# BURROWED LTD- BUNKER BROUCHURE 2024

North Laithes Farm, Eakring Road, Kneesall, Newark, NG22 OAN, Uk





### LET'S START WITH WHY BURROWED

The most popular bomb shelter in the world is a round culvert pipe. It uses the natural strength of the earth as your main protection and not the thickness of the walls.

First introduced in the US steel pipe culverts have been used successfully in the states for many years however these are not recommended with UK ground conditions.

Our structure twin wall HDPE plastic structure with advanced production technology to create a lightweight engineered solution with superior loading capacity that is chemically inert, impervious to water and provides a 125-year design life.

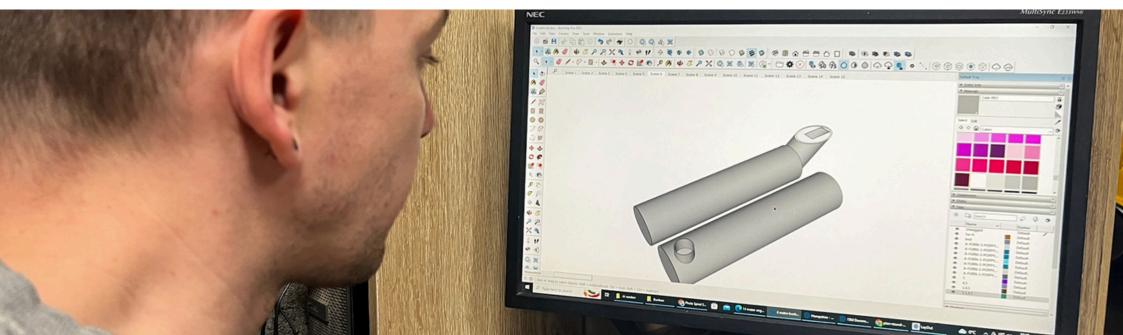
Making it the perfect bunker solution for UK ground conditions.

Our friendly Nottinghamshire based team are available to discuss your project. 01623 869432

We can design and build a fully fitted underground bunker, installed in the UK.

Or we can supply the HDPE twin wall structure along with a DIY /Self Build Guide including technical drawings and a step by step instructions.

Suitable for a competent DIYer, tradesman or contractor use.









# NUCLEAR BUNKERS AND FALL OUT SHELTERS

A Nuclear bunker not only provides physical protection as an air-raid or bomb shelter would, but also protects from the impact of radioactive debris or 'Fallout' as a result of a nuclear explosion.

When a nuclear bomb goes off, matter is vaporised in the fireball produced from the initial explosion. This is then exposed to Neutrons. The matter absorbs these neutrons, and becomes radioactive. This radioactive material condenses in the rain and forms dust and a light sandy material which emits alpha and beta particles, as well as gamma rays. This is called 'Fallout'. This radioactive material falls to the ground, subjecting anything within the line of sight to radiation, for a considerable period of time. The same Fallout can also occur after an accidental nuclear explosion, not just the result of tactical Nuclear weapons or larger strategic Nuclear missiles which are devastating in their scale and impact.

A Fallout Shelter is an enclosed space designed to allow people to take shelter and minimise exposure to the harmful fallout until the radioactivity has decayed to a safe level.

A fallout shelter includes shielding in its construction to reduce gamma ray exposure. The required shielding can be accomplished with various materials including lead, concrete or packed earth, but the thickness required will vary depending on the material. The thickness will need to be enough to reduce the gamma rays by approximately 1024 times in order to provide protection.

Our structures can be buried with upto 2m of earth on top, we recommend 1.22m (4ft) of earth above the structure to provide the required protection.

The shelters need to provide suitable accommodation for at least two weeks for a specified number of inhabitants, without having to exit, so provision for enough stored water and rations needs to be considered.



BURROWED LTD



### BENEFITS

The UK has limited options for Nuclear bunkers suppliers. There are a couple of companies that build luxury bunker basements into new build properties. There are a couple of US based companies that will ship over a steel culvert bunker. Here are some of the benefits to our bunkers.....

# **1**UK based

We are a UK based company, we build our structures in our Nottinghamshire workshop. We can either prefabricate the interior prior to delivery and the structure arrives ready to be installed.

