

BIG BOCS BWYD PROJECT PHASE 3



Project objectives and desired outcomes

The BBB hubs comprise of an attractive Pay As You Feel shop in the modified shipping container, additional secure storage (2nd smaller container), raised beds and small group meeting space. Some schools also have additional growing spaces, woodlands, poly tunnels, bee hives etc. that enhance the BBB shops.

The BBB project goals and actions:

- Help improve the wellbeing of the families who use the BBB
- Contribute to the reduction of food poverty/food insecurity via the 'Pay As You Feel' shop
- Help improve nutritional intake
- Increase parental involvement and engagement in ways that suit them (e.g. buying from the Pay As You Feel shop, volunteering with food growing aspects of the projects etc.)
- To share lessons learnt with the next phase of BBB installation
- To develop learning resources that will ensure BBBs become a focal point for experiential learning about food – nutrition, cooking and growing.
- Measurably reduce food waste
- Children will become more confident and literate about the connections between food, nature and the economy
- Children and families will develop a solid level of food literacy and confidence around how to process, cook, and use food as a foundation for health through experiential learning.
- Children will have an improved awareness of the benefits and potential of relocalising food production and distribution
- Children will build enterprise skills through real-world learning, providing an authentic context to enable Curriculum for Wales, Rights Respecting Schools aims, Future Generation and Wellbeing Goals, Health Schools, United Nations SDGs and Eco Schools.

Below is an overview of the expectations that will be expected from you as a school, should you be successful in your applications.

Big Bocs Bwyd Committee Expectations

- We will provide your converted container as per specification.
- We will support you in setting up your Big Bocs Bwyd e.g. essential contact information.
- We will arrange half termly meetings to share good practice, our successes and challenges.

School Expectations

- Your school will carry out your own risk assessment for your Big Bocs Bwyd.
- Your school will insure the Big Bocs Bwyd and the equipment within your Big Bocs Bwyd e.g. Fridge, Freezer and Air Con.
- Your lead contact will liaise directly with the Big Bocs Bwyd committee.
- You will maintain all equipment in accordance with manufacturers recommendations and guidance e.g. cleaning, moisture management.
- You will follow the Big Bocs Bwyd action plan to successfully set up your Big Bocs Bwyd.
- You will ensure that your BBB is at the heart of your school curriculum and provide opportunities for growing, cooking and learning about food.
- You will be asked to arrange delivery with some suppliers directly to your school. You will need to ensure that you are available for these delivery slots. Many of these items are heavy and will require manual lifting. (Items include – Fridge, Freezer, Air con unit, Oak Barrels, Coffee Machines and the French Doors for your BBB)
- You will need to allow access to your school for all contractors e.g. Groundworks, Shipping Container Delivery, French Stall installer and Electrical installer.
- You will need to attend Half Termly meetings to share good practice, your successes your challenges.
- You will need to evaluate your progress regularly and produce and submit a case study and newsletter half termly.

For further support in how to set up your Big Bocs Bwyd see our website -

<https://www.bigbocsbwyd.co.uk/>

Container Foundations

Storage Containers are self-supporting and do not need any special foundations however for the doors to operate properly they should be placed on level ground.

The chosen site needs to be set up as such that the container can be lowered on to pre prepared supports. The supports can be paving slabs, pre-set concrete supports, bricks or sleepers, Please avoid using softwoods or other materials that could compress over time as this would cause the container to go out of level.

You only need to support the container on the four corners but, these support points must be level with each other along the length, across the width and across the diagonals.

Ensuring the foundations are right prior to delivery will ensure level siting and subsequently the doors will work as expected. If the container isn't level, it could 'rack' (twist) and prevent easy operation of the doors and in the worst case, prevent the doors from opening and closing.

In keeping your container off the ground this will also help to give it the best possible lifespan as the ground beneath the container will dry out faster.

Condensation

The 20x8 and 8x7 shipping containers that make up the BBB are relatively maintenance free, with one critical exception – [the management and control of condensation](#).

Shipping containers can suffer badly from condensation known as 'container rain', predominantly affecting the container roof and the top 150mm of the side walls.

When a shipping container cools overnight the heat escapes the air inside cools, and the water in the air condenses (turns into drops of water) and this will build up on any surface that the heat is escaping from – this is why you may see it on the inside of your shipping container roof in the mornings.

On a hot summer day, you may find that the sun will heat up the roof of the container and allow condensation to evaporate back into the air inside the container relatively quickly.

