

# Animal Welfare Assessment Grid (AWAG) User Guide

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## Login

You can log onto the system using one of two methods:

1. Active Directory account

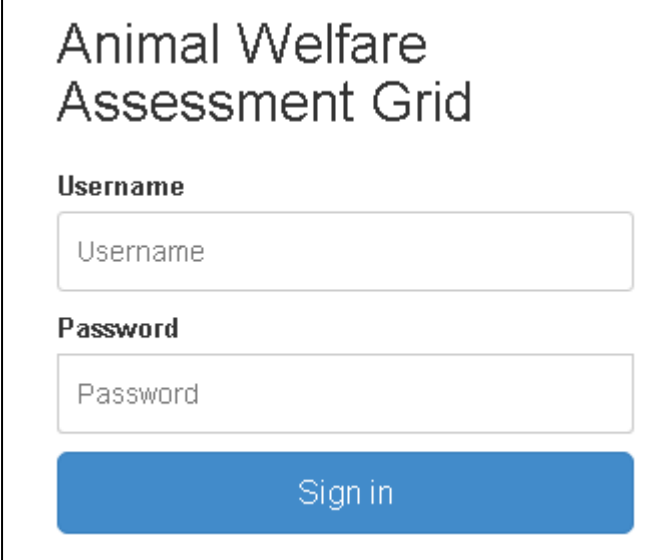
If the system is set up to use your organisation's Active Directory as the authentication system then the user account details will be supplied by your IT department.

## 2. Basic login

The username and passwords are held in a database and the defaults set to the following:

Username: admin

Password: adminadmin



The screenshot shows a login interface for the 'Animal Welfare Assessment Grid'. It features a title at the top, followed by labels for 'Username' and 'Password'. Below each label is a text input field containing the placeholder text 'Username' and 'Password' respectively. At the bottom of the form is a blue 'Sign in' button.

## Navigation

Once you have logged in, you can navigate around the system using the menu on the left hand side.

Animal Welfare Assessment Grid
<a href="#">New Animal Assessment</a>
<a href="#">Existing Animal Assessment</a>
<a href="#">Graphs</a>
<a href="#">Export Animal Assessments</a>
<a href="#">Manage Animals</a>
<a href="#">Manage Studies/Study Groups</a>
<a href="#">Manage Species</a>
<a href="#">Manage Reasons</a>
<a href="#">Manage Housing</a>
<a href="#">Manage Sources</a>
<a href="#">Manage Scales</a>
<a href="#">Manage Factors</a>
<a href="#">Manage Parameters</a>
<a href="#">Manage Templates</a>
<a href="#">Activity Logs</a>
<a href="#">Manage Users</a>

## Recommended Parameters and Factors

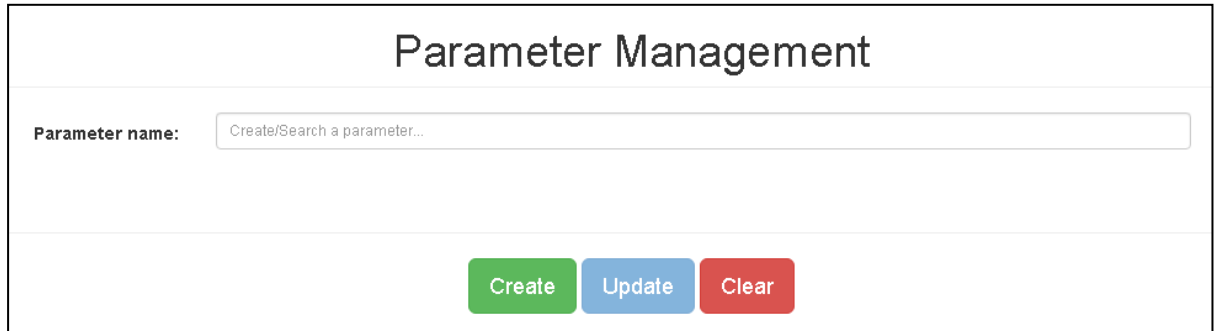
In order to carry out assessments for an animal, you must first create parameters and factors and apply them to a template.

Appendix 1 lists the recommended parameters and factors to use as described in the publication: Wolfensohn SE, Sharpe S, Hall I, Lawrence S, Kitchen S, Dennis M. (2015) 'Refinement of welfare through development of a quantitative system for assessment of lifetime experience'. *Animal Welfare*, 24, pp. 139-149.

