

| Enquiry Submission Form - Annex A: *delete as appropriate                              |      | ppropriate |
|--|------|------------|
| Query on a Verification Procedural Interpretation                                      |      | *No        |
| Query on a Verification Technical Interpretation                                       |      | *No        |
| Submission of an Alternative Design Approach which varies from the Technical Handbooks | *Yes |            |

If you disagree with the technical or procedural interpretation that the Building Standards Authority is adopting in the consideration of a building warrant that you have submitted or will require to submit you may request an interpretation through Local Authority Building Standards Scotland (LABSS).

#### OR

If you disagree with an interpretation that the Building Standards Authority is adopting in the consideration of a building warrant that you have submitted or will require to submit on an alternative design approach that you are proposing which varies from the Technical Handbooks you may request an interpretation through Local Authority Building Standards Scotland (LABSS).

This request must be submitted to the Building Standards Authority that is considering your proposal, preferably by email

\*\*Please complete this form as appropriate

| Name          | [Redacted] |
|---------------|------------|
| email address | [Redacted] |
| Date          | 13.7.20    |

Please explain the interpretation that you are querying and what you consider the decision should be.

The incineration Toilet (Cindi Family) has not been accepted as a toilet for use in our house. The consortium have advised that they would not approve the toilet due as there was no evidence that the whole system has been tested and verified by a 3rd party approved testing authority. Please see below for our explanation of why we have chosen to install an incineration toilet and what evidence we are submitting alongside.

The very nature of our house build (using natural materials) and using the small amount of land around the house to grow food and run courses on sustainability means that we are trying to think of every way in which we can do things in an environmentally friendly way. This means that sometimes we are having to find alternative ways to how things work here in Scotland at the moment. With regards to the incinerating toilet, we have found that this is a very acceptable way to dispose of waste in Scandinavia, a part of the world that often leads the way in more environmentally friendly ways of life.

There have been approximately 70,000 incinerating toilets installed worldwide.

This Separett incinerating toilet only requires electricity and air to function, turning waste into a small amount of sterile ash (about 1 tablespoon per use). Incinerating toilets are a self-contained waterless system, which means, as there is no plumbing attached that they are a



simple, safe & clean system to use. They are also equipped with a mechanical overheating protection that can only be reset manually, ensuring a safe and comfortable ownership which can be seen from the manufacturers guidance, CE certification and third party testing that have all been attached for evidence. As this toilet is an electrical device, the majority of the testing is based on its electronic systems.

Incinerating toilets mean that there is no water pollution, no need for septic tank, leading to a much healthier local environment as well as greatly reducing the wastage of clean water for flush toilets.

The evidence and information for your reading that we are attaching to our Building Standard Officer are as follows:

- CE Mark
- EMC Report
- Kemet Report (Includes whole system testing by an accredited 3rd party eg screws & connections, pollution degree, mechanical strength, instructions on how to empty and clean safely, general use etc).
- Cindi Family User Manual (English pages 47-67)

Thank you. You will receive an acknowledgement of receipt from your Local Building Standards Authority with contact details.

The procedure that will now be followed is as detailed here in the CONSULTATION / DETERMINATION PROCESS FOR DISPUTE RESOLUTION AND FOR TECHNICAL OR PROCEDURAL INTERPRETATION OR FOR ALTERNATIVE DESIGN APPROACH ENQUIRIES



# Consultation Form - Annex B \* Complete as appropriate

CONSULTATION / DETERMINATION PROCESS FOR DISPUTE RESOLUTION AND FOR TECHNICAL OR PROCEDURAL INTERPRETATION OR FOR ALTERNATIVE DESIGN APPROACH ENQUIRIES (including in association with STAS submissions)