Or we can supply the structure only for DIY builds.

We have a team of engineers, designers, electricians, plumbers, joiners available for support and technical information. Being UK Based reduces costs compared with shipping a product from outside the UK.

UK Planning permission information available on request.

# **2**Cost effective

The most popular bomb shelter in the world is a round culvert pipe, pipe is designed to be strong underground. It is using the natural strength of the earth as your main protection and not the thickness of the walls.

Concrete or steel basements bunkers have much higher material costs and require the majority of the work to be completed onsite increasing labour costs.

# 3 DIY / Self Builds

**BURROWED LTD** 

Building a bunker yourself can be much cheaper than having it built by professionals.

However it can be a daunting prospect. We provide a DIY Self Build guide with drawings and step by step instructions.

# 4 Quick

Quick installation timescales resulting in limited site disruption. Installation work can take as little as one week. Customers ordering a DIY bare structure can expect delivery within 4-8 weeks. Prefabricated bunker timescales vary.

# 5 Multi Use

Our round underground structures give you a unique space which can be much more than just a bunker.

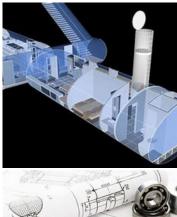
We recommend our prefabricated luxury bunker option for a real wow factor.

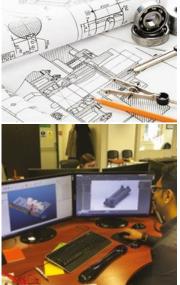
# Environmental Beneifits

<u>\*https://www.shirepods.co.uk/environ</u> <u>mental-benefits/</u>



### WHAT WE DO AT BURROWED





At Burrowed Ltd we can design, build and install a wide range of structures to be used as underground buildings.

We design and fabricate HDPE structures and fit them with floors, walls, kitchens, bathrooms to be used as holiday accommodation, residential, school buildings and more recently underground bunkers.

Effectively we could build a rabbit warren from our pipe structure with various joints and sections all joined together onsite, with a variety of internal decorative finishes.

Although this is something we could offer, the majority of bunker enquires are seeking the most cost effective solution for use as a underground bunker.

We have designed a cost effective solution which is available to purchase as a prefabricated bunker or structure only for DIY / self build use.

These models can be tweaked to suit individual needs or we can build something bespoke.

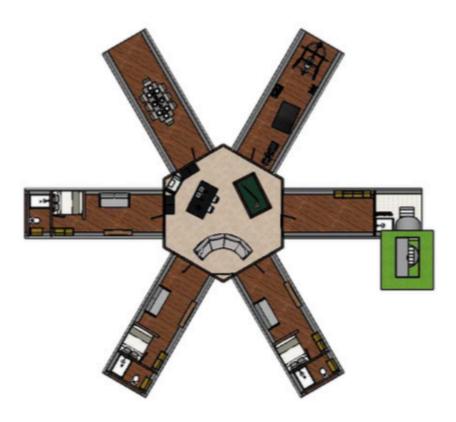
Speak to one of our team today.

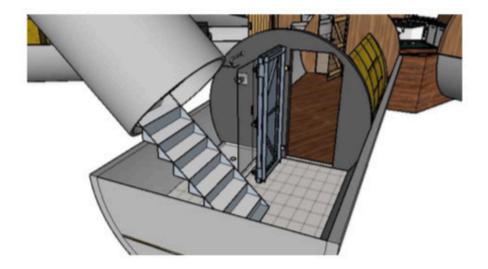
Please note we only offer, structures only or prefabricated bunkers. We do not offer a part build option, however we would be happy to supply materials including metal top hatches, air tight doors, air filtration systems, internal furniture and cavity wall installation on request.



