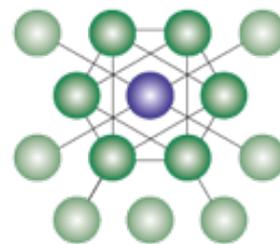


K43 Raised Storage/Access Systems New Build & Retrofit Checklist

GBE



Green Building Encyclopaedia

K43 RAISED STORAGE/ACCESS SYSTEMS (Checklist)

1 Problems/Solutions

Issues:

80% of domestic lofts are used for essential but infrequently used possessions and belongings storage like camping gear and Christmas decorations, and their insulation is often squashed under these possessions.

Squashed insulation's performance is worse than halved, and heat loss is more than doubled through squashed insulation.

Extreme energy efficiency upgrades often need whole house ventilation or heat and ventilation systems and renewable energy systems, parts of which occupy parts of the loft.

Services inevitably have access or inspection panels to replaceable parts like filters, they need safe access routes to enable easy maintenance and say a 1m² working platform at the access panel, with room to open and withdraw parts.

MVHR units require a safe access platform and a minimum 1m² working deck.

Many boiler maintenance companies will not attend to a boiler in a loft unless there is a safe access platform.

GBE Issue Paper:

[Squashed Loft Insulation](#) G#13919

Problems:

Personal possessions and belonging being stored in lofts is a significant barrier to upgrading the loft insulation or services systems to current needs or current regulations.

Decanting of possessions from roof and replacing them after the job is another point of expenditure where profits cannot be made so was a discouragement for energy refurbishments.

Recent stories in the media about tradesmen stealing heirlooms from lofts whilst working, puts more people off upgrading their insulation.

Misunderstandings:

48% of families surveyed do not understand that squashing insulation reduces its performance.

Solutions:

Manufacturers now make raised storage and access systems that are suitable for DIY installation overcoming the issue of theft by tradesmen.

They are modular so that parts can be assembled and possessions moved onto the partial storage deck.

More of the modules are completed where the possessions were, gradually creating all the modules and raising all of the possessions in stages

Consider:

Co-ordinate the planning of storage and access platforms with the Services installations to acknowledge the module sizes as much as possible and ensure access panel opening geometry, working space, and replacement parts withdrawal and replacement

Substitute:

If you choose a BBA certified system specify it or an inferior system may get substituted

Minimise:

Cutting of modular components by avoiding obstruction, planning to whole units and avoiding cutting at edges

Avoid:

Solid or hollow and closed legs that create thermal bridges through the top-up insulation

Health:

Take care if removing or moving existing old thermal insulation where all appropriate personnel protective equipment (PPE)

Wellbeing:

Biophilia:

Consider a visible veneered plywood or veneered block-board in place of chipboard

Biodiversity:

Take care not to disturb any birds or bats found in the lofts.

£5000/bat fine for disturbing bats

Safety:

Take precautions when lifting components into lofts and ensure all parts do not risk sliding back down

Working in a loft is equivalent to working at height,

200 falls through ceilings or from lofts, that result in hospital visits occur each year.

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Many boiler maintenance companies will not attend to a boiler in a loft unless there is a safe access platform.

Precautionary principle:

Adopt working at height precautions and PPE requirements.

4 Resource Efficiency Issues:

Choose a system that is modular, prefabricated, adaptable to older irregular roofs, not preassembled, easy to handle, quick and easy to assemble, effective.

Industry/Sector/Company Initiatives:

Some manufacturers offer return to stock

Reduce:

Plan the installation in advance and only order what is needed, some manufacturers offer return to stock

Reclaim:

Removal of screws from all components permits their easy retrieval, reclaim and reuse

Reuse:

Reuse reclaimed parts in similar arrangement.

Recycle:

Screws retrieved from steel components may not be reusable in which case, segregate them for recycling

Recover:

Better not to burn plastics, chipboard, polyethylene because of the chemicals release;

paper or cardboard is less of a problem,

but its best to segregate and reuse them all

5 Install/Use/Maintenance

Install

Ensure any existing top-up insulation is moved away to allow setting out and installation of raised storage/access systems
Ensure the top-up insulation is moved back into place to fill the gaps between supports and most importantly surround the supports

Ensure a 50 mm air space for cross ventilation is maintained between top of insulation and bottom of storage/access deck

Provide and follow [Method Statement](#)

In Use Issues

Check timber based board is not suffering from surface condensation on the underside and/or remaining damp

Maintenance

Metal, plastic and timber parts should not need maintenance

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6 Waste Issues:

Hazardous waste:

None anticipated unless asbestos based insulation is found in the existing ceiling insulation

Deleterious Substances:

None anticipated expect if glued joints are part of system

Avoid unnecessary painting any component

Waste management:

Design to avoid waste using modular system in modular arrangement

Waste statistics:

Waste minimization:

One manufacturer offers Return to Stock

European Waste Catalogue:

15 01 01 paper and cardboard packaging

17 02 01 wood (decking and pallets)
17 02 03 plastic (supports)
17 04 04 zinc (galvanizing)
17 04 05 iron and steel (cross-beams)
17 04 07 mixed metals (galvanized steel cross-beams, screws)
17 06 INSULATION MATERIALS AND ASBESTOS-CONTAINING CONSTRUCTION MATERIALS
17 06 01* insulation materials containing asbestos (not applicable unless existing)
17 06 03* other insulation materials consisting of or containing DS (not applicable unless existing)
17 06 04 insulation materials other than those mentioned in 17 06 01 and 17 06 03 (thermal insulation)
17 08 GYPSUM-BASED CONSTRUCTION MATERIALS
17 08 01* gypsum-based construction materials contaminated with DS (not applicable)
17 08 02 gypsum-based construction materials other than those mentioned in 17 08 01 (in case of accidents)