This occurs when there is a meeting of two different air temperatures. It is the exact same process that creates the steam on a window when you breathe on a cold glass pane.

Condensation occurs when its outside walls are colder than the dew point of the air inside the unit. There isn't much that we can do to affect the outside air temperature, so the solution to any issues must come from what we do on the inside.

Condensation in shipping containers cannot be totally eliminated but with good installation practice and local operating procedures it can be controlled and minimised.

The basic challenge is to regulate the temperature inside the container in accordance with the prevailing external weather conditions, thus minimising the dew point that creates condensation.

The challenge is exacerbated with the BBB due to the presence of three large commercial grade fridge / freezers within the large container. When operating, these appliances emit a significant amount of heat that will create a humid environment inside the container.

There are numerous methods to help control condensation and this project has implemented a multi layered best practice approach that is set out below, with highlighted in **Bold Red** your schools designated BBB lead critical responsibilities.

- **Ventilation:** The more air you have circulating within your container, the smaller the difference between inside and outside temperature. This can significantly reduce condensation, but unfortunately zero condensation cannot be guaranteed. In a very well ventilated shipping container, the air inside the container will maintain a temperature very similar to the outside of the container, thus reducing or completely removing any condensation build up. It is an inexact science and 10 vents are included as standard on your large Big Bocs Bwyd. *Sometimes, however, ventilation alone is not enough, and other tactics and methods have been installed in your BBB to compensate for this.*
- **Usage / air flow:** Linked to ventilation is how often the doors are opened, how frequently the container is loaded or unloaded, the time of day & weather conditions when the container is being used. These circumstances can also affect the amount of moisture in the air inside your shipping container, which in turn will affect the amount of condensation you can get. **Opening the steel doors and French doors every day and leaving them ajar will allow air to circulate within your BBB and help dissipate any condensation.**
- **Anti-condensation lining / boarding the** container – *This has been installed in your BBB to help prevent condensation from forming. These materials will essentially absorb the excess moisture in the air, meaning it can't then cool upon meeting the outside wall. The boards not only reduce the moisture in the air but also have insulating properties that reduce the drastic temperature differences.* Boarding of the container is considered a very good quality option by industry experts and to be at the top end of both quality and price and should offer a very long term effective solution for your container.

Your BBB has been installed using this more costly and high quality method and your container has been internally framed, insulated with celotex equivalent, a vapour barrier installed and face finished with OSB Boarding on the walls and plyboard on the ceiling. This method is considered by industry experts to dramatically slow the rate at which heat escapes from the container and will prevent the condensation forming. It

has been tried, tested and proven over time and offers an aesthetically pleasing industrial feel to the interior.

- **Supplementary insulation kit** that comes pre-cut to size and are ready fitted with industrial grade sticky back plastic on the back that affix to the internal walls and ceiling of your container.
- **Absorbpoles / damp sticks have been fitted to the containers.** There are a number of near identical desiccant poles on the market. The ones installed in your BBB are the market leading **Absorbpoles**. As well as being cost effective and a reliable long standing brand, as of October 2021 they are now carbon neutral as standard – the first and only cargo desiccant we know of that is carbon neutral. Working very much in the same way as the silica gel packet, these suck up, trap and hold any moisture within the damp-stick itself, each damp-stick comes with hooks that are fitted to eye hooks fitted in your container. They are 100% non-toxic and the main ingredient in these is calcium chloride; a type of salt. **Please ensure that you read the instructions and fit them correctly as failure to do so will render them ineffective.**

Each damp stick will last around 3 months and need to be checked regularly to ensure they haven't run out of absorbency and replaced in accordance with the manufacturers guidance. Make sure you have spares, if you find they have run out you will likely need to replace them promptly. Each pole comes in its own bag, do not open the bag until you want to start using the damp-stick, otherwise it will start sucking in moisture from the moment you take it out of the bag and you will be at higher risk of splitting or puncturing the bag. Four absorbpoles have been fitted in your large container and two in your small container. **Check them regularly, empty as required and replace every three months.**

