

Section 3: Questionnaire and client handouts

Investigating feline marking and elimination problems

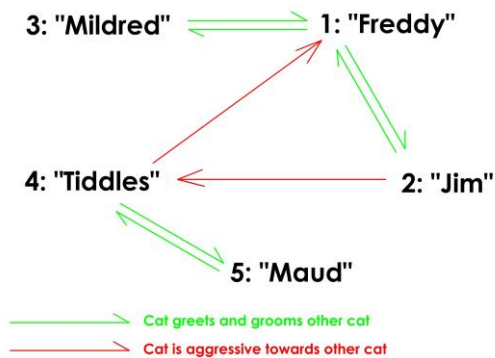
Name	Age	Sex [neutered]	
Cats: 1:	_____	_____	Client's name: _____
2:	_____	_____	Address: _____
3:	_____	_____	_____
4:	_____	_____	_____
5:	_____	_____	Phone: _____

Interaction diagram

Make a diagram of friendly and aggressive behaviour between the cats.

- Friendly: e.g. grooming, rubbing against, tail-up greeting.
- Aggressive: e.g. chasing, growling, hissing, spitting, fighting.

Example:



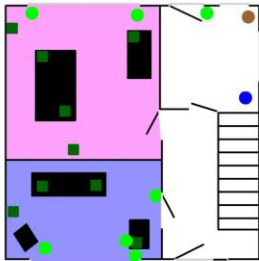
In this example cats 1,2 &3 form one faction, whilst 4 & 5 form another. It is possible to have no affiliative behaviour at all between a whole groups of cats, or a to find that there is a single outsider. Factions often require their own resources so that they can coexist without competition

House layout

Draw a diagram of the house to show where the cats have food, water, litter trays and cat flap. Also mark on this where urine or faeces have been found and which cat left them.

Example:

Ground Floor

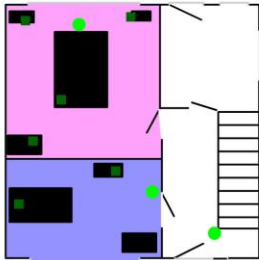


- Area where Faction 1 spends most of its time
- Area where Faction 2 spends most of its time

Provide details of resources and locations where urine and faeces found

- Resting site
- Litter tray
- Site where urine found
- Food

First floor



Record how often urine or faeces are found at each location, as well as what volume and whether it is against a wall or on the floor. For each location also record how early on in the problem were urine or faeces found here [was it an early place or has it only recently begun to be used].

Identify on diagram whether each patch of urine is spray or elimination:

Urine spray mark: small volume, usually passed standing up, located in highly visible places.

Urine elimination: larger volume, usually passed crouched, located in hidden places.

Typical patterns of development:

-*Urine marks around window, door and cat flap areas*: threat from outside.

-*Urine marks around internal doors & corridors*: conflict between resident cats.

-*Urine marks start at cat flap and then spread into house*: intruder cat.

Outdoor access

Can the cats go outdoors? _____.
Does the owner have to let them in and out? _____. Is there a cat flap? _____.
Is this open at all times? _____. Is it an electronic/magnetic coded one? _____.
Do the cats have other ways in and out of the house [windows etc]? _____.
Are any of the cats reluctant to go out? _____.
Is there a reason why they won't go out? _____.
Do any of the cats go to the toilet in the garden? _____.

Which cats are responsible for the elimination or urine marks?

Has the owner seen any of the cats showing the typical spraying posture *in the home*?

1 _____
2 _____
3 _____
4 _____
5 _____

Using fluorescein to identify urine marking or soiling cats	
•	Fluorescein is available as sterile paper strips, for ophthalmic examination. These contain approximately 1 mg of fluorescein per tip, but this should be checked with the manufacturer.
•	The tips should be torn off and rolled to fit into gelatine capsules, with approximately 5 per capsule [5mg].
•	This dose is given once daily for 3-4 days.
•	Urine sites are checked daily.
•	Lightly spray each site that has been urine marked with a weak solution of sodium bicarbonate [baking powder], mixed in water [1 tablespoonful in 125ml water].
•	A UV lamp is then used to check the site for fluorescence.
•	It is vital to start by testing the least probable culprits first, working up to the most probable. Otherwise fluorescence marks left by one cat will obscure those of another. If it is certain that the culprit is definitely a resident cat then the culprit may be identified by a process of elimination, which minimises the risk of leaving lots of any fluorescent stains for the client to clean up.
•	A 5-day washout is left between testing of each cat, to make sure that each individual has excreted all of the dye before testing the next.
•	Although fluorescein is water-soluble and can usually be removed with normal cleaning, this testing method may leave stains on fabric, carpets or wall paper and owners must be warned of this.

Pattern of toileting

Detail the pattern of toileting in the house [where, when, by which cat etc].

Does this fit with one of the patterns listed in the box? _____

Is there possible FLUTD? _____

- Single indoor toilet location or substrate [litter box available]: location or substrate of litter tray is unsuitable, or cat may be afraid to use the litter tray.
- Single indoor toilet location or substrate [no litter box, cat previously used garden latrine]: cat is unable to use outdoor latrine because it is unuseable [e.g. waterlogged, frozen, or paved over], or inaccessible [e.g. cat is unwell, or a dog now inhabits garden where the latrine is sited], or it is defended by other cats as part of their territory.
- Multiple indoor toilet locations and substrates: cat is unable to use a regular latrine due to conflict with other cats, aversive experiences during elimination [e.g. pain associated with FLUTD, or owner punishment].

Assessment

Does the pattern of urine and faeces deposits indicate a house-soiling or a marking problem [or both]? _____.

Does the pattern of marking sites indicate that there is a problem between resident cats? _____

Is this supported by information from the interaction diagram? _____

Does the pattern of marking sites indicate that there is a problem with non-resident cats? _____

Are resources adequate for the cats? _____, if not then what resources are deficient? _____

Which resources are likely sources of competition or frustration for the cats? _____

Which cat[s] are responsible for the urine or faeces found in the home? _____

Are medical issues relevant to this problem? _____

Medical issues checklist

Does the cat show signs of the following kinds of disease, which may contribute to indoor marking and elimination problems:

Urinary tract disease, cardiovascular disease, osteoarthritis, endocrine disease [e.g. hyperthyroidism], visual or hearing loss, senility.

Some of these have an indirect effect on behaviour. Any debilitating disease can impair a cat's ability to use its chosen latrine sites, for example. Hyperthyroidism can make cats irritable and aggressive, as well as increasing the proportion of available food that they consume.

