

Scottish Building Standards: Domestic: Section 3: Environment *A Summary of Changes in 2007 Edition*

Effective from May 2007 in Scotland

1 Introduction

The most significant changes to Section 3 relate to improving the provisions for the elderly, infirm and disabled. The major goal is to raise the standard of accessibility for all in dwellings from 'visitable' to 'liveable'. This change in philosophy has led to amendments in both Section 4: *Safety* and Section 3: *Environment*. It is advisable therefore to read the amendments in both sections together. Please refer to the TRADA Construction Briefing on Section 4: *Safety*, for further commentary.

Demographics for Scotland and for the UK as a whole are making the new philosophy necessary because, with improved healthcare, the number of people who are living to a much greater age is increasing dramatically. Government projections for the UK suggest that a 70% rise in those aged 65 and above is expected over the

next 30 years. The percentage increase is even more dramatic for older age groups, with those aged 85 years and over expected to rise by 149%¹. These same people will typically have decreasing mobility as they age. It is better from the point of view of cost and well-being to design homes which can easily cope with this reduced mobility, rather than always having to move the occupants to 'specialist accommodation'.

In Section 3 this modified philosophy affects the provision and layout of toilets, bathrooms / shower facilities and kitchens. Other notable areas of change include:

- Increased guidance on biomass fuel, eg how to store and deliver it safely.
- Modified guidance on ventilation to take account of the reduction in 'unplanned ventilation' that will occur as a result of the improved air tightness requirements in Section 6: *Energy*.

¹ *The future of the Code for Sustainable Homes – Making a rating mandatory*, July 2007, Department of Communities and Local Government.



High level cupboard space designed for easy access for wheelchair users. Photo courtesy of Nicholls & Clarke

2 Summary of the amendments made in 2007 edition

The amendment summary, given in column 2, is taken directly from clause 3.0.3 'Latest Changes' of the SBSA technical handbook. The third column, 'TRADA Commentary', provides a short summary of what is actually contained within the amended guidance. It is only a summary and it is necessary to read the actual guidance to see the full extent of the changes made.

2.1 Standard 3.0 Introduction

Clause	Amendment Summary	TRADA Commentary
3.0.4	Reference to CAR (Controlled Activities Regulations) and oil storage regulations.	Two recent pieces of Scottish regulation relating to oil pollution and adverse impact on the water environment have been added to the list of 'Relevant legislation', relating to Section 3: <ul style="list-style-type: none"> • The Water Environment (Controlled Activities) (Scotland) Regulations 2005 • The Water Environment (Oil Storage)(Scotland) Regulations 2006

2.2 Standard 3.2 Site preparation – protection from radon gas

Clause	Amendment Summary	TRADA Commentary
3.2.1	NRPB now affiliated with Health Protection Agency.	Further advice on radon gas is now available from the Health Protection Agency rather than the National Radiological Protection Board (NRPB).

2.3 Standard 3.5 Existing drains

Clause	Amendment Summary	TRADA Commentary
3.5.0	Guidance on sewers moved from clause 3.5.2.	The text remains unchanged.

2.4 Standard 3.6 Surface water drainage

Clause	Amendment Summary	TRADA Commentary
3.6.5	Soakaway equation simplified.	A very minor change only.

2.5 Standard 3.9 Private wastewater treatment systems – infiltration systems

Clause	Amendment Summary	TRADA Commentary
3.9.2	Improved guidance on design of mound filter	For infiltration systems with very slow percolation rates (ie with percolation test values greater than 140 secs / mm), the reader is referred to a new BRE publica-