- **De-Humidifier / air conditioner** – this is a critical piece of kit to win the battle with condensation control and a portable unit has been installed in your BBB. It is considered by industry experts to be the Gold standard for controlling condensation in shipping containers and has been installed fundamentally to control the unique environment inside the large BBB by removing the hot air expelled by the fridge / freezers. It has been externally vented to regulate the temperature inside the container. **It is critical that your designated person avails themselves of dehumidifier / air conditioning instructions carefully before use and operates the appliance in accordance with the manufacturers guidance. They will need to ensure its well vented and not obstructed inside or outside the container and regularly checked, adjusted and emptied (phase 2 schools will have a permanent fixed drain outlet installed that can be retro fitted to phase 1 schools). Failure to do this will result in your air**

conditioner / de humidifier malfunctioning and contributing to a significant build-up of moisture / condensation within your BBB. It is a critical process to regulate. Never operate your fridges / freezers without the air conditioning unit / de humidifier working. If you do this you will soon find you have a sauna instead of a BBB!

In summary, controlling condensation depends on one thing alone – how much slower the heat escapes from the roof and walls of your container. If you can drastically reduce the rate at which heat escapes, you can significantly reduce the condensation build up inside. There is no correct way to achieve the end result when there are a thousand different ways to approach a problem.

IMPORTANT – Local operating practices will impact significantly on the functionality of your BBB. Local non-compliance with the above operating protocols cannot be guaranteed. Accordingly, once sited, the container is your sole responsibility. You are accepting the BBB on this basis and without any guarantee or recourse, albeit that all reasonable measures have been taken during the installation process to help control / minimise the condensation that WILL attack your container. The diligence of your designated officer in following the good practice set out in this document is essential to maintaining the integrity of your BBB and will ensure your it remains safe and effective and lasts for many years to come providing such a wonderful facility and service for your families.

Aside from controlling condensation the only other maintenance and upkeep that you need to perform on your BBB are specified below:

- Ensuring that the fridges and freezers are operating in accordance with the manufacturers instructions and are set at the correct operating temperatures. We have had a few refrigeration units fail just outside the warranty period and as very expensive items you are encouraged to insure them accordingly.
- Ensuring that the air conditioning / de humidifier is checked daily and the water reservoir emptied as necessary. Phase 2 schools will have automatic drain pipes fitted that drain to the outside.
- Periodically check the exterior factory fitted vents that are installed around the top of your BBB. If they are blocked then clear them as required.
- Periodically check the roof of the BBB for any damage, especially during autumn and winter and remove any leaves of debris that may have gathered. Under no circumstances are you to stand on the roof of your BBB as it is not load bearing.
- Check daily that your air con / dehumidifier exhaust hose is not blocked or damaged.

Some Phase 1 and Phase 2 Big Bocs Bwyd schools have been up and running for some time and will be able to offer you the value of their experience as Big Bocs Bwyd pioneers. You are