Need to refer?

Here are some general indicators that referral may be a better option:

- Problem lasting >12 months.
- More than 5 cats in household.
- History of injury resulting from aggression [to owner or other cats].
- Failure to respond to an apparently appropriate course of treatment.
- High frequency of elimination or spraying causing damage to house.

Action plan

Relationship between resident cats:

Use the information from the interaction diagram to determine which cats in the household may conflict with each other, and whether any factions exist. Then supply information about resource access, use of Feliway diffusers etc.

If the introduction of a new cat has initiated the problem consider separating cats and going through reintroduction according to handout.

House layout:

Use information about house layout from the diagram to position resources and Feliway diffusers to enable the cats to use their home more effectively and to accommodate the needs of factions or individuals.

Relationship with non-resident cats:

If the pattern of marking and other behaviour implies the involvement of non-resident cats then strengthen boundary of the home environment using visual barriers on windows, electronic cat flap etc [handout].

Handouts supplied:

Understanding feline emotions	_____.
Cleaning	_____.
Preventing damage	_____.
Feliway	_____.
Clomipramine	_____.
Securing the indoor environment	_____.
Indoor environment	_____.
Outdoor environment	_____.
Scratching	_____.
Resource distribution	_____.
Litter trays	_____.
Multi-cat households	_____.

Follow up

- Effects of treatment should be seen within 3 weeks.
- Steady reduction in spraying and house-soiling should then be seen.
- It is advisable to review progress every 4 weeks
- Medication, if used, can be phased out after 4-6 weeks without problem behaviour.
- Feliway diffusers can be removed after 4-6 weeks without problem behaviour when the cats have begun to interact more normally.

Owners must be warned that problems can resurface after certain events such as the introduction of a new cat to the home, the start of the feline breeding season or arrival of new cats in the neighbourhood.

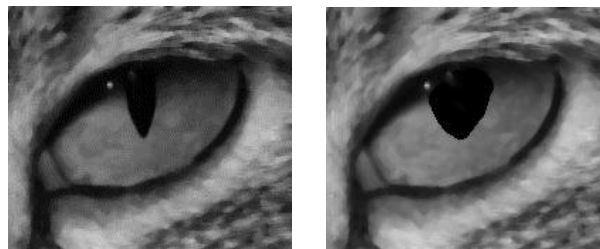
Client handout 1: Understanding feline emotions

Animals are capable of experiencing emotions that are very similar to those of people. Stress, anxiety and fear have the same effect on them, and they are capable of being relaxed and happy too. It is really important to have an understanding of the emotional state of your cat[s] because this will not only give you information about why there may be a problem at the moment, but also allow you to judge when that problem is resolving. You will be able to see that your cat[s] is happier.

Using methods that simply stop cats from carrying out a particular nuisance behaviour, like house-soiling, will not take away the underlying fear or anxiety that may have caused it. So, unless we see a change in the cat's emotion we cannot be sure that the problem will not resurface in the future.

Signs of fear, anxiety and stress

There are many potential signs of fear, anxiety and stress in cats. Cats that are tense in a given situation will not rest in a relaxed way, they may stay sitting up instead of lying down. They will be more jumpy when there is a sudden movement or noise. A good sign of tension is to look at the size of the cat's pupil. The size of the pupil [the dark part at the centre] on two things; when the level of light and the cat's emotional state. Below are two pictures of cat's eyes. Imagine that they were taken under the same lighting conditions. In the one on the left the pupil is quite narrow, which shows that this cat is relatively relaxed. The pupil of the eye on the right is much wider, and this shows that the cat is now quite tense.



When cats become very afraid you will see that the pupil becomes very large and almost round. Whenever you see a cat's eyes change in this way you should leave it alone. If you have several cats in the same room take a look at their eyes and see which ones are more relaxed or more tense.

General signs of anxiety and stress are:

Change in grooming: the cat's coat condition may look poor and the cat may either appear to groom excessively or not at all.

Change in eating: the cat may eat less.

Hesitancy: the cat may pause and look nervous at certain times, such as when entering a room, approaching food or being petted.

Increases in vocalisation: distressed or plaintive crying.

Hiding and avoiding: the cat may spend more time hidden or trying to hide.
Medical signs: regular diarrhoea, vomiting, patchy fur, sore or itchy skin.
Soiling in the house: if you find pee or poo in the house this can be a sign of ongoing stress.

When a cat is afraid of something you will see certain specific signs:

- The cat will adopt a crouched or generally flattened posture.
- There may be signs of hissing or spitting.
- The cat's pupils will be very large [dilated].
- The cat's ears will be flattened down.
- If it moves it may initially move very slowly.
- It may try to run away if it sees an opportunity to escape.

Not all of these signs may be seen at the same time, and some may develop over a period of a few seconds if the cat cannot escape. In general, if you see that a cat flattens its ears or crouches or has dilated pupils these are good initial signs that it is becoming afraid. **You should never attempt to handle or pick up a frightened cat, because you may get very severely injured.** If you see that certain cats in your household react to each other in this way then it indicates that there is considerable stress between them.

A classic time when you may see fearful behaviour of this kind is during chasing that is misinterpreted as play. If two cats take turns to chase each other and hide, but they also show a lot of friendly behaviour towards each other and the games never end in a confrontation then we can be confident that they really are playing. However, in many situations one cat gets chased and the "game" ends with that cat adopting a defensive posture as described above. This is not play, especially if the cats rarely show friendly behaviour towards each other at other times.

Signs of confidence, relaxation and friendliness

When a cat wants to show that it is friendly with a particular person or other cat it will greet them when it meets them. A typical cat greeting behaviour would be that:

- It will approach that person or cat with its tail held straight up.
- It will trill or meow as it approaches.
- It may sit closer to them after approaching.

- While sitting nearby the cat may look at the person or other cat and blink slowly several times while looking at them. This is part of the greeting behaviour.
- It may rub against or briefly groom that person or cat.

Once you know how cats greet each other you can use the same methods to communicate with your cat. If your cat approaches, call its name in a high-pitched voice. When it gets closer look at it and blink slowly a few times. See if your cat does the same thing back. Then let your cat come and rub against you, but don't rush to pick your cat up or handle it because in most cases the trill and the eye blinking is enough of a greeting on its own.