## Parameter management

To create parameters:

1. Select 'Manage Parameters' from the menu.

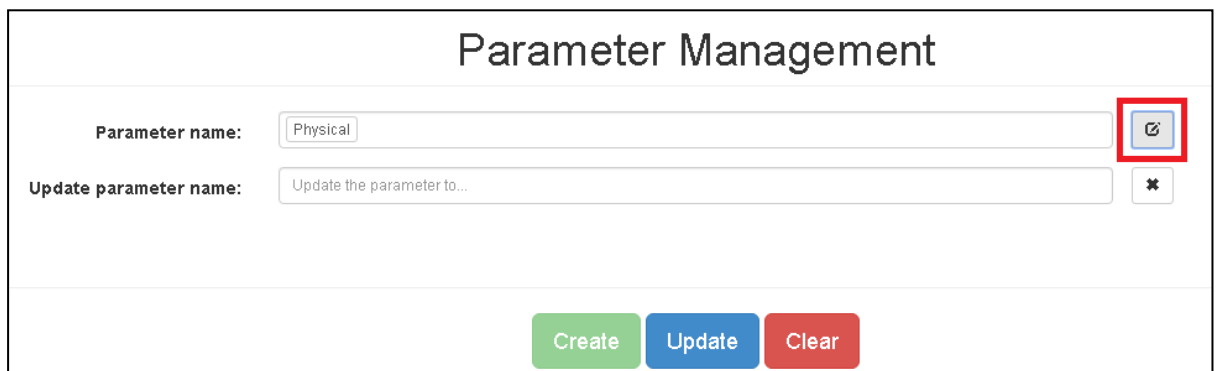


The screenshot shows the 'Parameter Management' interface. At the top, the title 'Parameter Management' is centered. Below it, there is a label 'Parameter name:' followed by a text input field containing the placeholder text 'Create/Search a parameter...'. At the bottom of the interface, there are three buttons: 'Create' (green), 'Update' (blue), and 'Clear' (red). The 'Create' button is highlighted with a red box.

2. Enter a parameter name into the input box.
3. To store this parameter in the database, press enter or select it and then press create.

Parameters can also be edited by looking them up and then renaming them.

4. Press the 'Edit' button the right of the select box.



The screenshot shows the 'Parameter Management' interface. At the top, the title 'Parameter Management' is centered. Below it, there is a label 'Parameter name:' followed by a text input field containing the text 'Physical'. To the right of this input field is a small square button with a pencil icon, which is highlighted with a red box. Below this, there is a label 'Update parameter name:' followed by a text input field containing the placeholder text 'Update the parameter to...'. To the right of this input field is a small square button with a cross icon. At the bottom of the interface, there are three buttons: 'Create' (green), 'Update' (blue), and 'Clear' (red).

5. Start typing an existing parameter name into the select box and select it.
6. Enter the new parameter name in the 'Update parameter name' input box and select it or press 'Enter'. You can cancel the update by pressing the cross button next to the input or pressing 'Clear'.

## Factor management

Factors are the granular scoring mechanism used to measure an animal's welfare. In the AWAG system, many factors are assigned to a parameter but first you must create them. They are created and edited in the same way as parameters are. You can access the factor management screen by selecting 'Manage Factors' from the main navigation menu.

## Factor Management

**Factor name:**

## Scale management

A scale will be used as a measurement for all factors in a template; an example being a value ranging from 1 to 10.

1. Select 'Manage Scales' from the navigation menu.

## Scale Management

**Scale name:**

**Scale min:**

**Scale max:**

2. Enter the name for the scale

## Scale Management

**Scale name:**

**Scale min:**

**Scale max:**

3. Enter the minimum and maximum values used to score a factor and then press 'Create'.

## Scale Management

Scale name:

Scale min:

Scale max:

CreateUpdateClear

4. You can edit a scale by selecting the scale name using the input box, editing the values and then pressing 'Update'.

## Scale Management

Scale name:

Update scale name:

Scale min:

Scale max:

CreateUpdateClear

## Template management

Once you have entered all of your parameters and factors in the system, you can start to create a template. The role of a template is to link parameters with factors. This will be applied against an animal so that assessments for the animal can be carried out.

1. Select 'Manage Templates' from the navigation menu.

Template management

Template basic info

Template name: Create/Search a template...

Scale name: Search for a scale...

