum roof

2.1 Sky Garden Sedum Data sheet

Product Data Sheet

Vegetation Product

Sky Garden Sedum Blanket VGSB30



Technical Data:

Sky Garden Sedum Blanket

Precultivated UK grown vegetation blanket, containing between 8-12 species specifically chosen for extensive green roof applications. Grown on 20mm substrate base on a carrier membrane.

Physical Properties:

Composition:	Base - Geo-composite polypropylene mesh / coir blanket.
	Growing Medium - 20mm Sedum Mix.
	Vegetation - Mature Sedum plants grown from rhizome and seed.
Plant Height:	20-50mm, depending on growing stage of sedum.
Weight (dry)	15kg/m ²
Weight (saturated):	20kg/m ²
Consignment Size:	35m ² per Pallet
Colour:	Seasonal variation
Sizes:	1.1 x 2m



Species Sown:

12 Sedum Species Sown (*subject to seasonal variations)

Sedum acre, *Sedum album*, *Sedum elacombianum*, *Sedum floriferum*, *Sedum forsterianum*, *Sedum hybridum*, *Sedum kamtschaticum*, *Sedum montanum*, *Sedum reflexum*, *Sedum selskianum*, *Sedum sexangulare*, *Sedum spurium*.

System Considerations:

Instant vegetative cover for Extensive Sedum Blanket Systems.

Recommended minimum substrate depth 50mm

Low maintenance, shallow rooted and non-invasive vegetative cover.

Sky Garden recommends annual maintenance of sedum green roofs to remove invasive/unwanted species to ensure system functionality and sustainability.

Full Specification Description:

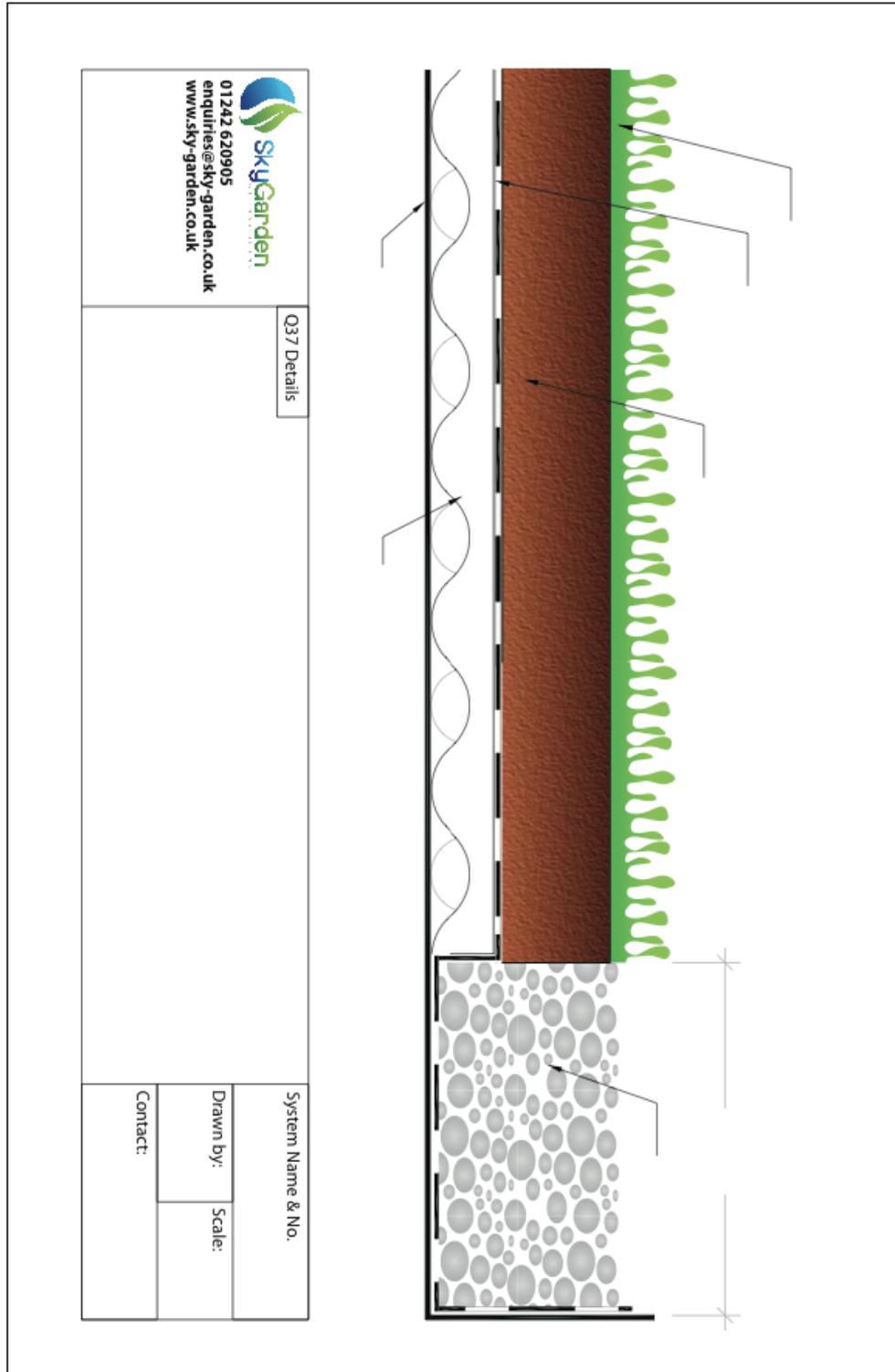
High quality Sedum Blanket, grown in the UK, to provide the perfect low maintenance solution for extensive green roof systems, using a carefully selected mix of sedum species