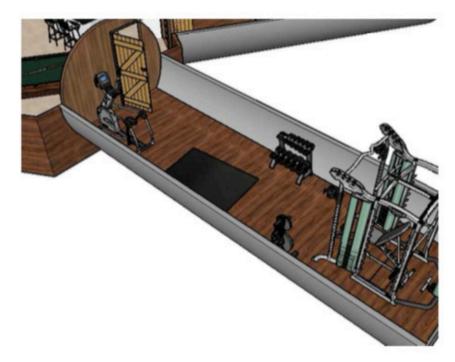


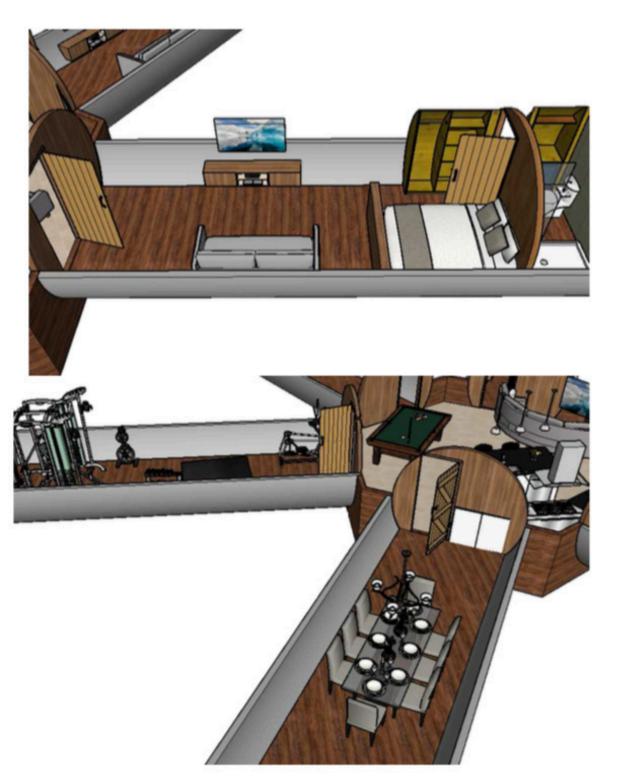
# **BESPOKE BUNKERS**

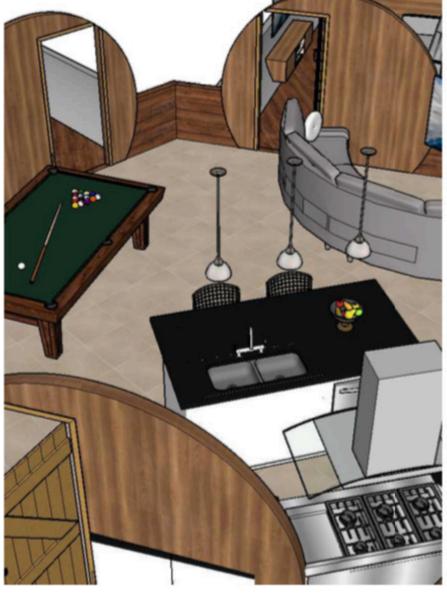














Our DIY structures includes 2 tank end walls, 1 internal sealed wall. 1500mm opening with 5m x 1500mm access, 2 x 110mm vent holes for air filtration.

#### Prices excludes delivery.

For delivery cost please provide postcode.

Delivered on an artic lorry with Hiab crane to off load.

Our transportation will not drive off road onto a surface not suitable for heavy vehicles.

Hiab crane will only lift into excavation works if the operator deems if safe to do so. Site visit lift plan recommended. Hiab, small crane or suitable excavator can be used to lift the structure into position.

Our team will need to weld the 1500mm section onsite due to transportation height restrictions, this is usually conducted on delivery, but can be completed at a later stage if necessary. A cost effective solution for competent DIYer's or tradesmen. DIY guide provided to give step by step instructions. How to guide for floors, walls, plumbing, electrics, NBC filtration system fitting with detailed drawings.

UK technical support team.

Site visit can be arranged to establish feasibility, access, lift plans for HIAB crane etc. Approx. £495 fee for this service.



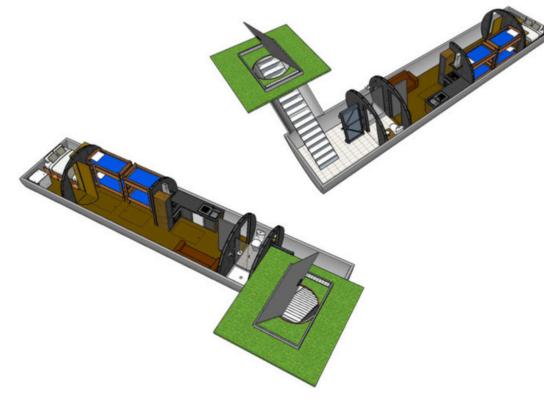
### PREFABRICATED BUNKERS

Our prefabricated bunkers are designed and built by professionals giving you peace of mind.

