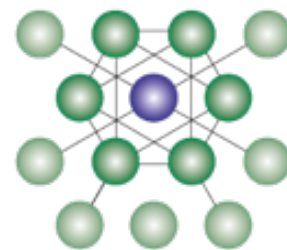


# GBE



**N80 BIODIVERSITY ENHANCEMENT/ADAPTATION/MITIGATION SYSTEMS**

Draft Specification awaiting review

Note to reviewers and viewers:

Red text or underline: is usually a question:

Is the information correct?

I have found reference to it but no supporting evidence if it is relevant or not

can you provide correct information?

or should it be removed?

Blue Text or underline: Usually optional information

To be edited by the project specifier

Some times to be added to, chosen from or deleted, if not relevant to the job

Green text: a note to me to edit in the next iteration or next product specification

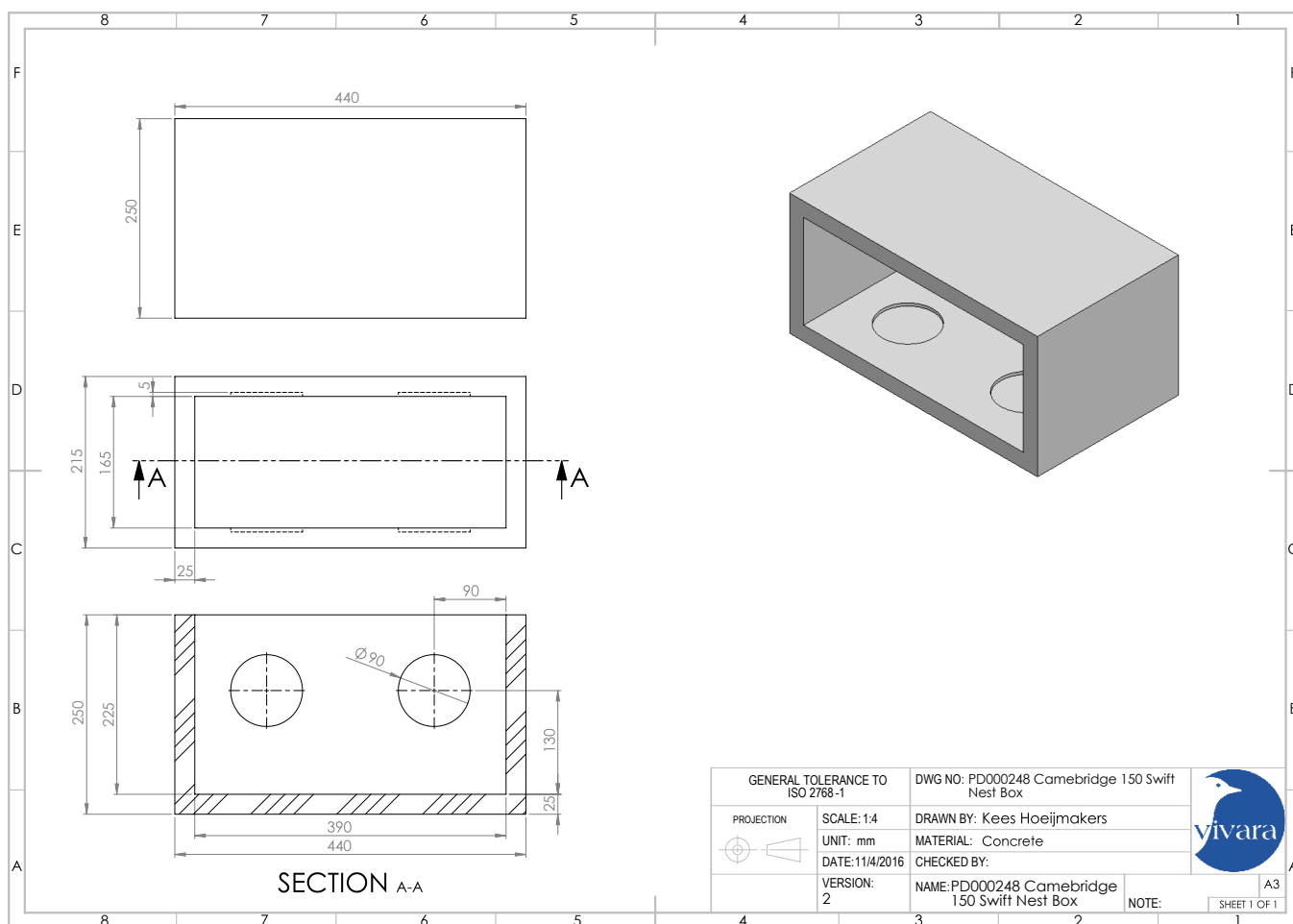
Blue underlined text: Usually a hyperlink