CONSULTATION PROCESS FOR USE WITH LABSS CONSORTIA GROUPS; LABSS CTWG;
BSD TECHNICAL and PROCEDURAL GROUP AND WITH SFRS (IF APPROPRIATE)

| STAGE 1: MAKING THE CASE   |  |   |
|--|--|---|
| Regulation 9  Provisions on which a determination is sought including the relevant Guidance Clause as appropriate  | Describe the applicant / developer / relevant person case  | Verifiers Position *alternative compliance recommendations read with site specific conditions where appropriate   |
| *This area to be completed by the receiving Local Authority  | *This area to be completed by the Local Authority in association with the applicant / developer / relevant person having due regard to Form Annex A  | *This area to be completed by the receiving Local Authority   |
| Standard 3.12 Every <u>building</u> must be designed and <u>constructed</u> in such a way that <u>sanitary</u> <u>facilities</u> are provided for all occupants of, and visitors to, the <u>building</u> in a form that allows convenience of use and that there is no threat to the health and safety of occupants or visitors. | Comments from applicants in support of their application to be read in conjunction with their statements in Annex A above and the previously sent attachments (CE Mark, EMC Report, Kemet Report, Cindi Manual): | Verifiers comments:  The proposed Separett CINDI system proposed doesn't in the opinion of the Highland Council have the appropriate levels of certification that would allow acceptance as part of the building warrant application for the new house. The NSF Standards referred to within the Technical Standards within 3.12.2 which are specific to these types of systems are noted from the NSF below: |
| 3.12.1 Sanitary provision  Every dwelling should have sanitary facilities comprising at least 1 watercloset (WC), or waterless closet, together with 1 wash hand basin per WC, or waterless closet, 1 bath or shower and 1   | We have been refused approval to install incinerating toilets into our proposed dwelling. At every stage we have provided what has been asked, including consulting SEPA, Environmental Health, providing the CE |   |



sink. It is normal for the sink to be located in a kitchen.

#### 3.12.2 Waterless closets

If a waterless closet is installed it should be to a safe and hygienic design such as:

- National Sanitation Foundation Certification to Standard NSF 41: 'wastewater recycling/reuse and water conservation devices', or
- NFS International Standard NSF/ANSI 41-1999: 'non-liquid saturated treatment systems', or
- c. to the conditions of a certification by a notified body.

Although some European countries manufacture waterless closets, they have not as yet been tested to any recognised standard. This does not mean that they are unacceptable, just that care should be taken in their choice to ensure they are both safe and hygienic in use.

certificate and 3rd party accredited whole system testing. Despite providing all the required documents and information, Building Standards still maintain that they are 'not satisfied that it meets the requirements of the standard and guidance within the technical handbook'. We have asked several times for the specific requirements the toilets do not meet so that we can address these but still haven't had any further information or clarity on this. Please see the following information taken directly from the handbook and our justification on how these toilets do in fact follow the guidelines.

Building Standards Technical Domestic Handbook

#### <u>Introduction</u>

'The Building (Scotland) Act 2003 gives Scottish Ministers the power to make building regulations to:

- further the achievement of sustainable development.'
  - These toilets are widely used in Scandinavia and have been approved by their strict environmental and safety regulations. Whilst we understand that

NSF/ANSI 41 certifies composting toilets and similar treatment systems that do not use a liquid saturated media as a primary means of storing or treating human excreta or human excreta mixed with other organic household materials.

The standard requires a minimum of six months of performance testing, which includes design loading and stress testing appropriate to the product class: residential, cottage or day-use park. We evaluate a minimum of one system in a controlled laboratory setting, and a minimum of three systems in a mature field setting.

#### **NSF P157: Incinerating Toilets**

NSF P157 evaluates the health and sanitation characteristics of electrical incinerating devices designed to combust toilet waste. It specifies minimum requirements for materials, design, construction, performance and cleanability.

The certification and third party accreditation provided as evidence and justification for the use of the Separett CINDI system relates solely to the electrical component and safety of the power system but doesn't appear to cover the other requirements for materials, design, construction, performance and cleanability that forms part of the NSF certification system.

On this basis we feel that there is insufficient evidence to allow acceptance of this particular product.



these toilets are not the perfect solution to sustainable waste disposal because of the electricity usage, they are a step in the right direction with regards to sustainable technology. Septic tanks are a widely known source of water pollution and water closets make up for 30% of water wastage in Scottish households. which is why we wish to install waterless toilets. We are trying, wherever possible, to make sustainable choices and we feel that the Scottish Government needs to be working towards sustainable development instead of dismissing new systems.

'These Technical Handbooks have been issued by Scottish Ministers for the purpose of providing practical guidance'

'Following the advice in the Technical Handbooks is therefore likely to be the normal way of complying with the building regulations. However, a designer may put forward other ways of meeting the regulations, in the form of alternative solutions.'