We have different lengths of structure from 9m to 15m to accomodate 2-8 persons. If you require something larger we can join structures together just speak to a member of our team. The bunker is then manufactured in our Nottinghamshire workshop prior to delivery across the UK.

We can offer a turnkey service including excavation works, installation, service connections, material removal and landscaping. Site work is not included in our prices please arrange a site visit to quote for site work.

Or you can use local contractors to prepare the excavation and carry out the installation under our guidance.



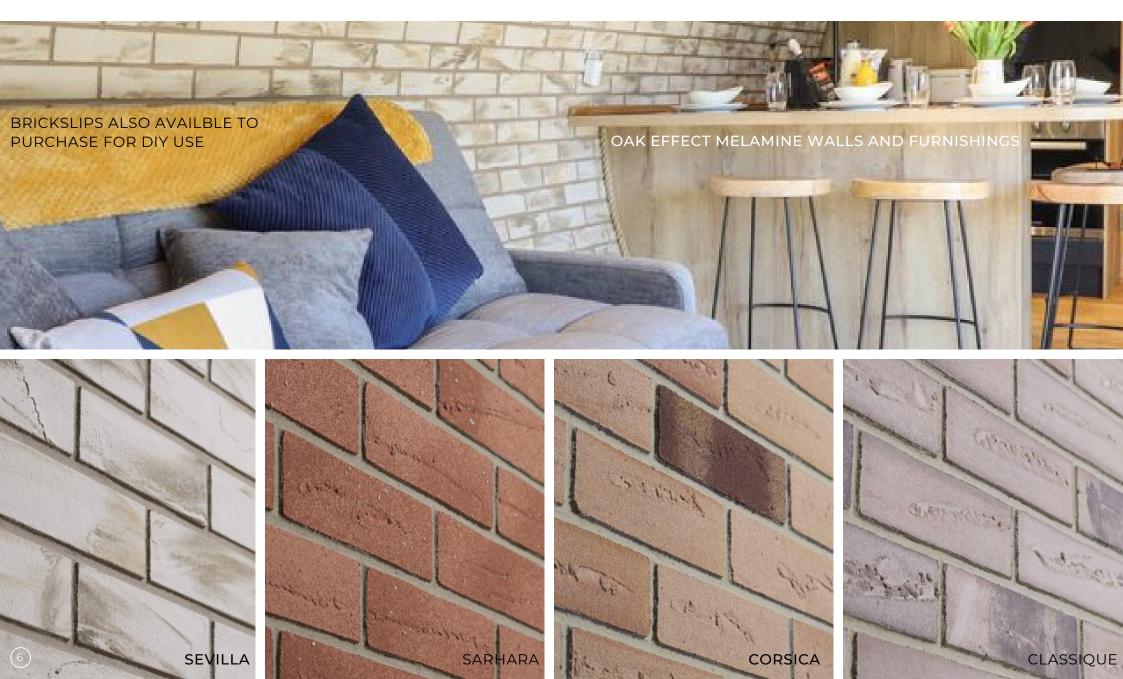
The interior fit out is completed in our workshop and includes:

- Air tight door
- Cavity wall insulation.
- Water Filtration
- Fresh Water Inlet
- Shower
- Electric Heater
- Grey-Water Tank
- Grey-Water Pump
- Fresh-Water Tank
- Full Kitchen
- Storage beds
- Sofa bed
- Under Floor Storage
- Bathroom with Composting Toilet
- Shelving For Food Storage
- Shelving for clothes
- 12 Volt LED Lighting
- 120/240 Volt Inlet
- Painted Interior
- Solar Generating Charging System with Battery Supply
- The Castellex Air550 is a four-stage NBC air filtration system with internal backup battery.