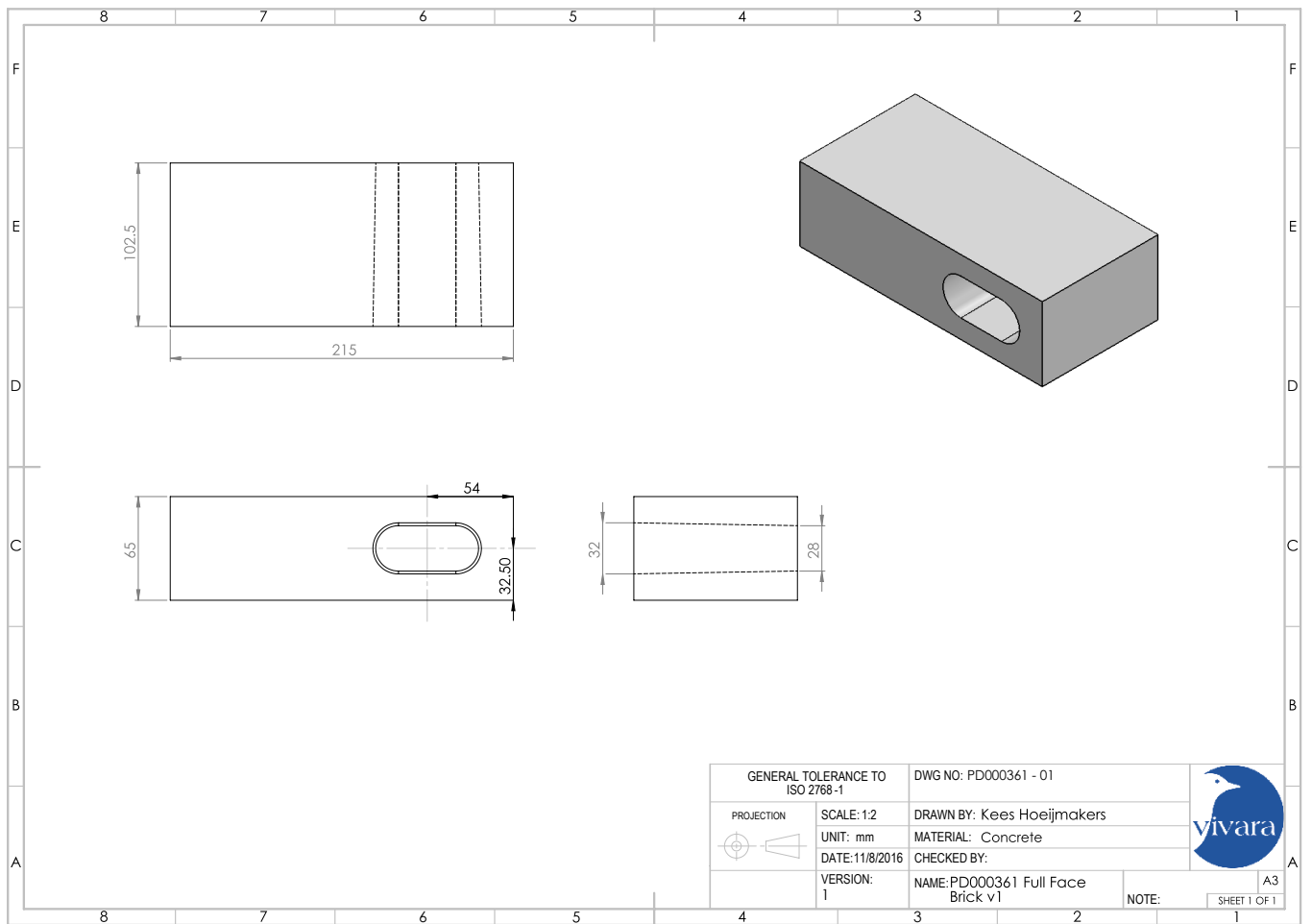
Please provide feedback to Brian Murphy to update until completion

**Illustrations:**

**N80/110A**

**Concealed concrete cantilevered swift nest box block:**





Consider adding 3<sup>rd</sup> drawing

The brick header entrance brick is half the length of the stretcher (the half with the hole!)