7 End of Life

End of Life Options:

Removal of screws from all components permits their easy retrieval, reclaim and reuse

Deconstruction:

Removal of screws from all components permits their easy retrieval, reclaim and reuse

Demount ability:

Removal of screws from all components permits their easy retrieval, reclaim and reuse

Reclaim:

Reclaim all of the parts for reuse

Product Passport:

None offered yet

Remanufacture:

None required if removed carefully

Recycle:

Recycle unserviceable screws damaged by driving into steel sections

Make available for Reuse:

Reuse:

Reassemble following manufacturers installation instructions

8 Jargon Buster

GBE [Jargon Buster](#)

[Theme](#)

[Initial, Abbreviations & Acronyms](#)

[Classification](#)

- K43 Raised Storage/Access Systems

[Words & Phrases](#)

- Conduction Thermal Insulation
- Decrement Delay
- k value
- Loft
- Loft Insulation
- Radiant Thermal Insulation
- Raised storage/access systems
- Thermal Break
- Thermal Bridge
- Thermal Bypass
- Thermal Flanking
- Thermal Insulation
- U value

[Numbers:](#)

9 Checklist:

New build:

New homes rarely have raised storage/access platforms above thick thermal insulation,

80% of households regarding loft storage as essential,

Retrofitting raised storage/access platforms is one of the first actions after moving in.

Refurbishment:

Loft insulation should be an obvious choice in any refurbishment

Decent Homes:

Loft insulation should be an obvious choice in any refurbishment

Insulation should come before replacement of old boiler with efficient boiler or old heating system with new

GreenDeal/ECO:

Insulation will always meet the Golden Rule with a short payback period

Some of the many reasons for poor uptake of energy refurbishments:

Loss of loft storage after loft top-up insulation
Decanting of possessions from loft space to increase insulation

Adaptation:

Don't just use k-value conductivity thermal insulation

We must protect homes from summer solar radiation heat gains through opaque roofs

20% of homes overheat (ZCH 2015)

Lifestyle:

Insulate your house as a priority

New bathrooms and kitchens cost you money that will only be realized when you sell and move on

Insulation saves you money whilst you stay put

10 CPD/Lectures

GBE CPD

Topics

- Refurbishment
- Housing
- Non-Domestic
- GreenDeal
- Overheating retrofit insulation

Seminars

- 80% of loft insulation is not working

GBE Lectures

Theme

- Elemental
- Pitched roofs

Subjects

11 Case Studies:

GBE Case Studies

Buildings

Portfolio

Events

- **Overheating**

Information

GBE Evidence Based Case

Buildings

12 Projects:

GBE Projects

Events

Information

13 GBE Calculators

GBE Equations

GBE Datasets

GBE Product Data Sheets

GBE Calculators

- The Loft Insulation U value and Raised Storage/Access System Psi value calculator is complete and reviewed by the manufacturer it was created for.
- It needs to be Peer Reviewed before making available here.
- But you can have a glimpse of the cover sheet and part of the main calculator until then.

14 Products

GBE Products

- StoreFloor Uni-Support
- StoreFloor Tri-Support
- StoreFloor Cross-beam

Making up System

StoreFloor G#13287

GBE Manufacturer

Eco Answers Ltd t/a LoftZone G#13890

15 Accessories

GBE Accessories

Primary Thermal Insulation

Top-up Insulation

Timber panel products
Screws

16 Systems

GBE Systems

[StoreFloor G#13287](#)

[GBE Manufacturer](#)

[Eco Answers Ltd t/a LoftZone G#13890](#)

17 Images

GBE CPD

• CPD Covers

• LoftZone CPD Cover slide

• CPD Slides

• CPD Shows

• CPD Handouts

GBE Images

• Icons

• Logos

• Pinterest

• <https://uk.pinterest.com/pin/523543525416166053/>

Videos

• Youtube <https://www.youtube.com/user/LoftZoneStoreFloor>

• Training course: <http://www.pplearning.co.uk/lms/index.php?r=course/details&id=18>

18 All

19 HERACEY™

Healthy:

• Use low VOC adhesive timber panels boards

• Use High decrement delay radiant heat thermal insulation to reduce risk of overheating

Environmental:

• Use plant based top-up thermal insulation with GWP in minus figures

Resourceful:

• Use a Modular system, design a modular layout, cut nothing, waste nothing

Appropriateness:

• Systems designed for this purpose are appropriate

Competence:

• One system on the market is BBA Certified as competent for the job

• k-value is not enough to overcome summer solar heat gain, decrement delay is essential too

Effectiveness:

• Raising possessions up from loft insulation makes a significant difference to insulation performance

• Use blown-in or poured-in insulation to reduce risk of gaps in insulation around supports

• Use high decrement delay plant based insulation, effective against summer solar heat gain and winter conductivity heat loss

Yardstick:

Use a BBA Certified System

20 Slogan/Hashtag

Slogan:

Stuffed Loft, Squashed Insulation, Lift Your Loft Stuff

#Hashtag:

#LiftYourLoftStuff

21 Information sources:

See this page right column

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