
Breed-specific Breeding Strategies

2017 IDHW – follow-up

Version 5: September 2018

Purpose of this document

- To propose a set of definitions and terminology that can be used for developing frameworks for breed improvement
 - To summarise the currently available frameworks that breeds can use to plan for improvement
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Acknowledgements

- The content of this document is based on inputs from:
 - Brenda Bonnett
 - Katy Evans
 - Gregoire Leroy
 - Helena Skarp
 - Ian Seath
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Background

- There are examples of [Breed-specific Breeding Strategy documents \(e.g. RAS, JTO\)](#) which provide good starting templates for others to use
 - [FKC Breeding Strategy TEMPLATE for Breeds with Large Populations](#)
 - [Norwegian Kennel Club RAS TEMPLATE English](#)
 - The UK KC also has a Strategy Guide ([The Kennel Club Breed Health Improvement Strategy - A Step by Step Guide](#)) with template examples and now has [Breed Health and Conservation Plans](#)
 - A range of terminology is already in use; we should aim to harmonise, rather than standardise, so that everyone has a common understanding of what is being done
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3 Levels for planning and improvement

- **Breed**

- This addresses the structure of the population (nationally and internationally)
- It includes a breed-wide view of health conditions (diseases), longevity, temperament, conformation and working ability (where relevant)
- It focuses on the objectives and strategies to safeguard and improve the future of a breed

- **Health Condition/Disease**

- This addresses specific plans and tactics for dealing with individual health conditions (or behavioural issues)
- It focuses on screening and testing programmes available to reduce the risks of perpetuating problems and of breeding affected puppies

- **Kennel/Dog**

- This addresses the individual choices a breeder makes when planning matings
 - It focuses on actions taken to maximise the chances of breeding typical, healthy and temperamentally sound puppies
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Terminology currently in use

Level	Terminology in use	Comments
Breed	<ul style="list-style-type: none">• Breed-specific Breeding Strategies (Sweden, Finland, Norway)	Also described as “Breeding Strategy” and abbreviated as RAS (Swe/Nor); JTO (Fin)
	<ul style="list-style-type: none">• Breed Health and Conservation Plans (UK)	Also referred to as Breed Health Improvement Strategy in the KC’s Strategy Guide (2012)
Health condition/ disease	<ul style="list-style-type: none">• Health Plan (UK)	Ref. KC Strategy Guide (2012)
Kennel/Dog	<ul style="list-style-type: none">• Breeding Plan	

Definitions

- A strategy is an action plan with a rationale
 - A strategy for a breed may include any, or all, of the following:
 - disease, longevity, genetic diversity, conformation, temperament, working ability
 - A strategy for a breed is broader than a plan for addressing a particular health issue
 - Plans for dealing with diseases may be called “health plans”
 - A strategy for a breed includes plans for implementation, including:
 - Changing owners’ and breeders’ behaviours
 - Data collection, analysis and monitoring
 - Demand-side (buyer) actions
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Prioritisation

- It is likely that there will be several issues within a breed, which will mean it will be difficult to handle them all at the same time
 - Some priorities may need to be agreed, based on a series of criteria to be weighted and scored
 - Key criteria to be considered:
 - Severity of the issue/disorder: consider the consequences, complications as well as difficulties of prognosis and treatment - see for instance the [Generic Illness Severity Index for dogs](#) (Asher et al. 2009).
 - Occurrence of the issue/disorder: consider the prevalence within the breed, within and outside the country
 - Feasibility for change: what are the opportunities for intervention (e.g. [genetic test available](#)), are the stakeholders aware and ready to participate?
 - What is the potential cost/availability of funding?
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Breed-specific Breeding Strategy templates

- A Strategy document is the tangible output of work done by a Kennel Club and/or breed club/group to define its position, identify improvements and set out its plans
 - There are good examples of strategy documents (e.g. [RAS](#), [BHCP](#)) which provide starting templates for others to use
 - The UK has a [Strategy Guide](#) with template examples
 - **We should create a generic template which we feel provides good practice and which is scalable for use by any breed**
 - Breeds would choose which elements to include or exclude, depending on their starting point and needs
 - Examples of current strategy documents should continue to be shared via dogwellnet.com
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Review of Strategy documents