2.6 Standard 3.11 Facilities in dwellings

Clause	Amendment Summary	TRADA Commentary
3.11	Text of standard expanded to improve scope.	Two major increased requirements have been made to Standard 3.11: (1) Apartments (eg living rooms or bedrooms) and kitchens are to be designed and constructed to make them 'liveable' for those with impaired mobility / ability, not just 'visitable'. (2) Internal space is to be provided in all accommodation for safe, convenient and sustainable drying of washing.
3.11.0	Improved explanatory clauses.	With changes made to the requirements of standard 3.11, the Introduction has been updated to explain the reasoning behind these changes.
3.11.2	New guidance clause.	An enhanced apartment is a new concept, which has been introduced to address the needs of those with reduced mobility. Essentially it is a living room / bedroom which is sufficiently large and flexible for a wheelchair user's needs. At least one enhanced apartment meeting the size requirements given in this clause is recommended on the principal living level of every dwelling.
3.11.3	New guidance clause.	The recommended guidance for kitchens has been amended to provide improved manoeuvring space and layout for those with impaired mobility. In addition, the kitchen should be on the principal living level. Having designed the kitchen with suitable manoeuvring space it should be relatively easy to make future adaptations for those with long term disabilities.
3.11.5	New guidance clause.	Some amendments have been necessary to the clauses on Alterations and extensions , to take account of the changes made to other clauses in this standard.
3.11.6	New guidance clause.	Safe, convenient and sustainable drying of washing is now a requirement in Standard 3.11. New guidance is now given recommending: <ul style="list-style-type: none"> • External clothes line be provided where reasonably practicable • Internal dedicated space be provided for all dwellings owing to 'unreliable weather' in Scotland.



Kitchen units designed for use by wheelchair users. Future adaptations such as those shown above should be relatively easy to make when required.



Wall constructions should be capable of taking the fixings necessary for heavy duty grab rails if required.

2.7 Standard 3.12 Sanitary facilities

Clause	Amendment Summary	TRADA Commentary
3.12	Text of standard expanded to improve scope.	The expanded scope now specifically requires that sanitary facilities are convenient to use for both occupants and visitors to the dwelling. Essentially this includes providing toilet facilities on the principal level which are fully accessible and providing privacy to wheelchair users.
3.12.0	Improved explanatory clauses.	The Introduction section explains the increased goal of designing sanitary accommodation which is immediately accessible and easily modified to meet occupants needs as they age and become less mobile. Whilst this is not to the optimum standard for wheelchair users it will enable most occupants to remain in their homes as their circumstances change and thereby reduce cost and disruption for all.
3.12.1	Minor revision to guidance clause.	Guidance previously in clause 3.12.4 has been moved to 3.12.1 relating to: <ul style="list-style-type: none"> • Location of washbasins close to toilets • Installation of a doorset to separate toilet facilities from places where food is prepared or eaten.
3.12.3	Additional guidance on sanitary accommodation.	The guidance now recommends considerably improved space provisions to create accessible sanitary accommodation on the principal living level. This should be of a size and form that allows unassisted use, in privacy by almost any occupant. This will often be greater than has typically been provided in the past. In addition to activity spaces for toilets, diagrams are now provided for washbasins, baths and showers. It should be possible to replace a bath with a shower (which is easier to use for many with reduced mobility) without adversely affecting other sanitary facilities. An alternative option is to provide a storage space on the principal living level which has suitable drainage connection and other provisions to allow it to be easily converted into an accessible shower room at a future date. Walls adjacent to sanitary facilities should be sufficiently robust to allow grab rails etc to be fitted.
3.12.4	New guidance on access to sanitary accommodation.	Accessible sanitary accommodation should be reached from common areas in a dwelling and not through a bedroom for example.
3.12.5	Revised clause to take account of general changes.	The section on Alterations and Extensions has necessarily been amended in the light of the substantial changes made to the guidance on new dwelling provision.

It should be possible to replace an existing shower or convert an existing storage space on the principal living level to provide shower facilities to a fully accessible standard.



2.8 Standard 3.13 Heating

Clause	Amendment Summary	TRADA Commentary
3.13	Text of standard expanded to improve scope.	The standard now requires that in addition to being able to be heated, a building must be able to maintain temperatures at a level which will not endanger the health of the occupants.
3.13.0	Improved explanatory clauses.	Reference is made to the Workplace (Health, Safety and Welfare) Regulations, which provide guidance on the heating of non-dwellings.
3.13.1	Improved guidance clause.	The minimum performance recommendation for the heating provision has been increased. With the exception of storage rooms, all areas of a dwelling should now be capable of maintaining a temperature of at least 18°C and one apartment 21°C when the outside temperature is -1°C.
3.13.2	New guidance clause.	The guidance no longer prescribes that internal temperatures should be maintained by means of a fixed heating system. As we move towards less reliance on traditional forms of fossil fuels, the forms of heating will change. It should be made possible to upgrade the heating provision easily to cater for the needs of the elderly and infirm.