**Guidance Notes:**

In addition to choosing a competent, appropriate location and orientation for the bird box to suit the occupant and their nesting habits, also take into account structural issues as noted below:

Building competent locations:

Above the U value envelop:

- above occupied rooms and their enveloping insulation,
- in gable walls of building with storage attics not room in roof accommodation

In the absence of information on concrete mix strength and box configuration strength, it is recommended to avoid load-bearing situations in buildings.

Unsuitable load-bearing situations include:

- Immediately below the eaves wall plate
- Below a cut timber roof's loadbearing purlin, loadbearing ridge or eaves wall plate

Suitable situations might include:

- Non-loadbearing walls
- Below a suitably designed and sized lintel
- Where the project Structural Engineer permits
- Where the Building Control Officer permits
- In an unloaded gable wall of a trussed rafter roof

Critique of System N80/110D Concrete concealed bird nest box & exposed entrance brick system in gable wall:

For

Domestic or Non-domestic buildings
Tough, durable, low maintenance,
Bats and/or birds accommodated
Roosts can be positioned on any elevation unobtrusively
Potentially large capacity roosts/nests
High thermal mass
Made for uninsulated cavity walls above the U value envelop

To be considered

Limited access for cleaning and removal of faeces and nesting materials from box
--

Critique N80/110E Concrete concealed bird nest box & exposed entrance brick system at eaves:

For

Domestic or Non-domestic buildings
Tough, durable, low maintenance,
Bats and/or birds accommodated
Roosts can be positioned on any elevation unobtrusively
Potentially large capacity roosts/nests
High thermal mass
Made for uninsulated cavity walls above the U value envelop

To be considered

Creates thermal break through inner leaf insulating around box makes the installation less stable
Causes thermal bridge through cavity wall construction
Reduces U value locally in cavity wall construction with cavity insulation
Could be used in blockwork but does not coordinate with blockwork if insulated around box
Limited access for cleaning and removal of faeces and nesting materials from box

Specification on next page

## N80 BIODIVERSITY ENHANCEMENT/ADAPTATION/MITIGATION SYSTEMS

To be read with Preliminaries A10-A55/General Conditions

### 110A CONCEALED CONCRETE CANTILEVERED SWIFT NEST BOX BLOCK:

Reference Drawing(s): Cambridge Swift Box Maxi Block PD000248

Type: Hollow block with open front and 2 No. cast in nest dishes in top and bottom (avoids error in installation)

Manufacturer: CJ WildBird Foods Ltd. The Rea, Upton Magna, Shrewsbury, Shropshire, SY4 4UR

T 0044 (0)1743 708022 F 0044 (0)1743 709505

W [www.birdfood.co.uk/pro](http://www.birdfood.co.uk/pro) W <http://twitter.com/VivaraProUK>

Contact: Martin George Wildlife Specialist T General: 0044 (0)1743 709555

E [martin.george@birdfood.co.uk](mailto:martin.george@birdfood.co.uk)

Product Reference: Cambridge Swift Nest Box

Endorsement: [GBE Listed]

LCA/EPD: Not Available

Density: 2400 kg/m<sup>3</sup> Michael McNulty to calculate

Box weight: [\_\_\_/\_\_\_] kg

Work sizes: 440 x [200/250] x 215 (l x d x h) mm.