When a cat is resting in a fully relaxed way, this indicates that it is happy and confident that people and other animals nearby are not a threat. Cats that are relaxed will lie down with their front feet folded underneath their body. Their eyes will be mostly closed and the cat's pupils will be narrow. Small noises and movements will not cause the cat to be startled. Cats will also rest on their side when they are relaxed. If there are several cats in the room resting in a relaxed way then this is a good indication that they are relatively comfortable with each other. If, on the other hand, they are all sitting up or in a position ready to move then this actually shows that they are tense.

Think about your cats and their emotional state

It is a good idea to think about each of your cats in terms of their emotional state:

- Do they seem generally relaxed or tense?
- What makes them afraid?
- Do they show fear of each other or of cats outside the home?
- Do they show friendly behaviour towards each other or towards you?

As treatment of your cat's problems progresses you may find that your answers to these questions change and that you consider that your cats are more often relaxed and happy with you and with each other.

Client handout 2: Cleaning up urine and faeces marks

House-soiling and indoor marking can begin for a number of reasons but, in some cases it continues purely because the cat can detect the trace smell of urine or faeces. Removing these odours is essential to stop the problem.

The best way to remove odours from existing sites is as follows:

Make up 3 sprayer bottles, labelled 1, 2, and 3. They should be filled in accordance with the following instructions:

- 1: A solution of *biological* clothes washing powder or liquid in water [approximately 1 part of powder/liquid cleaner to 10 parts of water].
- 2: Plain water.
- 3: Surgical spirit [clear surgical spirit, not coloured methylated spirit]

You also need a bucket and rolls of paper kitchen towel. Do not use reusable cloths to clean with because they tend to spread the scent. Keep the spray bottles and towel in the bucket to avoid leaving scent marks where they have been placed on the floor.

Each soiled site should be cleaned in the following way:

- Use paper towel to remove any urine and faeces. Dispose of the towel.
- Spray the area with bottle 1 and then wipe clean with paper towel. Dispose of the paper towel.
- Spray with bottle 2, wipe clean and mop dry with paper towel. Dispose of the paper towel.
- Spray with bottle 3, and allow to dry completely before allowing the cat into this area.

You should test this cleaning method on a small and inconspicuous area of the carpet or fabric you are cleaning to ensure that it will not be damaged. If you are cleaning curtains or furniture covers that can be removed and washed then machine-wash them according to the manufacturer's instructions.

How often to clean?

Once you have cleaned a particular spot once, it is tempting to leave it until the cat soils there again. In fact, this means that urine odours will continue to accumulate because one round of cleaning will never be enough to remove all of the odour. Instead, you should clean each spot several times each week, until it has not been soiled at all for at least 3 weeks. This will remove all odours and reduce the chance of further soiling if the cat has a relapse.

- Make a chart of all the places where your cat has ever left urine or faeces.
- Clean all of these places once to start with, so that the whole house is clean.
- Clean them all regularly until no further marking is seen.

Client handout 3: Preventing damage caused by urine and faeces

Cleaning is no good if pee and poo are able to get into cracks and crevices, or spoil furnishings that cannot easily be cleaned. These places will trap smells that we don't like and which may attract your cat back to go to the toilet or mark again.

Particular problem areas are:

- Wooden furniture.
- Cracks between floorboards or panels of laminated flooring.
- The junction between flooring and skirting boards, kitchen cupboards etc.
- The crack at the top edge of skirting board.
- Grouting between ceramic tiles [on floors or walls].
- Electrical equipment and electrical outlets.

These, and any other potential traps for urine, must be cleaned and sealed so that urine odours do not penetrate.

Wooden furniture should be regularly waxed with a heavy-grade wax polish [not a spray] so that the surface is protected. The feet of wooden chairs and tables can sometimes absorb urine, so these should be protected with a dab of varnish on the underside if possible.

Joints in wooden or laminate floors should be sealed and painted over with at least 2 coats of a high-quality varnish. Gaps between floorboards are easily sealed with rubber or silicone bath sealant, which is available in many colours, before painting over with varnish.

The junction between a wooden or hard floor and the bottom of skirting board should be sealed with a rubber or silicone bathroom sealant. The same method may be used to seal the top edge of skirting board.

Grouting is often porous so it absorbs urine. It can be steam-cleaned and treated with a sealant, or replaced with a waterproof equivalent [sealant for terracotta tiles and grouting is available from most DIY shops].

Electrical equipment such as toasters, kettles, televisions and audio equipment may become targets for spraying, because they heat up and release smells that cats find objectionable. Once they have been contaminated with urine they will release a urine smell every time they switch on, which attracts further spray marking. Soiled cooking equipment should be discarded, as it presents a health

hazard unless it can be completely cleaned. Audio and TV equipment that has previously been soiled must be cleaned with great care. It may not be possible to remove all traces of urine. Audio equipment may need to be put into a glass fronted rack or cupboard away from access by the cat, and TV equipment covered with a polythene sheet when it is switched off.

Urine getting into electrical outlets can create a serious risk of shock or fire, so access to these locations should be restricted. As an additional protection, electrical outlets can be protected by covering them with cling-film. Alternatively a flap of polythene may be taped to the wall above the socket so that it drapes over the outlet and redirects urine over it in the manner of a canopy.

Replacing flooring and soft furnishings

If an area is persistently soiled then urine and faeces odour will soak in and may be very difficult to remove. Consider removing carpets, curtains and soft furnishing that have been badly damaged by urine or faeces. You may be able to have these cleaned professionally but they may have to be destroyed and replaced.

If carpet or other flooring must be replaced due to soiling then the floor underneath must be scrubbed clean with a biological cleaner. Rotten or sodden timbers should be removed and replaced. The floor must be cleaned several times and then allowed to dry before any new flooring is put down. Paint wooden boards with varnish or gloss paint before laying new flooring over them, as this helps to reduce the return of old odours.

To prevent urine from soaking through the new flooring, and to prevent remaining odours from returning, it is advisable to put down a layer of thick polythene sheet in overlapping strips before laying the new flooring.

Consider putting a layer of polythene between the carpet and underlay, so that any accidental soiling is easier to clean. This extra layer may be put in strategically in locations where the risk of future soiling is highest.

Client handout 4: Use of Feliway for indoor marking problems

Cats produce a range of special chemicals that they use to signal to other members of their own species. These are called pheromones, and recently synthetic versions have been manufactured that can be used to help resolve behavioural problems in cats.

The main pheromone we use is called F3, and it is available in the Feliway diffuser and spray. F3 is used by cats when they want to identify a place as safe. When your cat rubs its face and body against a piece of furniture in the living room it will leave behind a small trace of F3. This reminds that cat that this is a safe place. Areas that have been heavily marked with F3 tend not to be marked by spraying or clawing. The reason is that the cat perceives these to be safe places and would not normally want to leave a mixture of marks in the same place.