# LUXURY PREFABRICATED BUNKERS

Upgrade to a luxury prefabricated bunker- includes brickslip curved wall coverings, tile bathroom and oak effect melamine flat walls & furnishings.



### PRICE LIST

L	STRUCTURE ONLY	PREFAB	LUX PRE
6M	£19,500	£84,000	£97,000
7M	£20,500	£88,000	£101,000
8M	£21,500	£92,000	£106,000
9M	£22,500	£96,000	£110,000
10M	£23,500	£100,000	£115,000
11M	£24,500	£104,000	£120,000
12M	£25,500	£108,000	£125,000
13M	£26,500	£112,000	£129,000
14M	£27,500	£116,000	£133,000
15M	£28,500	£120,000	£138,000
16M	£29,500	£124,000	£143,000

#### PRICES ARE FOR 3M INTERNAL DIAMETER STRUCTURE

VAT CHARGED AT 20% FOR STRUCTURE ONLY.

#### VAT CHARGED AT 5% FOR PREFABRICATED ORDERS. REDUCED RATE FOR CARAVANS.

Although our structures can be completely buried underground they still fall within the definition of a caravan. This only applies when sold with habitable facilities kitchen/bathroom.

You maybe able to claim back your VAT under the VAT Refunds For DIY Housebuilders scheme, you'll need to apply to HMRC by submitting a 431NB claim form for a new build, or a 431C form for a conversion.

#### WHAT IS INCLUTED IN THE PRICE?

Structure only- Exactly as described, includes DIY step by step guide & technical support.

Prefabricated- Structure with fitted interior.

Luxury prefabricated- Structure with fitted interior includes brick effect wall coverings, tile bathroom and oak effect walls and furnishings.

#### WHATS NOT INCLUDED?

Planning permission, delivery, groundwork/excavation works, cranes, plant machinery, installation backfill, service connections, material removal and landscaping.

We can provide these services but they are site specific and we would need to carry out a site survey to provide a quote.



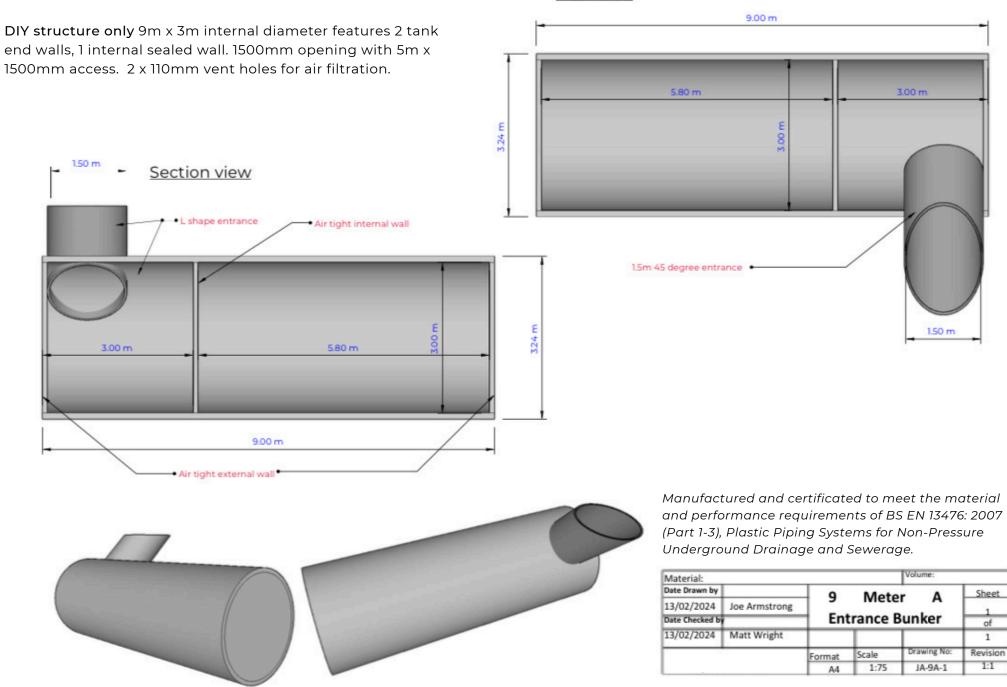
# 3M DIAMETER X 9M STRUCTURE £22,500 + VAT

**Plan View** 

of

1

1:1



# 9M PREFABRICATED BUNKER £96,000 +5% VAT

**9m bunker is perfect for small families and can sleep 4** The lockable top hatch leads down a 1.5m opening, this can either be a sloped entrance with steps as shown or a vertical entrance with a ladder if preferred.