• We understand that these toilets are not in any written Scottish Government documents at present but that does not mean that they cannot be approved. This handbook is for guidance only as stated above.

## Regulation 8

'The intention of the guidance below is to provide adequate flexibility to accommodate new techniques as well as proven traditional practices. This guidance ensures acceptance of products which satisfy the basic works requirements of the CPR to avoid barriers to trade. For example, products bearing a CE mark (European Mark of Conformity) must be accepted as meeting regulation requirements where the declaration of performance satisfies the requirement and the product is being correctly used.'

'In the absence of indications to the contrary, the verifier should assume that the information given in the CE marking and declaration of performance is accurate and reliable, and that the product meets the declared performances. If the declared performance of a product is suitable for its intended use, the verifier should not prohibit or impede the use of the product.'



• The CE certificate has been provided for these toilets as well as reports by a third party accredited testing on the whole system. Most of these tests are related to electrical testing because the toilet is run by electricity and not water.

#### **Environment**

'Disposal of wastewater and surface water also needs to be carefully considered to prevent environmental pollution and uncontrollable runoff during periods of heavy rainfall leading to flooding. The incorporation of water conservation measures in buildings can reduce pressure on precious water resources'

 Waterless closets are one of the most impactful things we can do for the environment when it comes to water conservation in our homes.

#### Water Water Drainage

• As this whole section is not relevant for the incinerating toilets (as they are waterless toilets) we have nothing to



comply with in this section with regards to the toilets.

## **Sanitary Provision**

'Every dwelling should have sanitary facilities comprising at least 1 water closet (WC), or waterless closet, together with 1 wash hand basin per WC, or waterless closet, 1 bath or shower and 1 sink. It is normal for the sink to be located in a kitchen.'

'Although some European countries manufacture waterless closets, they have not as yet been tested to any recognised standard. This does not mean that they are unacceptable, just that care should be taken in their choice to ensure they are both safe and hygienic in use.'

- Waterless toilets have already been recognised as an acceptable form of sanitation in this document.
- The hygiene and safety is of course of the utmost importance to us, the people who will be living in the house. It is only after extensive research that we have found these toilets to be the safest and most hygienic toilet to use, based on the certification, reports, ventilation



requirements and the fact that the waste is turned into sterile ash, ensuring no harmful bacteria or odours will remain.

# Water Efficiency

'Scottish Water estimate that the average consumption of wholesome water per person in Scotland is around 150 litres per day. Water consumption has increased over the last few decades and is projected to continue to rise.'

• Waterless toilets can contribute greatly towards water efficiency.

#### Water Use

'Water is used for various purposes within dwellings. The national independent organisation

'Waterwise' advise that the daily percentage of demand in key use areas of the total supplied water for dwellings to be as follows: WC Flushing 30%, baths & taps 21%, Laundry 13%, Showers 12%, Drinking & other 9%, Washing up 8%, Other 7%'.

• Waterless toilets will mean 30% less water will be used in this household.

# Electrical Safety



- CINDI® family is a safe toilet with several independent safety systems that counteract over-heating. If the toilet becomes too hot the current is automatically turned off. There are two different temperature gauges that monitors the temperature, three fuses that protect against overloading in the electrical circuit and an over-heating protection that responds to the temperature. The heating function will also only operate if the lid is closed, ensuring maximum safety.
- Please see safety testing information in the Kemet and EMC reports.

#### Sustainability

'the process of sustainable development and the quality of 'sustainability' to aspire to within the built environment should account for:

- the well-being of the natural world and the responsible use of natural resources, without destroying the ecological balance of the area where these resources originate or are processed'



'Since 2005, progress has been made by strengthening the standards on, for example, energy efficiency and accessibility for all new buildings so they are comparable with the best in Europe.'

• Using the proposed toilets in the dwelling would mean that we are having as little impact as possible on our natural surroundings. We have also done extensive research into the best technologies available at the moment for domestic waste disposal (within our budget) and have looked to the best in Europe for examples.

# Aspect Gold Level 4

'WCs of average flush volume to be not more than 3.5 litres'

• No water will be wasted from flushing.