- The following slides summarise a review of a selection of Strategy documents available from Sweden, Norway, Finland and the UK
 - They show the typical components mentioned in these documents
 - Note: components included in breeding strategies vary by country and by breed - if a given breed strategy document didn't include a component, that does not mean the component isn't something that might be included for a different breed's strategy.
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Common Strategy elements (1)

Current situation	Sweden	Norway	Finland	UK
Breed history (background and development)	✓	✓	✓	
Breed Standard (purpose, appearance, temperament)	✓			
Demography (registrations, country & international, show/working)	✓	✓	✓	✓
Population genetics (EPS, COI, Inbreeding Trends, Popular Sires, Imports)	✓	✓	✓	✓
Behaviour, temperament and working ability		✓	✓	
Health conditions (Morbidity – prevalence, impact; Screening/DNA tests)	✓	✓	✓	✓
Longevity (Mortality – age/cause of death)	✓			✓
Conformation (exaggerations)	✓	✓		✓
Reproduction (Fertility, Problems, Avg. Litter size)	✓	✓	✓	X
Organisation (Breed Council/Clubs, Health Committee)				✓

Common Strategy elements (2)

Objectives and plans	Sweden	Norway	Finland	UK
Priorities - summary	✓	✓	✓	✓
Short-term objectives (Goals) and plans to achieve these	✓	✓	✓	✓
Long-term objectives (Goals) and plans to achieve these	✓	✓	✓	
Recommendations for Kennel Club(s)				X
Recommendations for Breed Councils/Clubs	✓	✓		✓
Recommendations and guidance for breeders	✓	✓	✓	
Recommendations and guidance for judges	(✓)		✓	
Recommendations and guidance for others (e.g. vets, researchers)				
Recommendations and guidance for owners	✓		✓	
Recommendations and guidance for buyers				

Common Strategy elements (3)

Supporting documents/Source information	Sweden	Norway	Finland	UK
Breed Health Surveys	✓			✓
Veterinary consultation databases (e.g. VetCompass)				✓
Insurance Data	✓			✓
Published Research/Literature Review	✓			✓
Kennel Club Monitoring (e.g. at shows)	✓			✓
Feedback from judges	✓			✓
Show/Working Gradings/Assessments	✓			
Registration Statistics	✓			✓
Health Screening/DNA Testing Schemes (KC recognised and non-recognised)	✓			✓
Breed Club Health Schemes (e.g. Gold/Silver/Bronze)				✓
References				✓

Generic Breed-specific Breeding Strategy template

- The following template is a suggestion for content areas that may need to be included in a breed's strategy document
 - Each breed will need to decide which elements are required and which can be omitted
 - The structure of the document may also vary to meet each Kennel Club's or breed's local preferences
 - Since the "Current status of the breed" is likely to be the largest section, it may be appropriate to subdivide the document into the separate headings
 - It may also be appropriate to include objectives and plans directly alongside each of the "current status items", rather than have a separate section for these
 - (See templates 1 & 2)
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Generic Breed-specific Breed Strategy Template (1)

Introduction	<ul style="list-style-type: none">• Summarise the purpose of the Breed-specific Breeding Strategy, how it was created and how it should be used.
History of the Breed	<ul style="list-style-type: none">• Describe its origin and function. Explain how this compares with its current ownership and function.• Explain how its appearance relates to its function.• Describe its temperament and behavioural characteristics.• Summarise the registration statistics and trends for the past 10 years.
Current status of the breed	<ul style="list-style-type: none">• Explain any concerns related to the conformation of the breed and how these affect its health or fitness for purpose.• Summarise data from published research and health surveys to identify the most significant diseases that affect the breed (e.g. morbidity, mortality, longevity, prevalence, severity).• Explain any concerns related to the temperament or working ability of the breed.• Summarise data related to genetic diversity of the breed (e.g. COI, EPS, litter size).• List available screening programmes and/or DNA tests and the evidence for their value in improving the breed.• Summarise any current research programmes that are underway and their purpose and timescales.
Objectives and Plans	<ul style="list-style-type: none">• List the specific objectives for addressing any concerns described in the “Current Status” section.• Explain any priorities and the criteria used to define these.• Explain the plans that are in place to achieve the objectives. This should include who is responsible for implementing the plans and any funding required to enable this.• Explain when and how progress towards the objectives will be reviewed, assessed and updated.
Breeding Recommendations	<ul style="list-style-type: none">• Summarise the recommendations for anyone breeding puppies. This might include details of screening programmes, DNA tests, advice on Coefficients of Inbreeding, use of EBVs, limits on numbers of litters etc.
Breed-specific Judging Guidance	<ul style="list-style-type: none">• Explain the aspects of the breed that judges are expected to take account of at conformation shows, working trials (or other events), together with actions they are expected to take to protect the health of the breed.

