

18-20 Elsworthy Road

Green Roof Proposal

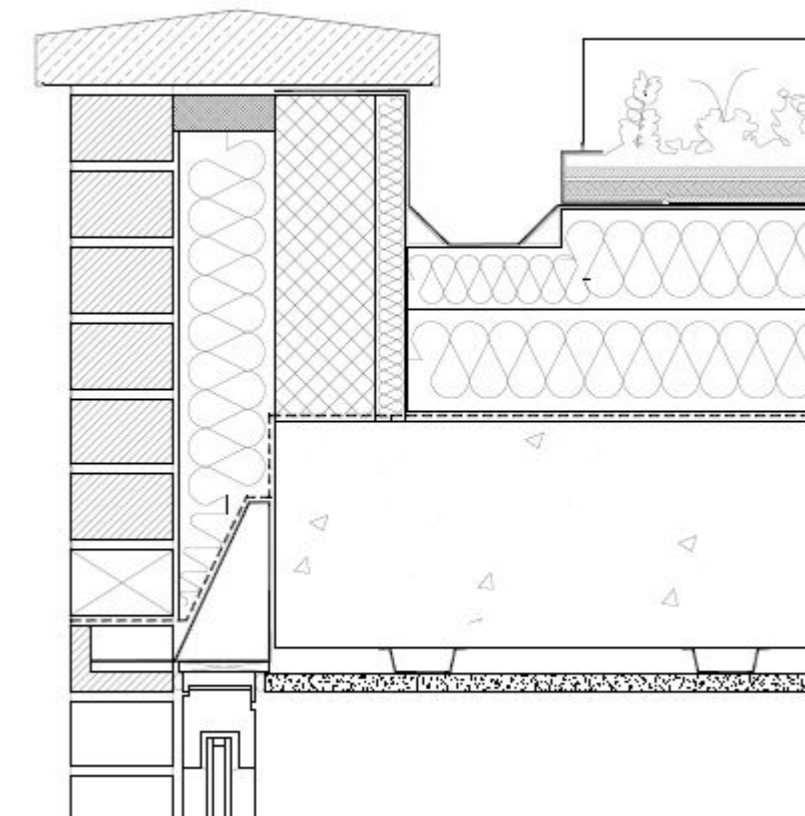
Planning Reference: 2014/5413/P & 2016/2041/P

1. Introduction

This Document sets out proposed alterations to the green roof areas at 18-20 Elsworthy Road. Planning permission ref: 2014/5413/P dated 30/03/2015 & amended by 2016/2041/P dated 09/11/2016 for the demolition of existing building (6 x flats) and erection of a three storey plus basement building to provide 5 x residential units and associated works. Changes are alterations to the area of green roof including the omission of Sedum planting to first floor roofs and the addition of green roof to the two bin stores located within the front gardens.

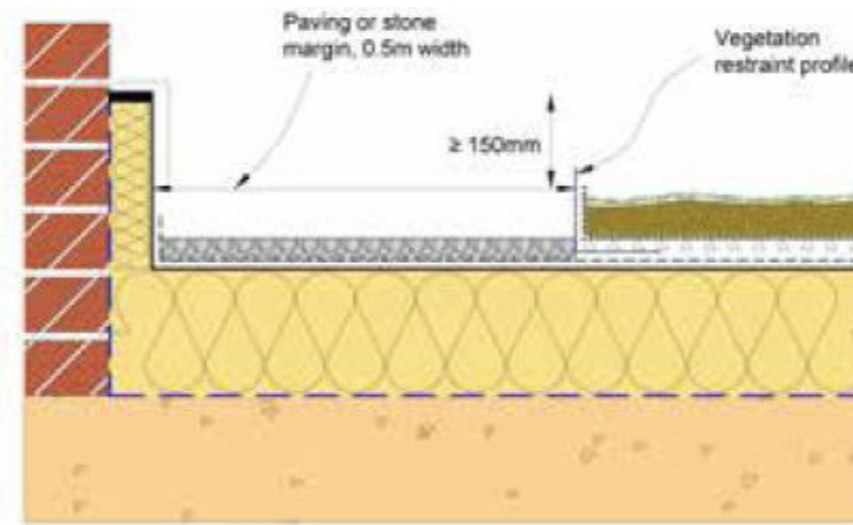
2. The Scheme as Approved

The approved drawing 18-20ELS - 417, shows sedum roof to the full extent of the roof at first floor level, totalling 42m². The approved details show a 150mm perimeter to the edge of the sedum roof.



3. Reasons for the amendment

The amendment addresses a conflict between the approved planning drawings and the requirement under the developer's building warranty (Premier Guarantee) to provide a "vegetation-free zone of minimum 0.5m width at all perimeters, abutments and openings." (Figure 5 from Premier Guarantee Technical Manual)



Notes:

1. 0.5m zone around openings, along abutments and at perimeters.
2. Vegetation restraint profile should be secured with ballast as necessary. Additional restraint will be required on sloping roofs to stop creep of the vegetation zone.
3. Protection of waterproof membrane should be extended under ballast zone.
4. Paving or stone should not simply be added to the growing medium at the perimeter as this (a) may reduce the available height of upstands and (b) will not stop plant growing in the zone.

Figure 5: Green roofs: vegetation-free zone: warm roof (elevation)

This reflects the manufacturer's recommendation :

"Round washed pebbles, graded 20-40mm should be used on all borders to a recommended width of 500mm to provide a vegetation free edging around upstand abutments, rooflights, rainwater outlets and all other penetration points."

<https://www.bauder.co.uk/green-roofs/planning-and-technical-advantages/green-roof-design-essentials/design-considerations/perimeters-and-vegetation-barriers>

Perimeters and vegetation barriers

Perimeters

The minimum required upstand height for the waterproofing at abutments, parapets or pipe work penetrations etc, is 150 mm above the completed landscape surface. The only exceptions are at perimeter kerbs where the waterproofing extends fully to the outer edge finishing in a traditional weltd drip, edge trim or at access doorways, where a linear drain is incorporated. Flush threshold access doorways can normally be accommodated, and the design of the waterproofing detail at the threshold will vary dependant upon the components to be sealed to.

Vegetation barriers

These are created with round washed pebbles and provide several important functions in a green roof:

- Prevent vegetation from encroaching on roof elements such as rainwater outlets
- Protection of the vegetation layer from water running down vertical upstand surfaces or from higher level rainwater downpipes.
- Provide rapid surface drainage during heavy rainfall.
- Reduce and ease routine maintenance.
- Protection of the waterproofing from mechanical damage during maintenance.
- Fire break, where the pebbles are installed at a **minimum** of 300mm wide and 50mm deep.
- Wind uplift resistance by increasing the imposed load at roof perimeters

Pebble barriers

Round washed pebbles, graded 20-40mm should be used on all borders to a recommended width of 500mm to provide a vegetation free edging around upstand abutments, rooflights, rainwater outlets and all other penetration points.



The pebble barrier installed on this project also prevents erosion of the XF301 sedum blanket vegetation from water draining onto the roof from the roof area above via a downpipe.

4. The proposed non-material amendments

Firstly, the product details will not change, the amendment is limited to a reduction in the overall area of green roof.

With the 500mm gravel margins incorporated as shown on drawing (03)42, the proposed green roof will remain on the rear extensions, and will be omitted to the roof areas along Elsworth Rise and against no.16. This results in a total of 8m² sedum blanket at first floor level

New green roof areas will be added to the top of the external bin stores at the front gardens in order to retain as much green roof area as possible. This gives a total sedum blanket area of 14m²