We can therefore use F3, in the form of Feliway, as a way to stop indoor marking problems where cats spray in the home.

Your vet has already identified that Feliway may be useful for your cat and this handout is designed to help you to use the products effectively. You will also have been told about ways to clean places where your cat has left pee or poo, and about how to change certain aspects of your home and the way that you look after your cats so that the problem can be resolved. Feliway is used to help with this process but to be effective you must follow the other advice.

Your vet will place a tick in the box next to the sections that he or she wishes you to follow, so you know which types of Feliway you will need and how you should use them.

Several cats sharing a household, with signs of inter-cat conflict

Your vet has identified that your cats form two or more groups that do not get on as well with each other as they should. To help resolve this problem you need to use Feliway diffusers in certain places and redistribute food and other resources that your cats need. The idea is to give each group or individual its own safe place with its own food, water and resting places. This reduces conflict between the cats so that they will get on better with each other.

Install a Feliway diffuser in each of the locations your vet indicates here:

Leave the diffuser switched on at all times, and replace the refill every 28 days. When you first install the diffuser keep the door closed and cats out of the room for at least 2 hours so that the scent from the diffuser is dispersed into the room. If you do not do this then your cat may spray against the diffuser and damage it.

Install food and water bowls in each of the locations close to where the diffuser is placed, and make sure that the cats have plenty of places to rest. Keep food bowls topped up at all times so that your cats can eat whenever they want. Alternatively you may use activity feeders [see handout].

Over time you should see that your cats begin to become friendlier towards each other. A good indication of this is that your cats may begin to rub against and groom each other.

Cats spray on objects brought into the home

Some cats react very badly to objects that are brought into the home, for example, they may spray on shoes that have been taken off, or against new furniture or bags of shopping.

You may find that this problem persists for a while even though you are making all the changes your vet recommended and you are using a Feliway diffuser. There may also be situations where you need to be extra careful with items that are brought into the home, such as furniture.

In these cases you can use Feliway spray to leave a scent on new objects that deters spraying:

- New furniture: unwrap new furniture and allow it to air in a room that the cats cannot access for at least a few days until any odd smells have gone away. Then thoroughly spray the furniture with Feliway and allow it to dry before the cats come into contact with it. Test Feliway on a small area before applying it all over.
- Bags, shoes, clothes etc: wherever possible put shoes in a cupboard and hang bags up so that cats cannot spray them. Spray these items with 2-3 squirts of Feliway as you bring them in, so that they are less likely to be sprayed by the cats.

Deterring indoor claw marking

Cats claw for a number of reasons, one of which is to leave a scent mark that deters other cats. Typically cats will use this kind of marking, often in combination with spraying, around points of entry into the house or some of its rooms. It may be acceptable, or even desirable, for the cat to leave claw marks in these places

as long as they do not cause damage and are not accompanied with urine marks.

To reduce claw marking you need to install scratching pads in the following places indicated by your vet

Follow the advice on the handout about claw marking. If scratching does not transfer to the new scratch pad places within 3 weeks, then you may need to use Feliway spray as a deterrent. Apply one or two squirts of the spray onto each of the places where you do not want the cat to scratch twice daily until scratching stops. This should happen within 2-3 weeks so if there is no response you must contact your veterinary surgeon.

Key points about using pheromone products
<ul style="list-style-type: none">• F3 diffusers must be used at a rate of 1 per 50-70m², in accordance with the manufacturer's instructions.• Diffusers should be left switched on at all times and must not be moved from room to room.• They should be installed strategically, one in each of the locations where individual cats or factions of cats spend time. Installing a single diffuser in a hallway between rooms will not generally produce an effect in the rooms.• When F3 diffusers are first installed the cats should be kept away from the diffuser for the first 2 hours to prevent them from spraying onto the diffuser. Being plastic, the diffusers will initially release a combination of smells that are undetectable to humans but that some cats may find objectionable.• If a diffuser becomes contaminated with urine it should be thoroughly cleaned, other wise it will release urine odours along with the F3. Some diffusers may need to be thrown away. • F3 spray can be used to spot mark new objects that are brought into the house [clothing, bags, new furniture].• F3 spray can also be used as a deterrent for scratch marking in the home: one squirt is applied daily to the claw marking location. An alternative claw marking location should be provided nearby.

Client handout 5: Use of Clomipramine (Clomicalm) for indoor marking and soiling

Clomipramine is sold as a branded product called Clomicalm. Clomipramine is an antidepressant drug that is used for treating behavioural problems in cats and dogs. It is only licensed for use in dogs, so you will need to sign an informed consent form for the drug to be used for your cat.

This is not because the drug is unsafe in cats, but because the market for using this kind of drug in cats is not large enough to justify the manufacturer paying for the costly licensing to enable them to make claims about the drug's efficacy.

The drug has been used extensively for the treatment of indoor marking and elimination problems in cats.

Clomipramine is used to reduce the rate of indoor marking behaviour in cats that spray as a result of stress. It is very effective but takes around one month to become effective. During the first week of use some cats become dull and lethargic but this soon passes.

The aim of using Clomipramine is to reduce stress for the cat for a period of time so that spraying is reduced and we can make changes to the environment to prevent the return of the problem. Clomipramine will not resolve problems on its own.

Typically Clomipramine is used in the following kinds of situations:

- Spraying is very severe or has been going on for more than a few months.
- Where there are signs of chronic stress or aggression between cats.
- Where one cat is so anxious that it is no longer confident to make use of its home environment [i.e. it is very nervous and hides a great deal].

This drug is usually used until we have seen *at least* 4-6 weeks without any spraying, and then the dose is gradually reduced.

Client handout 6: Securing your cat's indoor territory

The indoor part of your cat's territory is somewhere that it should feel safe and secure. In the wild, this 'core' part of the cat's territory is never invaded or overlooked by other cats because it is surrounded by an area of land that the cat patrols and scent marks in order to repel other cats.

Cats that are kept indoors all the time are not able to do this so they may feel very vulnerable if outside cats can look in at them through windows or glass doors. Even cats that do have outdoor access may not be able to maintain a suitable buffer distance that keeps other cats away from their home.