Wall thickness: 25 mm. (20 mm. in nest dishes)

Nest dishes: 5 x 90 mm. diameter

Material: Concrete OPC and primary virgin aggregates 1-2mm sand, 2 – 5mm coarse sand or 5mm + gravel

Finish: Fine textured finish

Colour: Grey

### 110B CONCRETE SWIFT NEST ENTRANCE BRICK STRETCHER

Reference Drawing(s): Cambridge Swift Box Full face brick PD000361

Type: Solid Brick with cast in opening front to back through 102.5 mm

Manufacturer: CJ WildBird Foods Ltd. The Rea, Upton Magna, Shrewsbury, Shropshire, SY4 4UR

T 0044 (0)1743 708022 F 0044 (0)1743 709505

W [www.birdfood.co.uk/pro](http://www.birdfood.co.uk/pro) W <http://twitter.com/VivaraProUK>

Contact: Martin George Wildlife Specialist T General: 0044 (0)1743 709555

E [martin.george@birdfood.co.uk](mailto:martin.george@birdfood.co.uk)

Product Reference: Cambridge 1 Brick Swift Nest Entrance

Endorsement: GBE Listed

LCA/EPD: Not Available

Density: 2400 kg/m<sup>3</sup> Michael McNulty to calculate

Brick weight: \_\_\_ kg

Work sizes: 215 x 102.5 x 65 (l x d x h) mm.

Wall thickness: 15-17 mm.

Material: Concrete OPC and primary virgin aggregates 1-2mm sand, 2 – 5mm coarse sand or 5mm + gravel

Finish: Fine textured finish

Colour: Grey

### 110C CONCRETE SWIFT NEST ENTRANCE BRICK HEADER

Reference Drawing(s): Cambridge Swift box Half face Brick Reference number

Type: Solid Brick with cast in opening front to back through 102.5 mm (full width brick)

Manufacturer: CJ WildBird Foods Ltd. The Rea, Upton Magna, Shrewsbury, Shropshire, SY4 4UR

T 0044 (0)1743 708022 F 0044 (0)1743 709505

W [www.birdfood.co.uk/pro](http://www.birdfood.co.uk/pro) W <http://twitter.com/VivaraProUK>

Contact: Martin George Wildlife Specialist

E [martin.george@birdfood.co.uk](mailto:martin.george@birdfood.co.uk) T General: 0044 (0)1743 709555

Product Reference: Cambridge Half Brick Swift Nest Entrance

Endorsement: GBE Listed

LCA/EPD: Not Available

Density: 2400 kg/m<sup>3</sup> Michael McNulty to calculate

Brick weight: \_\_\_ kg

Work sizes: 102 x 102.5 x 65 (l x d x h) mm half width brick

Wall thickness: 15-19 mm.

Material: Concrete OPC and primary virgin aggregates 1- 2mm sand, 2 – 5mm coarse sand or 5mm + gravel

Finish: Fine textured finish

Colour: [Grey/Duchy Red]

### 110D CONCRETE CONCEALED BIRD NEST BOX & EXPOSED ENTRANCE BRICK SYSTEM IN GABLE WALL:

Reference Drawing(s): Cambridge Swift Box Midi

Location: Gable wall of trussed rafter pitched roof above insulated accommodation

Surround: Masonry Cavity wall, Brick outer leaf, Blockwork inner leaf

Cavity:

Total cavity: [150/200] mm.  
Partial fill cavity Insulation thickness: [100/150] mm.  
Residual cavity: 50 mm.

Orientation:

[South-West for nursery roosts](#)  
[North for winter hibernation roosts](#)

Roof configuration:

[Pitched trussed raftered roof gable walls at high level close to ridge](#)  
[Pitched trussed raftered roof gable walls above external wall/internal ceiling insulation thickness](#)

Manufacturer: CJ WildBird Foods Ltd. The Rea, Upton Magna, Shrewsbury, Shropshire, SY4 4UR

T 0044 (0)1743 708022 F 0044 (0)1743 709505

W [www.birdfood.co.uk/pro](http://www.birdfood.co.uk/pro) W <http://twitter.com/VivaraProUK>

Contact: Martin George Wildlife Specialist

E [martin.george@birdfood.co.uk](mailto:martin.george@birdfood.co.uk) T General: 0044 (0)1743 709555

Product Reference: Cambridge Swift Nest System

Consisting of:

Concealed concrete cantilevered swift nest box block to N80/110A  
[\[Concrete Swift Nest Entrance Brick Stretcher to N80/110B](#)  
[Concrete Swift Nest Entrance Brick Header to N80/110C\]](#)