Create Update Clear

Template parameters

2. Add a template name into the 'Template name' input box and select it.

Template management

Template basic info

Template name: Animal Welfare

Scale name: Animal Welfare

Create Update Clear

Template parameters

3. Enter the scale name to use for the template and then click create.

Template management

Template basic info

Template name: Animal Welfare

Scale name: 1

Create Update Clear

Template parameters

The second panel in the template management screen is used to create relationships between parameters and factors.

4. Enter the parameter name that you have previously stored in the system and select it.

5. Enter one or more factors that you have previously stored in the system; these will be mapped to the parameter.

6. Press 'Add Parameter' to create the relationship.

## Species and source management

Before an animal can be stored in the system you must create a species and source to apply against it. These two screens operate the same as the parameter and factor management screens. Enter 'Species' and 'Source' names and press 'Create'.

## Animal management

To create and/or edit animals select 'Manage animals' from the navigation panel.




## Animal management


**Animal number:**

Create/Search an animal...

**Date of birth:**

Select a date...

**Sex:**

Select a sex...

**Species:**

Search for a species...

**Source:**

Search for a source...

**Dam:**

Search for a dam...


**Father:**

Search for a father...

**Assessment template:**

Search for a template...

**Is alive?**

Select alive...

Create


Update

Clear

Remove

1. Add the name of the animal in the 'Animal number' input box.
2. Select the date of birth of the animal using the date selection input box.
3. Add the sex of the animal using the drop down menu.
4. Add the species of the animal created in the previous section.
5. Add the source of the animal created in the previous section.
6. Add the dam and father of the animal; these can be left blank if not known.
  - a. Dam and father entries are created in the same way as for any other animal in the system. You can create a child, then its parents and after that go back and edit the child's details to include the parents.
7. Apply a template to an animal using the 'Assessment template' input box.
8. Select whether the animal is alive or not from the 'Is alive' drop down box.
9. Press 'Create' to add the animal into the system.

## Animal management

<b>Animal number:</b>	<input type="text" value="✖ A100"/>
<b>Date of birth:</b>	<input type="text" value="03-02-2016"/> 
<b>Sex:</b>	<input type="text" value="Male"/> ▼
<b>Species:</b>	<input type="text" value="✖ Cyno"/>
<b>Source:</b>	<input type="text" value="✖ Asia"/>
<b>Dam:</b>	<input type="text" value="Search for a dam..."/>
<b>Father:</b>	<input type="text" value="Search for a father..."/>
<b>Assessment template:</b>	<input type="text" value="✖ Animal Welfare"/>
<b>Is alive?</b>	<input type="text" value="YES"/> ▼


Create Update Clear Remove

## Study and study group management

Animals can be sorted into studies and study groups. Animals are added to study groups, which are in turn added to a study. A study can contain zero or more study groups. An animal does not have to be part of a study to be assessed in the system.


The system allows for animals to be part of more than one study but not at the same time.

1. Select 'Manage Studies/Study Groups' from the navigation menu.
2. Enter a study group name into the 'Study group name' input box.

Study group management


<b>Study group name:</b>	<input type="text" value="Main study group"/>
<b>Study group animals:</b>	<input type="text" value="Main study group"/>

Create Update Clear

Study management


3. Enter one or more animals already stored in the system by searching/selecting animals using the 'Study group animals' input box, then press submit.

The screenshot shows a web form titled 'Study group management'. It has a header bar with the title and a dropdown arrow. The form contains two input fields: 'Study group name:' with a dropdown menu showing 'Main study group', and 'Study group animals:' with a text input containing 'A100 A200 a|'. Below the text input is a dropdown menu showing 'A300'. At the bottom of the form are three buttons: 'Create' (green), 'Update' (blue), and 'Clear' (red). Below the form is a footer bar with the text 'Study management' and a right-pointing arrow.

4. Create a study by adding a study name and selecting the study groups you would like to add to it.

The screenshot shows a web form titled 'Study management'. It has a header bar with the title and a dropdown arrow. The form contains three input fields: 'Study name:' with a dropdown menu showing 'Main Study', 'Study study groups:' with a text input containing 'Ma', and 'Open study:' with a checkbox that is checked. Below the text input is a dropdown menu showing 'Main study group'. At the bottom of the form are three buttons: 'Create' (green), 'Update' (blue), and 'Clear' (red).

## Reason and housing management

Reason and housing can be created and edited using the same method described in the parameter and factor management screens. They can also be created at the same time as the assessment is being carried out for an animal.