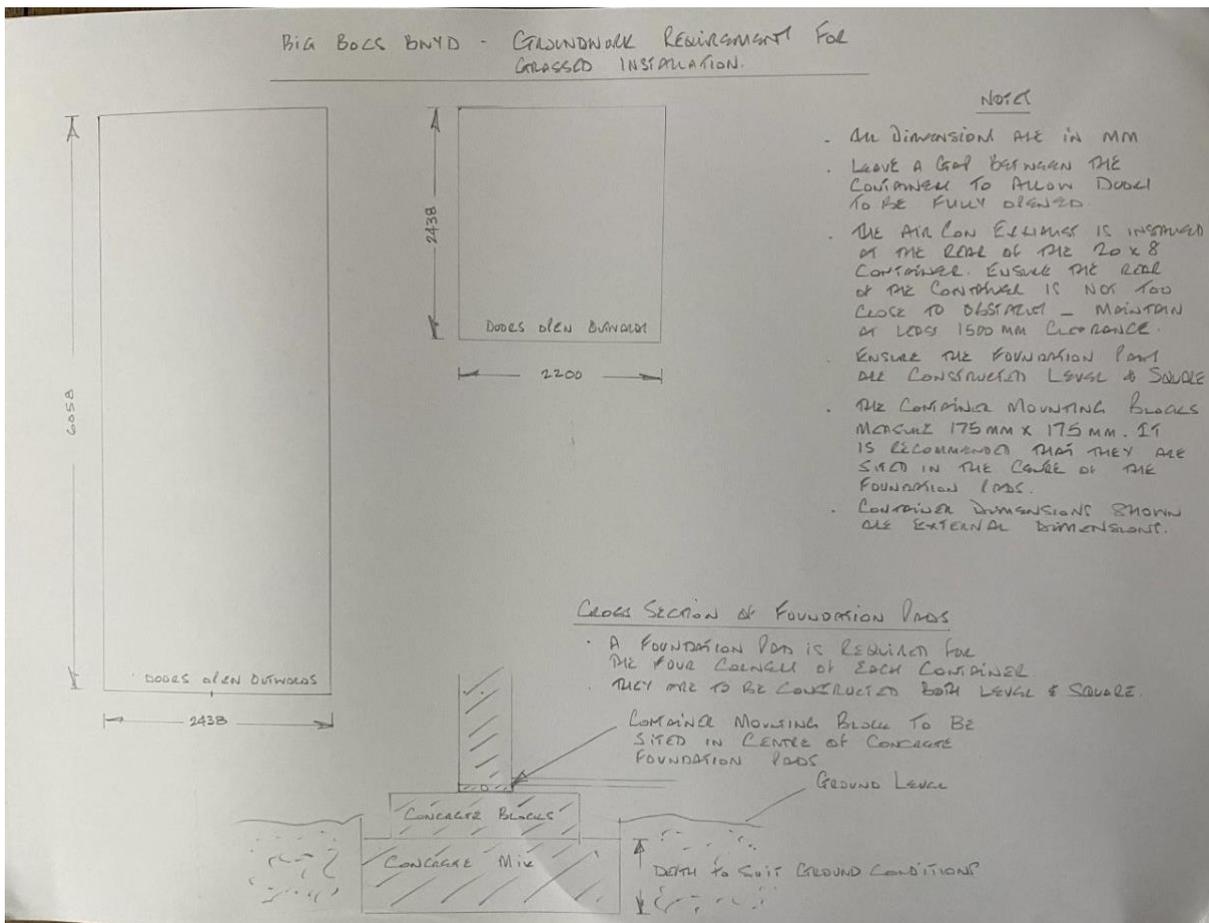
encouraged to link with these schools to clearly understand the operating requirements and the lessons learned for running a successful Big Bocs Bwyd.

Early adopters with good practice in place who will be willing to help are -

- Grangetown Nursery, Cardiff - BrinningN@Hwbcymru.net
- Garth Primary, Maesteg - Joanne.Bevan2@garthps.bridgend.cymru
- Oak Field Primary, Barry - OakFieldps@valeofglamorgan.gov.uk
- Cadoxton Primary, Barry- CogbillH2@hwbcymru.net
- Bro Banw, Ammanford - lucy.lock@brobanw.ysgolccc.cymru.net

Appendices

Appendix 2 – Groundwork Requirements For Grassed Installation



Appendix 3 – Specification of materials used for the internal fit out of the BBB

- 3x2 stud timber
- 25mm celotex insulation
- Thermapack double Multi foil insulation kit
- 11mm osb
- 6mm interior plywood
- 12mm t and g tanalised
- 2x1 pse
- Door stop



Appendix 4 – Specification for the French Doors



K N M Ltd

Is a member of the Thermal Rating Register Product Certification Scheme

Company Details

TRR ID	0148
Company Name	K N M Ltd
Address	Plot 9 Heol Mostyn Village Farm Industrial Estate Pyle Mid Glamorgan CF33 6BJ
Contact No	01656 745257
Email	knm_ltd@outlook.com

Summary Details

Calculation ID	10025-504956
Name	door u value
Type	Door
Material	PVC Two or Three Chambers
Style	Style 1
Values	System Defaults
U Value	1.5

U-Value Calculation Details

Overall Width	1000 mm
Overall Height	2000 mm
Frame Classification	PVC, three chambers, reinforced
Head Projected Width	80 mm
Left Jamb Projected Width	80 mm
Right Jamb Projected Width	80 mm
Sill Projected Width	80 mm
Glazing U Value	1.2 W/m ² K
Glazing Coating	Yes
Glazing Edge Spacer	Warm edge