Size: Whole brick and block sizes with no cutting and no waste

Preparation: ensure the top of the partial cavity wall insulation is protected by cavity tray DPC

Installation:

Build swift nest box into full thickness of inner leaf replacing a whole block,  
Cantilever across the cavity to contact with the inner face of the outer leaf brickwork  
Build swift nest entrance brick into [\[full/partial\]](#) thickness of outer leaf replacing brick [\[stretcher/header\]](#)

Mortar: Matching mortar to BS 5628

Coloured mortar: [\[Grey/colour to suit\]](#)

Joint Profile: [\[Flush/recessed/bucket handle\]](#)

Seal internal corner between outer face of swift nest box and inner face of outer brick leaf

Sealant: Material: Compatible with cavity tray DPC over box, setting type, [\[\\_\\_\\_\\_\\_\]](#)

Sealant application: to all 4 faces of nest box

Clean both joint surfaces, all round  
Apply compatible primer to adjacent surfaces  
Apply sealant between two adjacent primed faces  
Maintain convex sealant profile

Install Cavity Tray DPC above the box block and the entrance brick

Other requirements: Clean up upon completion remove any debris from top of cavity wall insulation beside and below.

## 110E CONCRETE CONCEALED BIRD NEST BOX & EXPOSED ENTRANCE BRICK SYSTEM AT EAVES:

Reference Drawing(s): [\[\\_\\_\\_\\_\\_\]](#)

Location: Eaves wall of pitched roof

Surround: Masonary Cavity wall, Brick outer leaf, Blockwork inner leaf

Cavity:

Total cavity: [150/200] mm.  
Partial fill cavity Insulation thickness: [100/150] mm.  
Residual cavity: 50 mm.

Orientation:

[South-West for nursery roosts](#)  
[North for winter hibernation roosts](#)

Roof configuration:

[Pitched roof eaves walls at high level close to eaves, but not immediately below wall plate](#)  
[Pitched roof eaves walls within external wall insulation thickness](#)

Manufacturer: CJ WildBird Foods Ltd. The Rea, Upton Magna, Shrewsbury, Shropshire, SY4 4UR

T 0044 (0)1743 708022 F 0044 (0)1743 709505

W [www.birdfood.co.uk/pro](http://www.birdfood.co.uk/pro) W <http://twitter.com/VivaraProUK>

Contact: Martin George Wildlife Specialist

E [martin.george@birdfood.co.uk](mailto:martin.george@birdfood.co.uk) T General: 0044 (0)1743 709555

Product Reference: Cambridge Swift Nest System

Consisting of:

Concealed concrete cantilevered swift nest box block to N80/110A  
[\[Concrete Swift Nest Entrance Brick Stretcher to N80/110B](#)  
[Concrete Swift Nest Entrance Brick Header to N80/110C\]](#)

Other requirements:

Thermal insulation to maintain U value [\[behind/ and beside\]](#) box  
Material: [\[Aerogel or Vacuum Insulated Panel \(VIP\)\]](#)

Thickness:

- 30 mm to rear face
- 30 mm to sides

Insulation sizes:

- Back: 30 x 215 x 440 (t x h x l) mm
- Sides: 2 No. 30 x 100 x 215 (t x d x h) mm
- Top and Bottom: 2 No. 30 x 100 x 500 (t x d x w) mm

Insulation installation:

- Allow for cutting blockwork to accommodate insulation, cut accurately and leave smooth surfaces
- Ensure there are no sharp edges if using VIP insulation

Preparation:

- Ensure the top of the partial cavity wall insulation is protected by cavity tray DPC
- Modify box depth (250 mm) to accommodate thermal insulation

Installation:

- [Build swift nest box into full thickness of inner leaf replacing a whole block,
- Build swift nest box into 70 mm thickness of inner leaf replacing a whole block
- Incorporate 30 mm. insulation all round]
- Cantilever across the cavity to contact with the inner face of the outer leaf brickwork
- Build swift nest entrance brick into [full/partial] thickness of outer leaf replacing brick [stretcher/header]

Mortar: Matching mortar to BS 5628

Coloured mortar: [Grey/colour to suit]

Joint Profile: [Flush/recessed/bucket handle]

Seal internal corner between outer face of swift nest box and inner face of outer brick leaf

Sealant: Material: Compatible with cavity tray DPC over box, setting type, [\_\_\_\_\_]

Sealant application: to all 4 faces of nest box

- Clean both joint surfaces, all round
- Apply compatible primer to adjacent surfaces
- Apply sealant between two adjacent primed faces
- Maintain convex sealant profile

If the boxes are not protected by an eaves overhang then install Cavity Tray DPC above the box block and the entrance brick

Other requirements: Clean up upon completion remove any debris from top of cavity wall insulation.