Generic Breed-specific Breed Strategy Template (1)

Possible Appendices:	<ul style="list-style-type: none">• Breed Standard (this may include an illustrated version)• Breed Club Code of Ethics• Health Schemes (e.g. Screening, DNA and/or breed-specific schemes)• Genetics of known health issues• Working (and other) tests• KC Registration trends• Genetics of coats and colours• References to research studies/papers
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Notes:

This is a suggestion for content areas that may need to be included in a breed's strategy document. Each breed will need to decide which elements are required and which can be omitted. The structure of the document may also vary to meet each Kennel Club's or breed's local preferences.

Since the "Current status of the breed" is likely to be the largest section, it may be appropriate to subdivide the document into the separate headings.

It may also be appropriate to include objectives and plans directly alongside each of the "current status items", rather than have a separate section for these. See template example 1, below.

Generic Breed-specific Breed Strategy Template (2)

Introduction	<ul style="list-style-type: none"> Summarise the purpose of the Breed-specific Breeding Strategy, how it was created and how it should be used. 		
History of the Breed	<ul style="list-style-type: none"> Describe its origin and function. Explain how this compares with its current ownership and function. Explain how its appearance relates to its function. Describe its temperament and behavioural characteristics. Summarise the registration statistics and trends for the past 10 years. 		
Current status of the breed	<ul style="list-style-type: none"> Explain any concerns related to the conformation of the breed and how these affect its health or fitness for purpose. Summarise data from published research and health surveys to identify the most significant diseases that affect the breed (e.g. morbidity, mortality, longevity, prevalence, severity). Explain any concerns related to the temperament or working ability of the breed. Summarise data related to genetic diversity of the breed (e.g. COI, EPS, litter size). List available screening programmes and/or DNA tests and the evidence for their value in improving the breed. Summarise any current research programmes that are underway and their purpose and timescales. 	Objectives and Plans	<ul style="list-style-type: none"> List the specific objectives for addressing any concerns described in the “Current Status” section. Explain any priorities and the criteria used to define these. Explain the plans that are in place to achieve the objectives. This should include who is responsible for implementing the plans and any funding required to enable this. Explain when and how progress towards the objectives will be reviewed, assessed and updated.
Breeding Recommendations	<ul style="list-style-type: none"> Summarise the recommendations for anyone breeding puppies. This might include details of screening programmes, DNA tests, advice on Coefficients of Inbreeding, use of EBVs, limits on numbers of litters etc. 		
Breed-specific Judging Guidance	<ul style="list-style-type: none"> Explain the aspects of the breed that judges are expected to take account of at conformation shows, working trials (or other events), together with actions they are expected to take to protect the health of the breed. 		

Possible Appendices:

- **Breed Standard (this may include an illustrated version)**
- **Breed Club Code of Ethics**
- **Health Schemes (e.g. Screening, DNA and/or breed-specific schemes)**
- **Genetics of known health issues**
- **Working (and other) tests**
- **KC Registration trends**
- **Genetics of coats and colours**
- **References to research studies/papers**

Objectives and actions

Examples

The language of breed improvement



May also be called...	Examples...
Goals	Reduce the prevalence of... Increase the number of... Increase awareness of...
Guidance	Advocate openness... Encourage participation in... Promote breeding with... Avoid using dogs with...
Plans, Tactics	Produce educational resources for... Conduct a survey of... Run seminars for... Provide subsidies for... Raise funds to...