Typical signs that this may be a problem for your cat are:

- Your cat leaves urine around the house close to the windows, external doors or cat flap.
- Your cat is hesitant to go out of the cat flap
- Your cat spends very long periods of time watching other cats in the garden and is reluctant to go outside.
- You have found evidence that other cats are coming into your home or they hang around outside and intimidate your cats.

In order to make your cat feel safe and secure inside its home you need to make sure that other cats cannot come inside or look into your home from outside. It can take some time for your cat to realise that it is safe indoors, perhaps several weeks, but you may then see some big improvements in your cat's behaviour. Having a safe and secure home will enable your cat to develop more confidence in securing its own territory outside.

To make the home feel secure for your cat you should:

- Block sightlines where other cats sit on fences or windowsills and stare at your cats while they are inside. In some locations you may need to put tracing paper on the lower portion of windows to stop cats staring in.
- If your cats use a cat flap, replace it with an electronic one that only your cats can come into the house.
- If the door of the catflap is transparent, paint or cover it so that it is opaque, taking care not to damage the mechanism of the catflap.

Client handout 7: Improving your cat's home

Cats use and rely on their environment in a different way from other animals. The inside of the home should be considered the 'core' of the cat's territory. This is somewhere that your cat expects to feel safe and where it can eat, drink and rest in privacy away from any enemies. Cats also need to be able to climb up high to vantage points where they feel safe.

It is important to provide cats with a home that meets their needs, especially if you have several cats sharing the same home. Otherwise there is risk of your cats suffering from stress and behavioural problems like aggression, house soiling or indoor urine marking.

In almost all cases it is best to give your cat outdoor access but if your cat cannot go outside it is even more important to make sure that the indoor home environment is really suitable.

What are the signs of stress?

Stressed cats are often hard to spot because usually cats become quiet and withdrawn when they are unhappy.

Some typical signs of stress include:

Excessive grooming: This may result in bald or sore patches.

Lack of activity: Cats that stop playing become reluctant to move about or eat. When in close proximity to each other, the cats may move very slowly, as they are frightened of being chased or attacked.

Hiding: Your cat may spend most of its time hiding in the same place and will not come out to feed or interact.

Jumpiness: If your cat is jumpy and easily startled by movements or sounds this can be a sign of stress.

Wariness or fighting around resources: Your cat seems hesitant to approach cat-doors, food and toilets. When your cat is near to these places it may seem very nervous. There may be hissing and spitting when other cats approach.

A household full of very passive cats that seem to spend all their time sitting still and watching each other probably indicates a high degree of stress.

What do cats need?

The cat's basic needs are for:

- Space [including access to height].
- An abundance of resources [food, water, latrines, resting places].
- Opportunities to perform normal behaviour [hunting, clawing etc].

- Privacy
- Choice: the need to have alternative places to eat, rest, play and go to the toilet.

Space

Cats should be provided with lots of opportunity to climb and explore. For example shelves at different heights, cat furniture and access to the tops of cupboards and wardrobes.

Resources

Each cat needs several places to eat, drink, and rest. This gives them choice and means that cats that don't get along do not have to compete for the same toilet or food bowl. Enabling the cats to live separate lives actually increases the chances that they will live happily with each other.

Choice over resting places is particularly important because cats move from one place to another every few days so that they can avoid parasites like fleas.

Typically you should provide 1 toilet per cat +1 extra. This means 9 cat toilets for 8 cats! This is because in the wild cats do not share toilets and they prefer to have separate ones for pee and poo. Fortunately, it is possible to provide outdoor toilets for cats so that fewer indoor litter trays are needed.

Cats often don't drink enough water to keep their kidneys and urinary system healthy. They can be encouraged to drink more healthy amounts by providing them with a recirculating-type water fountain. These are available commercially and include a filter to remove impurities that cats don't like to taste. This makes the water more like rainwater. The water movement and provision of a running water slope make it much easier for the cat to drink.

Opportunities to perform normal behaviour

Clawing is often a problem because it is destructive and annoying for us as owners.

Further information about problem clawing is provided on another handout, but it is even more important to give cats opportunities to claw so that it does not become a problem in the first place.

Times when cats will tend to claw:

- To stretch back muscles after waking
- To mark boundaries of territory
- To sharpen claws

- To gain attention from their owners

Sensible places to position clawing posts are therefore:

- Close to where cats rest.
- Near to cat doors and at the edges of the garden.
- In living rooms close to furniture or the television [where the cat may claw to get attention or a reaction].

Cats have preferences for particular kinds of material to claw. Upholstered furniture is often used for claw sharpening and stretching. Soft wood is often scratched to leave a scent mark at a boundary. Experiment with providing the right surfaces to satisfy your cat's clawing needs. Encourage clawing by taking notice and praising your cat when it claws on an object that you want to be used for clawing.

Hunting and play are important for cats, especially in the early morning and evening. These are times when it is important to encourage interactive games using fishing toys, laser pointers and lightweight toys that can be rolled on the floor. *Never* encourage play that involves the cat playing with people's feet or hands because this can create problems of aggression especially for cats that are kept indoors.

At other times, the cat should be provided with a continually-changing selection of small lightweight toys to play with. Keep a selection of feathers, decorated ping pong balls, furry mouse toys and similar small items in a box. Scatter a selection of these toys around the house daily. Real fur toys are particularly good because they act as a focus for your cat's predatory behaviour.

Certain features of toys are very important:

- Noise: Toys that twitter or squeak when touched.
- Movement: Toys that move rapidly and unpredictably when they roll.
- Texture, size and colour: Bright colours, feathers, parts that sparkle or dangle, or toys that mimic real prey.

Typically cats get bored with play after about 10 minutes so don't expect your cat to play for long periods unless you keep changing the toy or game every few minutes. If your cat appears to be getting bored then switch to something else or move the toy in a different way to attract your cat's attention again.

In the wild, cats spend more than 6 hours every day hunting for, catching and eating their prey. In the domestic environment, all of this activity may be absent, especially for indoor cats. It is also known that well-fed cats continue to hunt wildlife but when they catch a bird or mouse they will take more time to kill it. This means that the wild animal's suffering is prolonged.

One way to replace this lost activity and reduce boredom is to provide your cat's food through activity feeding. Activity feeders force the cat to play in order to get food, and help reduce obesity and frustration, especially for indoor cats.

Activity feeders include:

Delidome [available from online retailers]: An electronic cat feeder that throws out small balls full of food every 1-2 hours for the cat to play with.

Empty plastic drinks bottles: perforated with food-pellet sized holes and part filled with dried cat food. The food falls out as the toy rolls along.

Food bowls placed high on shelves for the cat to find.