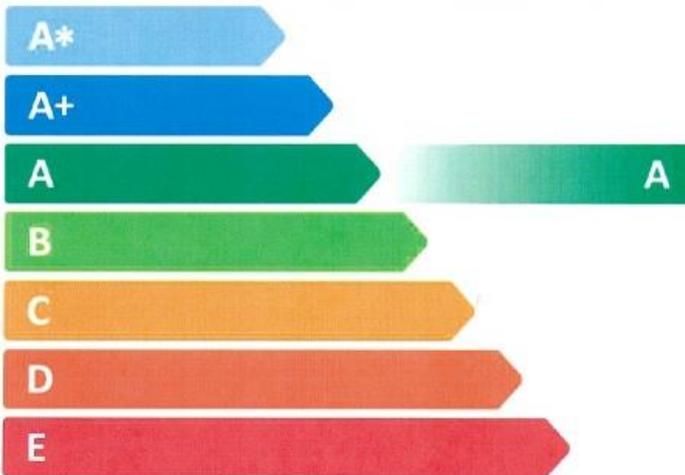
WINDOW ENERGY RATING

K N M Ltd

Reg No: 0148-005A

PVC-U Casement A Rated Window

Date: 10/11/2015



To check this label is current visit:
www.thermalratingregister.org



The Window Energy Rating is a relative rating based on a notional house and windows in an average UK location. Actual performance will vary with building detailing, usage, local climate and internal temperature.

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Technical Data

Veka
Matrix 70 60mm Outer - 65mm Combi Mullion , 69mm Espagnolette Sash
Partial Steel Reinforcement
SGG - Planilux/ Argon/ Planitherm Total+ 4/20/4
Swisspacer V
Casement

French Door Data Information

PROFILE: VEKA, M70, Internally glazed and fully reinforced with steel
GLASS: Pilkington, Toughened K glass argon filled warm edge spacers with an "A" energy rating.
U VALUE: 1.5 or less
LOCK SYSTEM: Fuhr 859 Type 17 – A Multi-point locking system that includes 4 roller, 2 Hooks, 1 latch and 1 dead-bolt

Appendix 5 – Specification of the Electrical Supply

The electrical installations are installed to the current edition of the IEE Wiring regulations and are tested and commissioned before being signed off and handed to the client (school).

An Electrical Installation Certificate is provided following final electrical connection to the school.

The installation comprises of a surface conduit installation making it easy to adapt should addition power points need to be added or relocated.

The installation comprises of 6 Twin socket outlets and 2 5ft LED Batten light fittings switched at entrance.

All circuits are protected by RCD Circuit breakers which are located in the Local Distribution Board which has spare capacity for an additional circuit should it be required.

Final connection to the school is provided by an armoured cable and protected by a 32 amp Circuit breaker which gives it a maximum Loading of 32 amps.



Big Bocs Bwyd



ACTION PLAN

START THE BIG BOCS BWYD

WHAT	WHEN	WHO
Contact your local supermarkets/shops to see what support they can offer.		Apps to sign up to, to get food for your BBB Fare Share Go /Neighbourly
Contact FareShare Cymru to arrange food deliveries		Contact: katie@fareshare.cymru
Consider a risk assessment currently in line with Covid-19 regulations and beyond.		
Set up a charity for your BBB, design charitable purposes and identify trustees.		https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/806434/GD3.pdf
This will support your finances of the project e.g. Grant Applications		
Establish a team (staff and volunteers) within your school community to support your Food Literacy goals.		
Plan for who is going to lead and run the shop e.g. Parent Volunteers, Community Engagement Leads. Plan in time and space for this to happen.		
Decide on the Big Bocs Bwyd opening times.		
Social Media – Think about how you might market Big Bocs Bwyd e.g. Twitter, Instagram, Facebook. Poster in local shops etc.		
Register for a bank account.		Charity Bank Accounts <ul style="list-style-type: none"> • Lloyds Treasurers' Account. • Metro Bank Community Account. • NatWest Community Account. • FBS Community Bank Account. • Reliance Charity, Club & Society Current Account. • Santander Treasurers' Current Account. • TSB Club, Charity and Trust Account. • Ulster Bank Not for Profit Account.
Go contactless – You might want to invest in iZettle. A card payment that goes straight into your bank account.		https://www.zettle.com/gb/payments/card-reader
Identify ways in which children can be involved in running the shop.		
Identify links between Big Bocs Bwyd and Curriculum for Wales/Future Generations Act.		

Contact Details and Key Suppliers

ATG Site Services LTD

Tracie Greening

Email – tracie@atgsite.services

Fridges and Freezers

Mike Beecham

Mobile – 07946254524

Email – mike@accessentialsupplies.co.uk

Electrics

Mark Seaward - Seaward Electrical

Email – mselectrical1@outlook.com

Phone – 07980908003 / 02920 595658

NICEIC Enrollment No. 612244000

French Doors

Stuart Treharne / KNM LTD

Email - poolnomad@gmail.com