We thank you for taking the time to read through and consider these toilets as an acceptable provision of sanctuary installations within our proposed dwelling. We appreciate that these toilets are at the moment seen as an usual and different choice of sanitation that is not yet covered in the Scottish Building Control



| guidelines. We would however like you to consider that we have researched how best we can live safely and sustainably. New technologies are moving quickly and these guidelines are from 2017, we therefore think that it is important that the environmental guidelines are looked at in the context of where |  |
|--|--|
| guidelines are looked at in the context of where we are now and what the future looks like in terms of sustainable development   |  |

# STAGE 2: CONSULTATION WITH LOCAL CONSORTIUM (OR WITH 7 CONSORTIA GROUPS IF NEEDED) (Comments sought from Other Consortium to allow the LABSS Position to be determined) \*This area to be completed by each Consortium Lead / Technical Lead (include all comments from other consortia) Group 1: Southwest Scotland Building Standards Consortium (SWSBSC)



| Group 2: Highlands and Islands consortium (H&IC)                         | Orkney  |
|--|---|
|  | Based on information provided, our view is that proposed incinerating toilet does <u>not</u> achieve compliance with Standard 3.12.   |
|  | For the record, we do not have a problem with incinerating toilets per se, but would suggest that NSF or other comprehensive certification is required to ensure compliance with Standard 3.12 (as per guidance in 3.12.2).   |
|  | Shetland  |
|  | Based on information provided, our view is that proposed incinerating toilet does <u>not</u> achieve compliance with Standard 3.12.   |
|  | As per guidance clause 3.12.2, incineration toilets may be acceptable where it has been sufficiently demonstrated, certified and tested to a recognised standard such as NSF P157.  |
|  | Western Isles   |
|  | We discussed this at a team meeting today. There were differing views but, on balance we were not of the view that the proposed incinerating toilet did not achieve compliance with Standard 3.12, Sanitary facilities. The applicant has put a good case forward and although we do acknowledge there are disadvantages to this form of system, we thought that the case was a reasonable one and that the proposals could be accepted. We thought that the last paragraph in clause 3.12.2 of the DTH is significant "Although some European countries manufacture waterless closets, they have not as yet been tested to any recognised standard. This does not mean that they are unacceptable, just that care should be taken in their choice to ensure they are both safe and hygienic in use." |
| Group 3: Southeast Scotland<br>Building Standards Consortium<br>(SESBSC) |   |
| Group 4: Tayside consortium (TC)   |   |



| Group 5: Clyde Valley consortium (CVC)        |  |
|---|--|
| Group 6: Central Authorities consortium (CAC) |  |
| Group 7: Grampian consortium (GC)             |  |
|   |  |
|   |  |

# STAGE 3: LABSS POSITION FOLOWING CONSULTATION (EITHER FOLLOWING LOCAL CONSORTIA DECISION OR NATIONALLY WITH 7 CONSORTIA)

\*This area to be completed by LABSS Management / CTWG

The majority view in H&IC is that proposed incinerating toilet does <u>not</u> meet the requirements of Standard 3.12. Accordingly, this dispute resolution was closed on 17 August 2020. Individual verifier responses are enclosed below but, to summarise, the view of Highland (originating authority) was supported by Orkney and Shetland. Only Western Isles had a different take on the matter.

(It may be worth noting that after this dispute resolution was closed, the applicant put forward details of a different incinerating toilet with NSF certification. Highland are reasonably satisfied that revised proposal achieves compliance with Standard 3.12.)



#### **STAGE 4: CONSULTATION REVIEW WITH BSD and SFRS**

#### Comments sought from BSD Technical/Procedural group

\*This area to be completed by LABSS in association with BSD

A copy of this dispute case decision has been passed to the BSD for information

#### Comments sought from SFRS or other relevant consultees (if appropriate)

This area to be completed by LABSS in association with SFRS

N/A

#### **STAGE 5: CONSULTATION REVIEW FINAL DECISION**

#### **Final Decision**

This area to be completed by LABSS in association with BSD

This will be confirmed:

- by LABSS and added to the LABSS Website, and
- by BSD Standard Decision Letter (if appropriate)

As outlined in Stage 3, the majority view in H&IC is that proposed incinerating toilet does not meet the requirements of Standard 3.12.