End of work section N80

**NB: NOTES ON EDITING SPECIFICATIONS:**

Use as guidance, a standalone appendix or merge into work section.

Delete all of the Information on this and other pages of guidance notes, excluding the page break above, down to the end of GBE URLs (website addresses), when adding this work section or clauses to a project specification or purchase order.

Edit the clauses by selecting the clauses required, deleting any not required, by editing the [blue text which often describes options available] within square brackets to suit the project; or edit the specification to suit the procurement method.

Remove all square brackets using search for [ and replace with nothing and search for ] and replace with nothing.

Replace blue text with black text by selecting all and choosing auto or black colour text.

There are clauses in Red text in the Specification these are examples of project specific versions of the generic clauses that are included for guidance and are likely to be deleted or edited if they are useful to the project.

Remove any grey tone by selecting all text, and select Format > Borders and Shading > Shading > No fill > Okay.

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**REV Revisions**

Revision No.	Description	Author	Date
A00	For Preliminary Issue Cut and pasted from literature and websites Edited to specification format Added Materials and Product critique Issue to CW @ BCT	BRM	08/08/2009 - 14/08/2009
A01	Updated during review of Draft 9	BRM	09/10/2009
A02	Update Roofblock spec	BRM	16/09/2012
A03	Save as Separate file for CJWBF only Added 110A-110E CJ WildBird Food Cambridge System clauses	BRM	26/08/2016
A03	Issue to MG at CJWBF for comment	BRM	26/08/2016
A04 %%%	Updated with email and telephone feedback (250mm into drawing & spec)	BRM	21/11/2016
A04 %%%	Added Guidance notes re positioning re loadbearing capacity	BRM	21/11/2016
A04 %%%	Added Page 1 Header, Logo, editing notes and T&C at end	BRM	21/11/2016
A04 %%%	Moved Critiques to page with Guidance notes	BRM	21/11/2016
A04	Issue to MG, MMcN, PS @ CJWBF	BRM	21/11/2016
A05	Feedback from PS at CJWBF	PS	25/11/2016
A06 %%%	Incorporated comments and edited accordingly, some still outstanding moved guidance and critique forwards; Added illustrations	BRM	25/11/2016
A06 %%%	110A Next > Nest, WS title spelling adaptation,	BRM	25/11/2016
A06	Issue to MG, MMcN, PS @ CJWBF	BRM	25/11/2016
A07	Deleted © images to allow publishing on website	BRM	26/11/2016
	<b>Pending:</b>		
A06	Concrete recipe to finalise Concrete density or object weights to be calculated Duchy Red to be confirmed © Action for swifts images; permission to be sought or replace?	BRM	25/11/2016

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### **Addenda**

#### **NBS compatibility**

National Building Specification (NBS) is the industry standard specification library.

NGS's Green Building Specification (GBS) and Robust Specifications (GBS RS) are designed to complement NBS.

NGS clauses are written specifically to address issues of environmental sustainability.

NBS adopts and develops the Construction Project Information Committee's (CPIC) classification system Common Arrangement of Work Sections (CAWS) 1998 edition.

GBS adopts and develops the CPIC and NBS versions of CAWS to enable integration into NBS-based specifications.

GBS adopts NBS clause numbering to provide for easy clause assimilation.

CPIC: <http://www.cpic.org.uk>

CAWS: <http://www.cpic.org.uk/en/publications/common-arrangement-listing.cfm>

NBS: [www.thenbs.com/](http://www.thenbs.com/)

GBE website: [www.greenbuildingencyclopaedia.uk](http://www.greenbuildingencyclopaedia.uk)

GBE shop: [www.greenbuildingencyclopaedia.uk/shop/](http://www.greenbuildingencyclopaedia.uk/shop/)