The screenshot shows a web form titled 'Reason Management'. It has a header bar with the title. The form contains one input field: 'Reason name:' with a text input containing 'Health check up|'. Below the text input is a dropdown menu showing 'Health check up'. At the bottom of the form are three buttons: 'Create' (green), 'Update' (blue), and 'Clear' (red).

## Housing Management

Housing name:

[Main housing](#)

Create
Update
Clear

### Assessing an animal

1. Select 'New Animal Assessment' from the main navigation panel.
2. Select the animal to create an assessment for.

## Animal Assessment

Animal:

Study: [a100](#)

Species: [a200](#)  
[a300](#)

Assessment reason:

Assessment date:

Animal housing:

Performed by:

Previous assessment date:

Previous assessment scores:

Name	Average
------	---------

After you create an assessment, you can review it and make changes in the Existing Assessment section (see menu). Finalised assessments can be viewed or deleted but **not edited**.

Create and finalise assessment
Create assessment
Clear form

- If the selected animal has been assessed before, the assessment form will be updated automatically using data from the previous assessment. The system will ask you to confirm any scores that you haven't changed compared to the previous assessment to help to avoid input errors.  
**Only parameters and factors with scores that have not changed will be displayed.**
- Other fields, such as assessment reason or date are automatically updated but are not checked so please double check they are correct.**

## Identical scores verification

Assessment you are about to create has identical scores for the following factors compared to the previous assessment.

Please review scores and confirm you want to use the same scores for the new assessment.

Environmental	Physical	Procedural	Psychological
---------------	----------	------------	---------------

Group size	7
Provision of 3D enrichment	6
Provision of manipulable enrichment	4
Contingent events	7

It's OK, create assessment
I forgot to change scoring, cancel

- Select an existing assessment reason using the 'Assessment reason' input box.

**Note:** you can also create a new reason by typing in a non-existent reason name and choosing it.

## Animal Assessment

Animal:

Study: N/A

Species: Cyno

Assessment reason:

Assessment date:

Animal housing:

Performed by:


Previous assessment date: N/A

Previous assessment scores:

Name	Average
Health check up	

4. Select the date from the 'Assessment date' date selection box.
5. Select an existing housing using the 'Animal housing' input box  
**Note:** you can also create a new housing by typing in a non-existent housing name and choosing it.

## Animal Assessment

Animal:	<input type="text" value="a100"/>			
Study:	N/A			
Species:	Cyno			
Assessment reason:	<input type="text" value="Health check up"/>			
Assessment date:	<input type="text" value="12-01-2015"/>			
Animal housing:	<input type="text" value="Building 441"/>			
Performed by:	<div style="border: 1px solid #ccc; padding: 2px;">Building 441</div>			
Previous assessment date:	N/A			
Previous assessment scores:	<table border="1" style="width: 100%; border-collapse: collapse;"><tr><th style="width: 50%;">Name</th><th style="width: 50%;">Average</th></tr></table>	Name	Average	
Name	Average			

6. Select scores for all of the factors for each parameter.
  - a. Factors may be ignored. If they are, their value will not be included in any calculations.

Environmental
Physical
Procedural
Psychological

Housing	<div style="display: flex; align-items: center;"> <div style="width: 100px; height: 10px; background: linear-gradient(to right, black 70%, white 70%);"></div> <div style="margin-left: 10px;">(Score: 7)</div> </div>	<input type="checkbox"/> Ignore
Group size	<div style="display: flex; align-items: center;"> <div style="width: 100px; height: 10px; background: linear-gradient(to right, black 60%, white 60%);"></div> <div style="margin-left: 10px;">(Score: 6)</div> </div>	<input type="checkbox"/> Ignore
Provision of 3D enrichment	<div style="display: flex; align-items: center;"> <div style="width: 100px; height: 10px; background: linear-gradient(to right, black 60%, white 60%);"></div> <div style="margin-left: 10px;">(Score: 6)</div> </div>	<input type="checkbox"/> Ignore
Provision of manipulable enrichment	<div style="display: flex; align-items: center;"> <div style="width: 100px; height: 10px; background: linear-gradient(to right, black 60%, white 60%);"></div> <div style="margin-left: 10px;">(Score: 6)</div> </div>	<input type="checkbox"/> Ignore
Contingent events	<div style="display: flex; align-items: center;"> <div style="width: 100px; height: 10px; background: linear-gradient(to right, black 40%, white 40%);"></div> <div style="margin-left: 10px;">(Score: 4)</div> </div>	<input type="checkbox"/> Ignore

Comment for parameter: Environmental

Average score for parameter: Environmental is 5.80

ⓘ After you create an assessment, you can review it and make changes in the Existing Assessment section (see menu). Finalised assessments can be viewed or deleted but **not edited**.