Product: **VGSB30**

Supplier: Sky Garden Ltd

 01242 620909	 Unit 4 Beta Orchard Industrial Estate, Toddington, Chesham, Glos. GL54 5ER	 enquiries@sky-garden.co.uk
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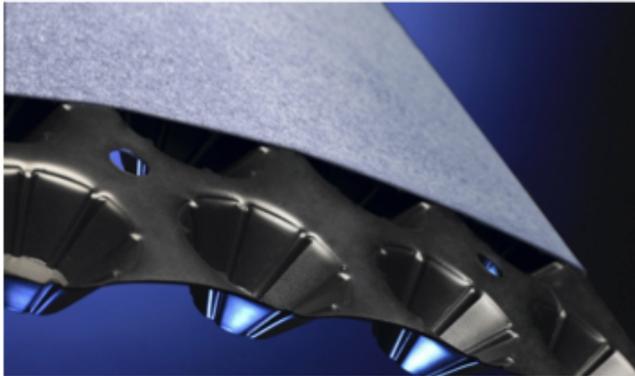
2.1 Sky Garden standard technical edging detail



2.2 Sky Garden drainage board

Sky Garden | Rigid Drainage Board | Sky Garden

<https://www.sky-garden.co.uk/shop/drainage-products...>



Sky Garden HDPE 20mm cusped drainage board allows for 7lts/sqm of water storage. Complete with filter fleece to protect the board from the substrate above.

calculate cost

SQM [CALCULATE](#)

Total: £6.50 [ADD TO BASKET](#)

Your Basket

Sub-total (exc vat)	£0.00
Delivery (exc vat)	£0.00
VAT	£0.00
Total (inc vat)	£0.00

[PROCEED TO SECURE CHECKOUT \(/PAYMENT/BASKET.PHP\)](#)

shop categories

- [Clearance \(/shop/clearance/\)](#)
- [Full Systems \(/shop/full-systems/\)](#)
- [Live Products \(/shop/live-products/\)](#)
- [Substrate Products \(/shop/substrate-products/\)](#)
- [Water Reservoir and Drainage Products \(/shop/drainage-products/\)](#)
- [Edging Products \(/shop/edging-products/\)](#)
- [Green Roof Maintenance Packages \(/shop/green-roof-maintenance/\)](#)

how will it be delivered



http://www.youtube.com/embed/L6i5I_ZxdYs?autoplay=1

How do I look after my green roof?

This article gives you advice and techniques to look after your living roof.

[READ MORE \(/AFTERCARE.PHP\)](#)

2.3 Sky Garden sedum substrate

Sky Garden | Sedum Substrate In Bulk Bags | Sky Garden

<https://www.sky-garden.co.uk/shop/substrate-product...>



Sky Garden's sedum substrate is a specially blended mix of free draining organic material with clean, screened granular aggregates, recycled from certifiable waste products from the building industry, to provide a low nutrient water retentive growing medium.

This light weight, free draining, low nutrient and moisture retentive growing medium is made from 70% recycled materials in compliance with the stringent Soil Association standards and certifications along with the UK Green Roof Code of Best Practise.

Ideal for use in extensive sedum blanket or sedum plug plant roofs.

Recommend installation depth 50 - 80mm

Dry weight: 930 kg/m³

Wet Weight: 1300kg/m³

Grading 5- 11mm

Provided in bulk bags

Let us know how many sacks you need in the box near the top of the page for an accurate price.

If you have any further questions, please do not hesitate to [contact us](http://www.sky-garden.co.uk/contact.php). (<http://www.sky-garden.co.uk/contact.php>)

soil calculator

<input type="text"/>	SQM	
<input type="text"/>	Depth	CALCULATE

Total Bags: 0

calculate cost

<input type="text" value="1"/>	Bag	CALCULATE
Total: £67.50		ADD TO BASKET

Your Basket

Sub-total (exc vat)	£0.00
Delivery (exc vat)	£0.00
VAT	£0.00
Total (inc vat)	£0.00

[PROCEED TO SECURE CHECKOUT \(/PAYMENT/BASKET.PHP\)](#)

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how will it be delivered



http://www.youtube.com/embed/L6i5l_ZxdYs?autoplay=1

How do I look after my green roof?