An air tight door separates the mud room from the habitable space. Shower room with compositing toilet leads through to the studio living area. The space includes a kitchenette with sink, hob, fridge and storage cupboards.

Supplied with either sofa bed or fitted with 4 x bunk beds.

# Fully fitted 9m Bunker features

- Air tight door
- Cavity wall insulation.
- Water Filtration
- Fresh Water Inlet
- Shower
- Electric Heater
- Grey-Water Tank
- Grey-Water Pump
- Fresh-Water Tank
- Full Kitchen
- Storage beds
- Sofa bed
- Under Floor Storage
- Bathroom with Composting Toilet
- Shelving For Food Storage
- Shelving for clothes
- 12 Volt LED Lighting
- 120/240 Volt Inlet
- Painted Interior
- Solar Generating Charging System with Battery Supply
- The Castellex Air550 is a four-stage NBC air filtration system with internal backup battery.

ONLY 5% VAT ON PREFABRICTED MODELS. REDUCED RATE FOR CARAVANS.

### 3M DIAMETER X 15M LENGTH £28,500+ 20% VAT

STRUCTURE ONLY 9m x 3m internal diameter features 2 tank 15.00 m end walls, 1 internal sealed wall. 1500mm opening with 5m x 1500mm access. 2 x 110mm vent holes for air filtration. 3.00 m 11.80 m 3.24 m 3.00 Section view 1.50 m --shape entrance Air tight internal wall 1.50 m ε 1.5m 45 degree entrance ----3.00 m 11.80 m 3.24 15.00 m Air tight external wall Volume: Material: Date Drawn by 15 Sheet Meter A 13/02/2024 Joe Armstrong 1 **Entrance Bunker** Date Checked b of 13/02/2024 Matt Wright Manufactured and certificated to meet the material 1 Drawing No: and performance requirements of BS EN 13476: 2007 Scale Revision Format 1:1 1:75 (Part 1-3), Plastic Piping Systems for Non-Pressure A4 JA-9A-1 Underground Drainage and Sewerage.

<u>Plan View</u>

### 15M PREFABRICATED BUNKER £120,000 + 5% VAT

15m Bunker is perfect for larger families and can sleep 8. The lockable top hatch leads down a 1.5m opening, this can either be a sloped entrance with steps as shown or a vertical entrance with a ladder if preferred.

An air tight door separates the mud room from the habitable space. Shower room with compositing toilet leads through to the living area. The space includes a kitchen with sink, hob, fridge and storage cupboards.

Supplied with sofa bed, king sized bed &  $4 \times bunk$  beds. (configuration of interior can be altered to suit.)

# 15m Prefabricated Bunker features

- Air tight door
- Cavity wall insulation.
- Water Filtration
- Fresh Water Inlet
- Shower
- Electric Heater
- Grey-Water Tank
- Grey-Water Pump
- Fresh-Water Tank
- Full Kitchen
- Storage beds
- Sofa bed
- Under Floor Storage
- Bathroom with Composting Toilet
- Shelving For Food Storage
- Shelving for clothes
- 12 Volt LED Lighting
- 120/240 Volt Inlet
- Painted Interior
- Solar Generating Charging System with Battery Supply
- The Castellex Air550 is a four-stage NBC air filtration system with internal backup battery.

REDUCED RATE FOR CARAVANS. Although our structures can be completely buried underground they still fall within the definition of a caravan/ mobile. This only applies when sold with habitable facilities kitchen/bathroom.

ONLY 5% VAT ON PREFABRICIED MODELS.

# ORDER PROCESS

# **1**Get in touch

Our friendly team are here to help. Give us a call, email or fill out the online form.

# 2 Arrange a site visit

If you would like a site visit please provide address including postcode.