Create and finalise assessment

Create assessment

Clear form

7. You can enter any comments you have for each assessment parameter into the comments input box below the assessment form.

### Creating and finalising assessments

The system allows partially filled in assessment form to be created. These assessments can be completed at a later date.

However, once an assessment data has been finalised, it cannot be edited unless unlocked by a system administrator who need to run a database query.

1. Press 'Create assessment' to create an assessment. You will be able to edit it later.
2. Press 'Create and finalise assessment' to create an assessment. The system will prompt you to enter any missing information and once the creation is successful, the assessment will be finalised and not further edits will be possible.

### Looking up incomplete assessments

Sometimes assessments cannot be completed and are saved in the system in an incomplete state. In order to complete an assessment you will need to first look up it up.

1. Select 'Existing Animal Assessment' from the navigation panel.
2. Select the search criteria to look up assessments and press search.

## Existing Animal Assessment

Search for assessments

**Animal number:**

**Date from:**

**Date to:**

**User:**

**Reason:**


**Study:**

**Is assessment complete?**

Search

Clear

3. Once located, select the incomplete assessment in the table of assessments by clicking on it. Incomplete assessments are marked yellow.

Search results 				
Found: 9 assessments				
Date	Animal	Reason	Performed By	Is complete?
16-11-2015	a100	TB Screen	Staff	YES
17-11-2015	a100	TB Screen	Staff	YES
18-11-2015	a100	TB Screen	Staff	YES
19-11-2015	a100	TB Screen	Staff	NO
20-11-2015	a100	TB Screen	Staff	NO
21-11-2015	a100	TB Screen	Staff	YES
22-11-2015	a100	TB Screen	Staff	YES
23-11-2015	a100	TB Screen	Staff	YES
24-11-2015	a100	TB Screen	Staff	YES
				<div> <div>10</div> <div>25</div> <div>50</div> <div>100</div> </div>

4. Fill out any missing information and press either 'Finalise assessment' or 'Save'.  
 If you press 'Save', you will save the current state and you will still be able to edit the assessment.  
 If you press 'Finalise assessment', you will save the current state and the assessment will be



finalised preventing any further changes.

Previous assessment date:

18-11-2015

Previous assessment scores:

Name	Average
Environmental	5.80
Physical	1.00
Procedural	1.00
Psychological	1.00

Environmental

Physical

Procedural

Psychological

Housing

■■■○○○○○○○○ (Score: 3)

☐ Ignore

Group size

■■○○○○○○○○○○ (Score: 2)

☐ Ignore

Provision of 3D enrichment

■■○○○○○○○○○○ (Score: 2)

☐ Ignore

Provision of manipulable enrichment

■○○○○○○○○○○○○ (Score: 1)

☐ Ignore

Contingent events

○○○○○○○○○○○○○○ (Score: 0)

☐ Ignore

Comment for parameter: Environmental

Average score for parameter: Environmental is 1.60

After you save changes made to an existing assessment, you can edit it at a later time. However, finalised assessments can be viewed or deleted but **not edited**.

Finalise assessment

Save changes

Clear form

## Viewing existing assessments

Follow initial steps from Looking up incomplete assessments section.

## Exporting assessments

To export assessment data from the system you can use the 'Export Animal Assessments' section of the system.

Select 'Export Animal Assessments' from the navigation panel.


To export assessments you need to follow 3 main steps:

1. Select assessments to be exported.
2. Add selection from #1 to list of exports.
3. Export all the selections.


Before using the export feature, please read the notes on searching and exporting which are located above the search form.

**Please note that only complete assessments can be exported.**

## Export animal assessments

 Notes on searching

- Search is performed as soon as a single search value is specified.
- After specifying one of the search criteria, other search fields are adjusted to display only relevant data, e.g.:
  1. Search assessments by a study.
  2. Only study groups and animals which are part of that study will be available as further search filters.
  3. Date ranges will also be adjusted to dates of the oldest and most recent assessments.
- When study and animal are specified, study group selection is ignored. This is because an animal cannot be in more than one group within a particular study.