Activity box: Fill a box with crumpled newspaper and small toys. Hide small dried food treats for the cat to rummage and find [freeze-dried prawns and smelly fish treats work well.

Indoor play and activity feeding are obviously essential for indoor-only cats, but they also reduce the outdoor cat's interest in predatory behaviour, and can therefore save local wildlife from being killed.

Privacy

Privacy is partly provided by giving cats plenty of choice. If cats can choose to feed or rest away from each other they are more likely to get along well.

Some cats, especially those which are elderly or infirm, also like to have ground-level hiding places where they can run in and hide. Empty cat baskets or cardboard boxes are perfectly suitable.

The indoor part of the cat's territory is somewhere that the cat should feel secure. In the wild this 'core' part of the cat's territory is never invaded or overlooked by other cats because it is surrounded by an area that the cat patrols and scent marks in order to repel other cats. Indoor-only cats are unable to do this and they may feel very vulnerable if outside cats can look in at them through the windows. Even cats that do have outdoor access may not be able to maintain a suitable buffer distance that keeps other cats away from their home.

So it is important to block views from windows that are overlooked, perhaps close to places where your cat has urine marked or shown signs of aggression or fear in the past. This is easily achieved using 'glass etch spray' which is used to make bathroom windows opaque. Light still comes through but the cat cannot see clearly what is on the other side of the glass. Other cats tend to hang around less when there is no chance to threaten the indoor cat. Changes may also be made

outdoors to deter other cats from lurking and menacing your cat [see handout on improving the outdoor environment for cats].

The indoor territory should only be available to your own cat. To avoid problems of other cats entering the home, which can cause urine spraying or aggression between your own cats, it is best to fit an electronic cat flap with personalised coded collar keys that allow only your cats to enter.

Giving indoor housed cats some fresh air

Outdoor pen

Indoor cats should ideally be given access to an enclosed outdoor area. Free access is via a cat flap so that the cat can choose when it goes in and out. A well-designed pen should mimic the outside world as closely as possible, providing a multitude of tree trunks, toys, scratching posts and high-up resting places. Introduction to the pen should be gradual, perhaps involving play or searches for food treats. The cat must always be able to return to the house voluntarily.

Client handout 8: How to improve the outdoor environment for your cat

Cats control access to their territory using scent marks and by watching and threatening their enemies from vantage points that they spend time at around the edge of their territory. In order for the cats to do this, the garden must be filled with hiding and climbing places as well as places for scratching. Otherwise the cat may use vantage points in the home, and could start to scratch and spray mark inside.

Making improvements to the outdoor environment has several benefits:

- It increases the space available to your cats.
- It reduces competition for toilets, resting places and space within the home.
- It provides the cat with things to do so that it is able to carry out a wider range of its normal activities.
- The cat may stay closer to home because all of its needs are met locally.
- It enables the cat to successfully maintain the garden as territory, so that fighting with other cats is reduced.

Providing outdoor toilets

House-soiling problems tend to be worse in the winter, probably because the cat's outdoor toilets start to become difficult to use. Hard, frozen ground is difficult to dig and water logged soil is messy and unpleasant for the cat. Remember that cats are evolved from desert living ancestors so they naturally prefer to dig dry, light and sandy soil.

If you give your cat an outdoor toilet close to the house this will reduce your cat's need to have an indoor litter tray and can help to reduce the number of indoor litter trays needed if you have several cats. Outdoor toilets are easy to make and maintain. Your cat can use them all year round.

- Find a suitable location for the latrine, preferably at the edge of the garden, obscured by flowerbeds and bushes to give your cat some privacy.
- Dig a hole that is approximately 90 cm deep, and 90cm square.
- Fill the bottom 60cm of the hole with pea-sized gravel, to create drainage.
- Top up the hole with soft, white sand like that used in playgrounds. Don't use the orange sand used for building [also known as sharp sand].

- Once your cat is using the latrine regularly you can scatter a little earth over the top to help disguise it.
- Use a litter scoop to remove any faeces every couple of days, as you would with an indoor tray.
- Dig out and replace the sand every few months to refresh the latrine.

Sand latrines do not get wet or frozen and they give the cat an easily accessible toilet close to the house. This stops your cat from needing to travel away from your garden, and reduces the nuisance to neighbours. It is best to provide two of these outdoor toilets.

Scratching places

Cats tend to leave claw marks at the edge of their territory to keep other cats out. If you create some outdoor scratching places this will enable your cat to maintain its territory more effectively.

- These are simply made from softwood posts, which have been rubbed against existing scratching places to pick up claw marking smells.
- The surface is scratched with a wire brush to simulate scratch marks, as this often attracts further scratching.
- Position them around the edges of the garden.

Hiding places and vantage points

Your cat needs some easily-defended vantage points in the garden from which it can rest and watch the activities of other cats. For example:

- Fix shelves to fences and outside walls.
- Fit wooden platforms into trees.
- Clear shelves and windowsills in garden sheds so that the cat can sit on them.

Position these vantage points so that they face away from the house, otherwise invading cats may use them to stake out your cats home. Block the line of sight back to the house using the natural arrangement of trees and plants in the garden, or use pot plants, fences and other obstacles.

Some cats are hesitant to go out and will hang around the cat flap for long periods, or they will often rush in as if they are being pursued. These cats may benefit from having a few hiding places close to the exit of the cat flap. For

example, a few plant pots close to the cat flap so that your cat may hide rather than run inside.

This reduces the tendency for cats to spray around the interior walls close to the cat flap. It also means that your cat can sneak out into the garden without being watched by other cats.

If your garden is mostly a single open space with no planted borders or trees, then this can prove stressful for your cat. Your cat may find crossing such a large open space quite intimidating. Try to break up open spaces using plants, pots and garden furniture and provide hidden walkways around the edge of the garden for your cat to use.

Preventing access by other cats

In most cases cats are not very concerned when other cats cross their territory because it is normal for this to happen. Problems arise when other cats lurk in the garden, using their own vantage points to observe and threaten your cat in its own home or when it tries to enter the garden.

Guidance on how to deal with this in the home is included on a separate handout about improving the indoor environment for cats, but it is also possible to modify the garden to deter other cats.