One of our team will arrange to meet you at the site to check for access, discuss lift plans for HIAB crane, answer any questions you may have and complete a design consultation for prefabricated models.

We can provide a quote for groundworks and installation on request.

A fee of £495 is charged for this service. (For Northern Scotland or outside UK mainland please request a quote)

A site visit is not essential for Structure only orders, however it is the customers responsibility to ensure there are no restrictions preventing the lorry reaching the site.

# 3 Place an order

For structure only orders the full order value will be required on placing an order.

Your structure will be delivered within 4-8 weeks.

For prefabricated orders 50% deposit is required on placing an order. Followed by two further 25% payments due as build stages are completed.

Once the bunker is nearing completion we will arrange a delivery date.

# 4 Delivery

Delivered on an artic lorry with Hiab crane to off load.

Our transportation will not drive off road onto a surface not suitable for heavy vehicles. Hiab crane will only lift into excavation works if the operator deems if safe to do so. Site visit lift plan recommended.

Hiab, small crane or suitable excavator can be used to lift the structure into position.

# 5 Preparation & Installation

Groundwork/ excavation works, service trenches should be dug prior to the structures arrival. Suitable lifting equipment organised to position the structure. Service connections made followed by a careful backfilling process.

This can be competed by our team or we are happy to provide instructions for local contractors to carry out the preparation and installation work.





### PLANNING PERMISSION

There is a huge amount of information online regarding planning permission for nuclear bunkers.

We are not planning consultants and would recommend seeking professional advice.

Apply or not to apply that is the question.

We recommend applying for planning permission in most cases. We can provide CAD designs, design statements, environmental credentials to support an application.

Having planning permission obviously gives you piece of mind knowing that you are not going to get a knock on the door from a local planning officer.

However we can understand why customers opt not to apply.

Arguments we often hear as why not to apply include:

If I apply for planning permission everyone will know I have a bunker in my garden' Its a fair comment the last thing you want when you have a bunker is for everyone in the local area coming knocking when the time comes. Secondly 'planning permission takes a long time and I want something now' Again it is understandable, planning permission can take months or even years.

The stance people often take is 'If anyone asks I will say its a water tank once its in the ground no one will know its there'

'I can always apply for retrospective planning permission'

It is the property owners responsibility to obtain the relevant permissions.

Disclaimer- We recommend seeking advice from a planning consultant and any advice or information in our marketing material does not constitute legal or professional advice. It remains the customers responsibility to ensure the relevant permissions are in place.





### FREQUENTLY ASKED QUESTIONS

Can I fit more people in than you recommend?

Yes, the NBC filtration system can be used for up to 24 persons. The limitation is space, food and water supplies.

Can I have one in a small garden? No we wouldn't recommend installing one within 4.5m of any buildings. You would require access for a large excavator as a minimum. Send us a google maps with a pin drop or marked location and we can advice. further.

Can you build larger bunkers? Yes we can either join together our standard models or design something bespoke.

Can you build a smaller bunker? We can provide a smaller structure for use as a DIY bunker. This can be smaller in length or diameter on request.

Can I go deeper than 1.22m (4ft)? Yes the standard 2KN structure can be buried with up to 2m of material above.. We can supply DIY or prefab bunkers that can be installed with 5m of material above them. The price does increase significantly. What is the weight of the bunkers? Our 9m structure only weights approx. 3.5ton For every additional meter in length adds 1/3 of a ton.

e.g 12m = 4.5ton

For prefab models it works out approx. double the weight of the structure only.

Can I have a emergency escape like the US companies have? Yes, we could weld on a 1500mm L shaped

section to the rear of the structure.

Can I dig the hole myself?

Yes although digging large excavations can have risks of collapse and we recommend seeking professional advice.

How long will I need to say inside the bunker? There is lots of information online about this subject, based on our research 2 weeks seems to be adequate to significantly reduce the risk from radiation.

How long will it take you to build a prefabricated bunker?

Its a difficult question to answer as it depends on our current order book. We can sometimes squeeze one in straight away and it would take us 2-3months to build.

We may have several months waiting list. Get in touch and hopefully we can give you a better indication.







BOOK AN APPOINTMENT TO VISIT OUR WORKSHOP.

info@burrowed.co.uk