 Notes on export


- Comma Separated Values (CSV) format only supported for now.
- Duplicate assessments are filtered automatically.
- Data which is not present is represented by '-' (hyphen) in export files.
- Ignored factors have a score of 0 (they are not included in parameter average calculation).
- Assessments in export files are ordered by date, starting from the most recent assessment.
- Exporting assessments based on different templates in a single export is not supported.


Specify selection criteria to select assessments. The number of assessments that can be exported is updated automatically.

Study:

Study group:

Animal:

Date from:  

Date to:  

Reason:

Performed by:

Assessments that can be exported based on the search criteria: **1**

When you are happy with the selection, click the 'Add selection to export' button. This will add the selection to list of exports.

Selections to be included in the export:

#	Search criteria	Assessments matching criteria	
1	Study: Test study 1, study group: any, animal: Animal 2, reason: any, performed by: any, date from: any, date to: any	<b>1</b>	<input type="button" value="Remove from export"/>

You can add as many selections as you like to the list.

Use the 'Remove from export' or 'Remove all from export' to remove selections.

Selections to be included in the export:

#	Search criteria	Assessments matching criteria	
1	Study: Test study 1, study group: any, animal: Animal 2, reason: any, performed by: any, date from: any, date to: any	<b>1</b>	<input type="button" value="Remove from export"/>
2	Study: Test study 1, study group: any, animal: any, reason: any, performed by: any, date from: any, date to: any	<b>6</b>	<input type="button" value="Remove from export"/>
3	Study: any, study group: any, animal: any, reason: any, performed by: any, date from: any, date to: any	<b>8</b>	<input type="button" value="Remove from export"/>

After selecting all the data you want to export, click the 'Export assessments' button. A progress bar will appear.



Once the export is ready, a dialog window should be displayed to allow you save the export file.