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2.4 Sky Garden edging detail

Sky Garden | Aluminium Retention Detail | Sky Garden

<https://www.sky-garden.co.uk/shop/edging-products/...>



Aluminium edge detail is used to retain our green roof systems. Mill finished with regular drainage outlets, this robust aluminium trim is a perfect finish for your green roof..

The aluminium edge detail comes in 1m lengths. The upstand height is 100mm and base is 100mm with a width of 1.5mm.

(1.5mm Aluminium Edging 100 (W) x 100 (H) x 1000 (L))

Each length of aluminium edge comes with a connector to fasten the lengths together.

If you require a corner connector please order separately.

Simply mastic the aluminium edge at either end and use the weight of the system to hold it in place. Find our edging glue in the 'Edging Products' section of the shop.

Each exposed edge is turned back 45 degrees to insure no sharp edges on your roof.

Fill in the number of lengths you need in the box near the top of the page for an accurate price.

If you have any further question, please do not hesitate to [contact us](http://www.sky-garden.co.uk/contact.php). (<http://www.sky-garden.co.uk/contact.php>)

calculate cost

Length [CALCULATE](#)

Total: **£17.00**

[ADD TO BASKET](#)

Your Basket

Sub-total (exc vat)	£0.00
Delivery (exc vat)	£0.00
VAT	£0.00
Total (inc vat)	£0.00

[PROCEED TO SECURE CHECKOUT \(/PAYMENT/BASKET.PHP\)](#)

shop categories

[Clearance \(/shop/clearance/\)](#)

[Full Systems \(/shop/full-systems/\)](#)

[Live Products \(/shop/live-products/\)](#)

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how will it be delivered



http://www.youtube.com/embed/L6i5I_ZxdYs?autoplay=1

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[READ MORE \(/AFTERCARE.PHP\)](#)

2.5 Sky Garden maintenance plan (2 pages)



Sky Garden Ltd, Unit 4 Beta, Orchard Industrial Estate, Toddington, Glos, GL54 5EB
T: 01242 620905 F:01242 620739
www.sky-garden.co.uk

Maintenance Summary for a Sedum System

Implementing a maintenance schedule to uphold the diversity and aesthetic performance of your living roof is something Sky-garden highly recommends. Our package will help with the longevity of your roof and continue to promote healthy and vigorous growth. We also aim to mitigate against any potential problems your roof may face, such as drainage issues caused by leaf build up or weed infestation.

Our package includes bi-annual visits, one in the spring / summer and one in late autumn. All visits are carried out by our own registered living roof maintenance teams who are experienced with our systems and understand the key elements of long-term living roof success.

The standard maintenance package will run over a 12 month period from the date of contract inception and will contain at least two remedial visits to inspect and carry out the required works as detailed below. Costs of maintenance are based on our daily rate for our maintenance team, on the number of visits per year, the location, the accessibility of the roof area and provisions of man safe systems. Please note that provisions of man safe systems are not part of the maintenance quote.

Before any visit the maintenance manager will discuss with yourself any further requirements or issues with the green roof. Our policy is to allow a green roof to evolve so a range of species deemed acceptable by Sky-Garden develop upon your roof. We will only remove invasive weeds, trees and woody shrub seedlings along with grasses that affect the survival capacity of the green roof species or the integrity of the waterproofing.

Page 1 of 2



Sky Garden Ltd, Unit 4 Beta, Orchard Industrial Estate, Toddington, Glos, GL54 5EB
T: 01242 620905 F:01242 620739
www.sky-garden.co.uk

Our Maintenance Package Includes:

- Full roof inspection to assess:
 - Sedum establishment
 - Diversity of new species present
 - Weed spectrum and control requirements (if any)
 - Drainage of roof and function of drainage outlets
 - Performance of roof and retention systems (if present)
 - Water requirements of roof
 - Feeding requirements
 - Remedial requirements
 - Physical damage caused by weather or transit
 - Recommendations for ongoing maintenance requirements
- Localised spot weeding of invasive or damaging weeds
 - Re-seeding and remedial patching of roof areas caused by poor establishment, (not adverse weather effects or insufficient irrigation.)
- Assessment of irrigation systems (if present or installed by Sky-Garden)
- Inspection of drainage channels and clearing of exposed outlets
 - Full report outlining actions required outside of maintenance contract or required between remedial visits
- (Autumn only) Feeding using broadcast slow release sedum fertiliser (organic)
 - Our package does **not** include access provisions above and beyond standard ladder access, quotes can be drawn up upon request.

Any fertiliser or weed killer application come from a range of products developed specifically for Sky-garden living roof systems and are naturally organic or naturally derived. Herbicides are weed species specific, low impact and used only as a last resort to tackle invasive or widespread weed problems.