Steps to take:

- Identify all vantage points other cats use to observe your cat in the home and garden.
- Block the view from these places: Plant shrubs or place planters and other obstacles to obstruct the view. For example, trellis fence can be erected at the top of a wall to stop cats from watching from a neighbour's garage or shed roof.
- Make vantage points uncomfortable for other cats to use: Knock long [8-10 cm], flat-headed nails into the top of wooden fences or posts, spaced about 4-6 cm apart to stop cats sitting there. They will still be able to walk along and stand, but not be able to lurk and threaten. Alternatively fix pieces of spiky plastic doormat or commercially available intruder-deterrent plastic spikes onto fences, posts and other places where cats sit.

Do not use broken glass or other hazardous deterrents, as they may injure cats very badly.

Client handout 9: Provide your cat with opportunities to claw

Claw marking has several functions:

- Stretching of back muscles after resting.
- Claw maintenance and sharpening.
- Scent marking, as a means of identifying territory to other cats.

It may also become a way for your cat to get your attention and cats will often claw the sofa right in front of you and then scamper out of the room waiting to be chased. Cats that carry out excessive clawing can become a nuisance, and there are various ways for dealing with the problem. For some individuals, claw marking becomes a problem during periods of stress. It will continue until the source of the tension is relieved.

Claw marking

The natural location for this is outside the house, as it is intended as a signal to other cats, to warn them to stay away. Many gardens don't have many good places for cats to claw mark but these can be easily provided. Install softwood posts at the edge of the garden or fix small sheets of softwood onto the corners of buildings, such as sheds, with the wood grain running vertically. To determine whether a piece of wood is suitable for your cat to claw, try making an indentation in it with your thumbnail. If an indentation is easily made and the wood grain is wide, then the wood is suitable. Don't apply wood preservative as this could be hazardous to cats and will deter them from clawing. As an alternative to softwood you can use lengths of natural tree-trunk that has a heavily grooved corky type of bark. It is important that the scratching posts are in clearly visible locations and not hidden out of the way. To attract the cat to scratch them you can rub them against existing scratch marking places so that they pick up some scent. To make them even more attractive scratch the surface with a wire brush to leave some vertical scratches that look like claw marks.

Clawing after resting

When cats wake up, they will often stretch against a piece of furniture, digging their claws in and then making a few scratching movements. There is no way to stop this behaviour so it is best to install a commercially available carpet or hessian covered scratching post nearby as an alternative. These can be made more attractive to the cat by marking them with heavy vertical black lines using a permanent felt marker, and then scratching the surface with a few vertical strokes of a wire brush.

Clawing to maintain claw sharpness:

Upholstered furnishings and stair carpets provide perfect opportunities for cats to sharpen their claws. They want a surface that will catch their claws and then pull

off any loose old nail as they wrench their claws out of the surface. Ordinary scratching posts may not provide the right kind of surface for this. Position a hessian or carpet covered post in front of the place the cat usually claws. If this does not attract the cat, then consider covering the post with a thick layer of blanket and then covering this tightly with heavy fabric. This will usually give the cat the kind of texture it is looking for. Choose a fabric that has a strong pattern of stripes and align these vertically, or use blank fabric and make some vertical marks on it with a permanent marker.

Clawing for attention

Cats often claw furniture in front of their owners as a means of getting some kind of reaction. This presents problems because the cat will rapidly learn that clawing the furniture continues to get a reaction but clawing the scratching post does not. It is therefore important to look at the cat and react when it claws the scratching posts you have provided in the house, but not when it goes to scratch a piece of furniture.

Deterring undesirable scratching

Once you have provided your cat with suitable places to scratch you can then use methods to deter scratching where you don't want it.

Preventing scratching of softwood [pine wardrobes, stair poles etc]

If the object has a varnished surface, rub down any existing claw marks and apply a treatment with commercially available 'wood hardener'. This is a kind of plastic that penetrates the wood and dries to make it very tough. Then apply several layers of high-grade varnish or gloss paint [according to the finish you desire] until the surface of the wood is very smooth and hard. Test this treatment on an inconspicuous section of wood to make sure that the appearance of the object will not be impaired, and allow the varnish to dry completely before allowing any cats to have access to the woodwork that has been painted. You can test the surface again with your thumbnail, and you should find that the surface is much harder, which will make it far less appealing to scratch.

If the object has a waxed surface, then it cannot be varnished unless the wax surface is stripped off. This will almost certainly damage it or change the appearance of the object. Instead, make up a mixture of solid furniture wax with a few drops of eucalyptus and citronella oil added. Apply this to the clawed area of wood as a polish. It will leave behind an odour that most cats find repellent. If this does not work, make up a preparation of solid furniture wax mixed with a few menthol crystals and several drops of eucalyptus oil and use this as a polish instead.

Soft furnishings

These can be temporarily protected with heavy grade polythene sheeting, which will make the surface unpleasant to scratch. This is left in place for several weeks

until the cat has switched all of its scratching to the posts and pads that have been provided.

Client handout 10: Resource Distribution and Availability

Cats are solitary hunters but they are able to live in groups as long as they have access to all of the things that they need. In the wild, cats eat at least 10 small meals each day, and they need to be able to patrol their territory at certain times of day in order to leave scent marks and confront other cats.

As a result of this there are certain things that cats often find very hard to cope with:

- Waiting for food.
- Eating at set meal times.
- Queuing for the use of a litter tray.
- Waiting to be let outside.
- Accepting the owner's control over their activities.

This is in stark contrast to dogs, which are fully able to accept the control of other members of their group, including human beings.

So, in order to reduce stress for cats we need to make sure that they have access to what they need without conflict either with us or the other cats in the household.

Within a house there may be one or more "factions" of cats. Within these groups the cats look after each other and will share access to certain resources and space. They may have their own favourite places in the house and they may be quite confrontational with cats that are not part of their group. This is normal behaviour for cats but it becomes a problem when two competing factions share a home. If these groups share a single feeding place in the kitchen then one group may monopolise the food or all the cats may be hesitant about how to gain access to it.

The answer is to give the separate factions their own places to feed, rest, drink and go to the toilet. In this way they can lead separate lives in the same home without conflict. This also means giving the cats back control over when they eat and gain access to certain parts of their territory.

General guidelines are:

- Provide access to food at all times [dried food preferably]. Keep food topped up rather than having set mealtimes.
- Increase the number of feeding and drinking places, situating them in areas where the cats tend to spend most of their time.

- Increase the number of resting areas available to the cats as well as their access to three-dimensional space within each room [places to climb and hide].

Give cats access to outdoor space without restriction [if it is safe to do so].