2.9 Standard 3.14 Ventilation

Clause	Amendment Summary	TRADA Commentary
3.14.0	Improved guidance clause.	The revised Introduction recommends that occupants should be able to dry washing by other means than a tumble dryer because of its high energy usage.
3.14.1	Improved guidance clause.	A paragraph giving four main requirements for ventilation in a dwelling has been taken from clause 3.14.0 in the previous version. These requirements relate to: <ul style="list-style-type: none"> • indoor air quality • removing excessive moisture • removing pollutants eg from non-flued combustion appliances • rapidly diluting pollutants and water vapour
3.14.2	Revised guidance and table.	Section 6: Energy is now driving down permissible air leakage rates in order to improve energy efficiency. However some of this uncontrolled air movement was assisting with providing the necessary air ventilation. The table of recommended ventilation provisions has been modified to provide a new column of increased provisions where air tightness levels that are better than 10m ³ /hr/m ² @ 50Pa are being provided.
3.14.3	New guidance clause.	The minimum recommended ventilation opening size in conservatories has been increased greatly from 1/30 th to 1/5 th of the floor area to prevent excessive heat build up.
3.14.4	New guidance clause.	New guidance is given on the ventilation requirements for areas designated for drying of washing. This ties in with clause 3.11.6.
3.14.5	Minor changes to guidance.	Minor change relating to how the size of ventilation should be calculated.
3.14.9	Improved guidance on input air ventilation systems.	New guidance requiring that the inlet to and outlet from mechanical ventilation systems is designed to prevent contamination of the air supply to the system, which can cause legionellosis.
3.14.11	Ventilation of large garages now in non-domestic Handbook.	The previous guidance had a separate clause on ventilation of large garages.

2.10 Standard 3.15 Condensation

Clause	Amendment Summary	TRADA Commentary
3.15.2	New clause relocated from 3.14.2.	The content of this clause on control of humidity is broadly the same.

2.11 Standard 3.23 Fuel storage – protection from fire

Clause	Amendment Summary	TRADA Commentary
3.23	Standard amended to cover biomass fuels.	Previously the standard only addressed oil storage.
3.23.0	Revised introduction clause.	The Introduction gives some background to the increasing use of woody biomass as a form of renewable fuel.
3.23.4	New guidance clause.	Specific guidance is now given on woody biomass fuel relating to: <ul style="list-style-type: none"> • fire resistant protection • control of dust • protection of pellets at the time of delivery • automated supply of biomass fuel into the boiler.

2.12 Standard 3.24 Fuel storage - containment

Clause	Amendment Summary	TRADA Commentary
3.24	Standard amended to cover biomass fuels.	The revised standard requires that the volume of woody biomass fuel storage is sized to minimise the number of journeys necessary to make deliveries.
3.24.0	Revised introduction clause.	The changes include: <ul style="list-style-type: none"> • Reference to new regulations covering the storage of oil. See 3.0.4. • Definitions for the terms 'catchpit' and 'integrally bunded tank'. • Discussion on providing sufficiently sized storage facilities for woody biomass to reduce the number of deliveries required.
3.24.4	New guidance clause.	Tables giving recommended minimum sizes for woody biomass fuel storage are provided.



Woody biomass boiler. Photo courtesy of the Biomass Energy Centre



Further help

TRADA members may contact the Members' Helpline for free on t: 01494 569601.

Useful resources

Building regulations in Scotland:
www.sbsa.gov.uk

Centre for Accessible Environments (CAE):
www.cae.org.uk/index.html

Biomass Energy Centre:
www.biomassenergycentre.co.uk

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Feedback

We welcome feedback from readers and if you have any comments on the content of this briefing please contact Rupert Scott on rscott@trada.co.uk.

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