Objectives and actions

- Objectives describe what must be achieved
 - They are about performance improvement, not activity
 - They usually include the words: “increase”, “reduce” or “improve”
 - Actions describe the work that needs to be done in order to achieve the Objectives
 - They are about activity and form the basis of a plan that can be implemented
 - Somebody (or some organisation) should be identified as being responsible for making the activity happen
 - Actions are more likely to be taken if they have a start date and an end date!
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Example objectives and actions

Objectives: Genetic Diversity	Actions
Increase the number of registered dogs	Promote interest in the breed through social media campaigns
Increase the number of imports and exports	Recommend foreign litters via puppy enquiries database
Increase the numbers of dogs and bitches used for breeding	Recommend a restriction on the number (or %) of litters per breeding dog Provide a database of stud dogs Recommend stud dogs from foreign database via enquiries Promote the use of older dogs for breeding Set a minimum age for breeding (may differ between dogs & bitches) Avoid repeat matings in individual breeding programmes
Maintain a low level of inbreeding	Set targets for COI Calculate COI for every planned mating
Increase the number of show/working merit dogs used for breeding	Provide breeding advice to potential breeders Promote showing/working to owners

Example objectives and actions

Objectives: Health	Actions
Reduce the frequency of X condition	Adopt X Screening Programme Adopt X DNA test Recommend breeding advice based on Screening/DNA Testing/EBVs Recommend breeding advice for close relatives of those dogs screened/tested Remove “affected” or symptomatic dogs from the breeding population Promote the use of older dogs for breeding
Reduce unreported cases of X condition	Encourage reporting cases of X condition (increase awareness)
Reduce the risk of diseases of known hereditary origin (where no screening/test exists)	Set targets for COI Calculate COI for every planned mating Promote the use of older dogs for breeding Carry out research to develop a Screening Programme or DNA Test
Reduce the risk of diseases caused by conformational exaggerations (where no screening/test exists)	Remove “extreme” dogs from the breeding population Prioritise less “extreme” dogs for breeding
Reduce the number of Caesarean births	Prioritise breeding with bitches with natural whelping capability

Example objectives and actions

Objectives: Conformation	Actions
Reduce exaggerations which adversely affect a dog's health, welfare or quality of life	Provide specific education and training to breeders, owners and judges Promote showing/working to owners Require judges to report concerns about exaggerations Amend the Breed Standard Produce illustrated Breed Standards to show acceptable and exaggerated conformation
Reduce demand for dogs with exaggerated conformation	Provide education to owners and buyers (Breed Club website, Social media)

Example objectives and actions

Objectives: Behaviour and Temperament	Actions
Reduce the prevalence of untypical or undesirable behaviour in the breed	Conduct (regular) Breed Temperament & Working Ability tests Promote participation in Temperament & Working Ability tests Conduct a survey of temperament and behaviour Prioritise breeding from dogs with acceptable temperaments Require judges to report behaviour/temperament issues Promote participation in “Canine Good Citizen” programmes

Example objectives and actions

Objectives: Research	Actions
Increase the quality and quantity of breed health data	Conduct (regular) Breed Health Surveys (& report results) Establish a system for reporting Mortality (age and cause of death) Promote participation in research into specific health conditions

Example objectives and actions

Objectives: Ownership	Actions
Improve the quality of life of dogs through improved husbandry (owner care)	Create a website with advice for owners and buyers Communicate good husbandry practices via Social media Create and promote a Health Scheme for owners (Gold/Silver/Bronze)

Links in this document

Breed-specific Breeding Strategy documents (e.g. RAS, JTO)

- <https://dogwellnet.com/breeds/additional-breed-resources/breeds-with-summaries-of-swedish-kc-finnish-kc-or-norwegian-kc-breeding-strategies-r179/>
- [FKC Breeding Strategy TEMPLATE for Breeds with Large Populations](#)
 - <https://dogwellnet.com/files/file/348-fkc-breeding-strategy-template-for-breeds-with-large-populations/>
- [Norwegian Kennel Club RAS TEMPLATE English](#)
 - <https://dogwellnet.com/files/file/349-norwegian-kennel-club-ras-template-english/>

The Kennel Club Breed Health Improvement Strategy - A Step by Step Guide) with template examples

- <https://dogwellnet.com/files/file/73-the-kennel-club-breed-health-improvement-strategy-a-step-by-step-guide/>

Breed Health and Conservation Plans

- <https://dogwellnet.com/files/file/397-the-kennel-club-breed-health-conservation-plan-example-template-bhcp/>

Generic Illness Severity Index for dogs (Asher et al. 2009)

- <https://dogwellnet.com/files/file/157-inherited-defects-in-pedigree-dogs-parts-1-and-2/>

genetic test available

- HGTD: <https://dogwellnet.com/ctp/>
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