Client handout 11:
Providing suitable litter trays and discouraging inappropriate elimination

Cats have very specific requirements for the places they prefer to go to the toilet. These include:

- Privacy: cats prefer not to share toilets with other cats and do not like to be disturbed whilst going to the toilet.
- Substrate: Cats prefer certain kinds of material to go to the toilet on.
- Dedicated latrines: cats prefer not to use the same toilet for pee and poo.

We can make use of this information when we want to provide cats with a suitable toilet as well as when we want to discourage them from using the wrong places.

Before we begin to use deterrents we must make sure that we have provided the cats with a suitable set of toilet facilities, otherwise we will just move the house-soiling to another equally undesirable place.

Indoor litter trays

Cats do vary in their preferences, but here is a general indication of what cats would regard as an ideal litter tray:

- Deep sided and large enough for the cat to turn around in.
- Filled to a depth of at least 3 cm with a dry, soft mineral based litter [not wood chips, or litter made from wood pulp or scented. You may try using soft white sand or a 50% mixture of litter + sand as this is more attractive to some cats.
- Position the tray in a quiet place where the cat will not be disturbed.
- Try having litter trays open and covered to see which your cat prefers. To test this, cover one tray with a large cardboard box with a hole in the side.

Typically we need to provide one litter tray per cat plus an extra tray. This can mean a lot of litter trays but you can also add outdoor latrines too.

Providing outdoor toilets

House-soiling problems tend to be worse in the winter, probably because the cat's outdoor toilets start to become difficult to use. Hard, frozen ground is difficult to dig and water logged soil is messy and unpleasant for the cat. Remember that cats are evolved from desert living ancestors so they naturally prefer to dig dry, light and sandy soil.

If you give your cat an outdoor toilet close to the house this will reduce your cat's need to have an indoor litter tray and can help to reduce the number of indoor litter trays needed if you have several cats. Outdoor toilets are easy to make and maintain. Your cat can use them all year round.

- Find a suitable location for the latrine, preferably at the edge of the garden, obscured by flowerbeds and bushes to give your cat some privacy.
- Dig a hole that is approximately 90 cm deep, and 90cm square.
- Fill the bottom 60cm of the hole with pea-sized gravel, to create drainage.
- Top up the hole with soft, white sand like that used in playgrounds. Don't use the orange sand used for building [also known as sharp sand].
- Once your cat is using the latrine regularly you can scatter a little earth over the top to help disguise it.
- Use a litter scoop to remove any faeces every couple of days, as you would with an indoor tray.
- Dig out and replace the sand every few months to refresh the latrine.

Sand latrines do not get wet or frozen and they give the cat an easily accessible toilet close to the house. This stops your cat from needing to travel away from your garden, and reduces the nuisance to neighbours. It is best to provide two of these outdoor toilets.

Once the cat is regularly using the litter trays you can use deterrent methods to stop the cat from using the wrong places.

Here are some suggestions:

- Cover the location with thick polythene: urine will then drain towards the cat's feet when it is standing on the sheet.
- Cover the location with a large sheet of silver foil: some cats do not like to stand on this.
- Apply strips of double-sided sticky tape to either of the above to make them even more repellent.
- Place small bowls of food on top of the latrine sites, so that they become feeding stations. Cats are usually reluctant to urinate near sources of food.

- Illuminate dark corners with a bright spot lamp so that any privacy is taken away. The same effect can be achieved using a small, battery powered infra-red activated lamp, which will turn on each time the cat approaches [these can be obtained inexpensively from electronic stores].

Client handout 12: Multi-cat households

Do cats like to live alone?

If you have a single, happy cat that has outdoor access and plenty of toys and resting places in the home, there is no reason to provide other cats as play mates. It is important to remember that cats are solitary hunters and they do not need to associate with other cats in order to survive. This means that cats can live alone perfectly happily. Provided that they have a sufficient supply of safe territory, food, shelter, affection from their owners and opportunities to play and exercise, then they will cope very well. Your cat is free to mix with cats outside and, if it is a sociable individual, it can find friends there. If, however, your cat is not particularly sociable then it can avoid other cats and live a happy life alone. Some cats definitely prefer to have their own home, without other cats in it, so it is important to think carefully before getting another cat.

When is it best not to have several cats?

Some urban areas have a very high population density of cats and adding extra ones simply causes more tension and stress for all of them. Your own cats may not be able to carve out their own territory and could end up living indoors because they are too frightened to go outside.

If you intend to keep several cats indoors, without outside access, this can also cause problems. You will need to adapt the house to provide the cats with space and a whole host of resources and activities to save them from becoming bored or stressed by the absence of privacy from other cats.

Is it best to take on two cats at the same time?

In the wild, cats do often live in groups, but these mainly consist of related adult females and immature cats. They are extremely intolerant of outsiders and unwilling to live with a cat they are not related to. So if you want two cats to live together it is best to get them as littermates. If you are unable to get two littermates you can raise very young kittens as if they were from the same litter, provided that you take them on at a very early age i.e. before they are seven weeks old.

Introducing a new cat into a household

If you do decide to take on an adult cat or older kitten as an additional cat in a multi-cat household, then you must introduce the new cat very carefully.

What kind of cat makes a good second or additional cat?

Research has shown that resident adult cats are more likely to accept the introduction of a new cat if it is much younger than them. They are far more intolerant of same-aged or older new cats. Research also suggests that resident cats are more likely to tolerate a new cat of the opposite rather than the same sex and that, in cases of same sex pairs, two males are slightly more likely to be compatible than two females. Some older cats do feel intimidated by kittens, as

they may feel unable to stand up to physical play. So, getting two young kittens reduces the pressure on the older cat because the kittens can play together.

Replacing a housemate after an accident or illness

Friendships between cats are unique and individual and they cannot be replaced by bringing in a new cat. If a pair of littermates has been raised together, their bond is particularly strong and irreplaceable. The remaining cat may experience genuine grief and may search for and call out to the missing one. This kind of grieving can go on for several months and is certainly not a good time to bring in another cat. Any new cat may be met with intense hostility. Even if the new cat is introduced well after grieving has ended, the bond is unlikely ever to be as strong as between the previous pair.

Successful integration of new cats

Apart from introducing the new cat correctly, it is important to make sure that the resident cats have plenty of the resources they need so that they feel comfortable to coexist without competition.

The number of existing feeding sites in the home may be just enough for one or two cats but not when third or fourth cat is introduced. Each cat needs its own share of feeding, resting, drinking and toilet places. Much like people, cats get along best when they have their own privacy. Greater access to height through the use of cat furniture, shelves and places to climb, will allow the cats a greater amount of usable space even though the floor area of the house is limited.