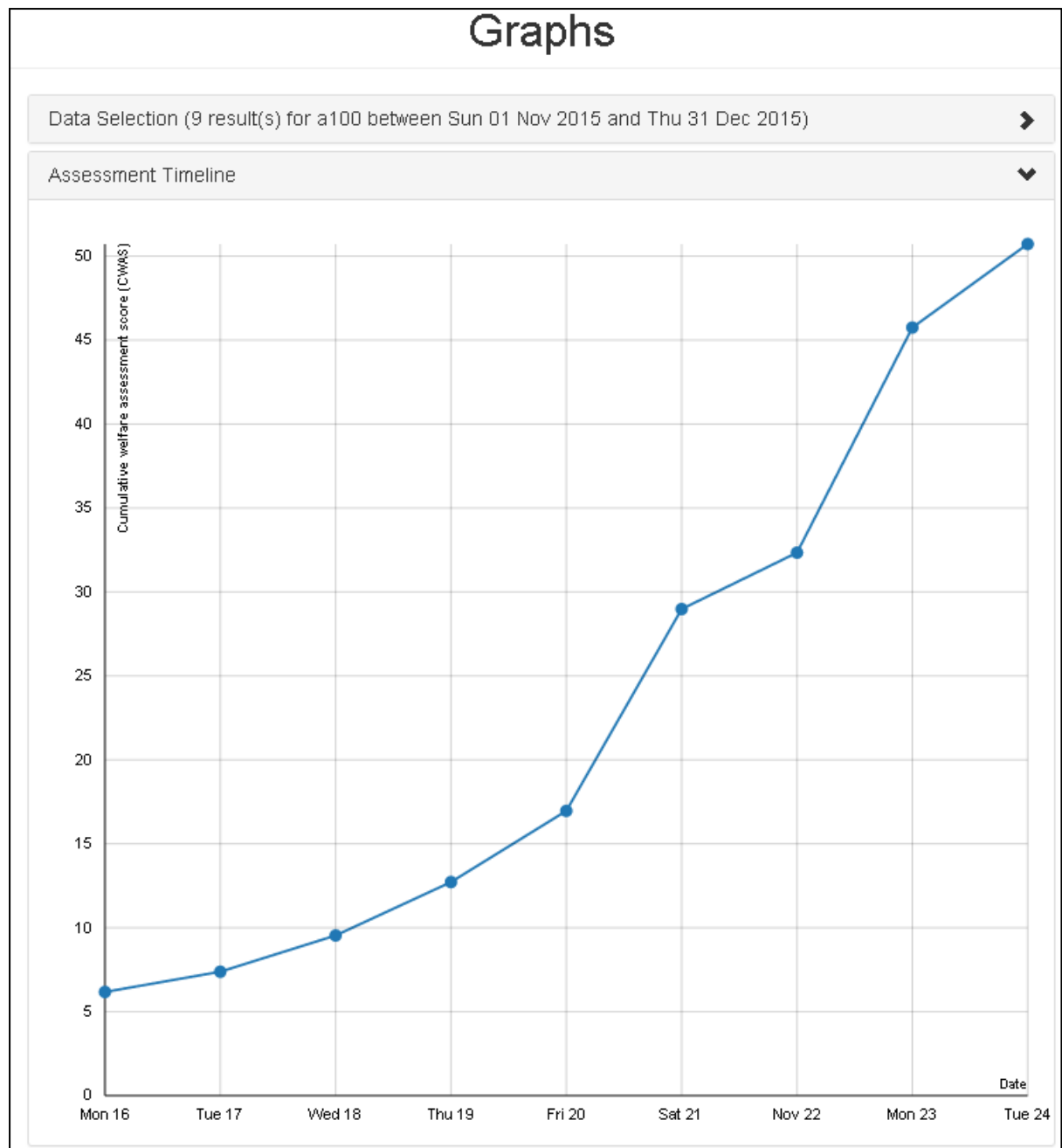
## Graphs

To view the assessment data in the system you can use the 'Graphs' section of the system.

1. Select 'Graphs' from the navigation panel.
2. Select an animal and a date range and press 'Submit' to view assessment data.

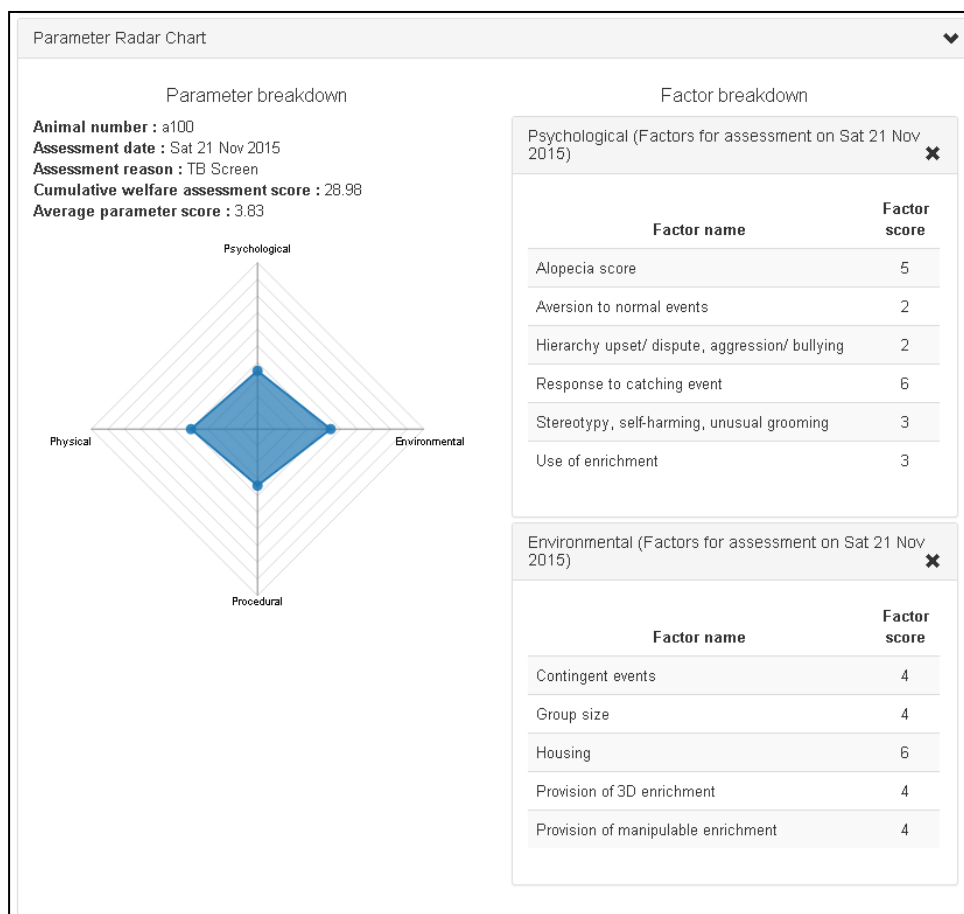
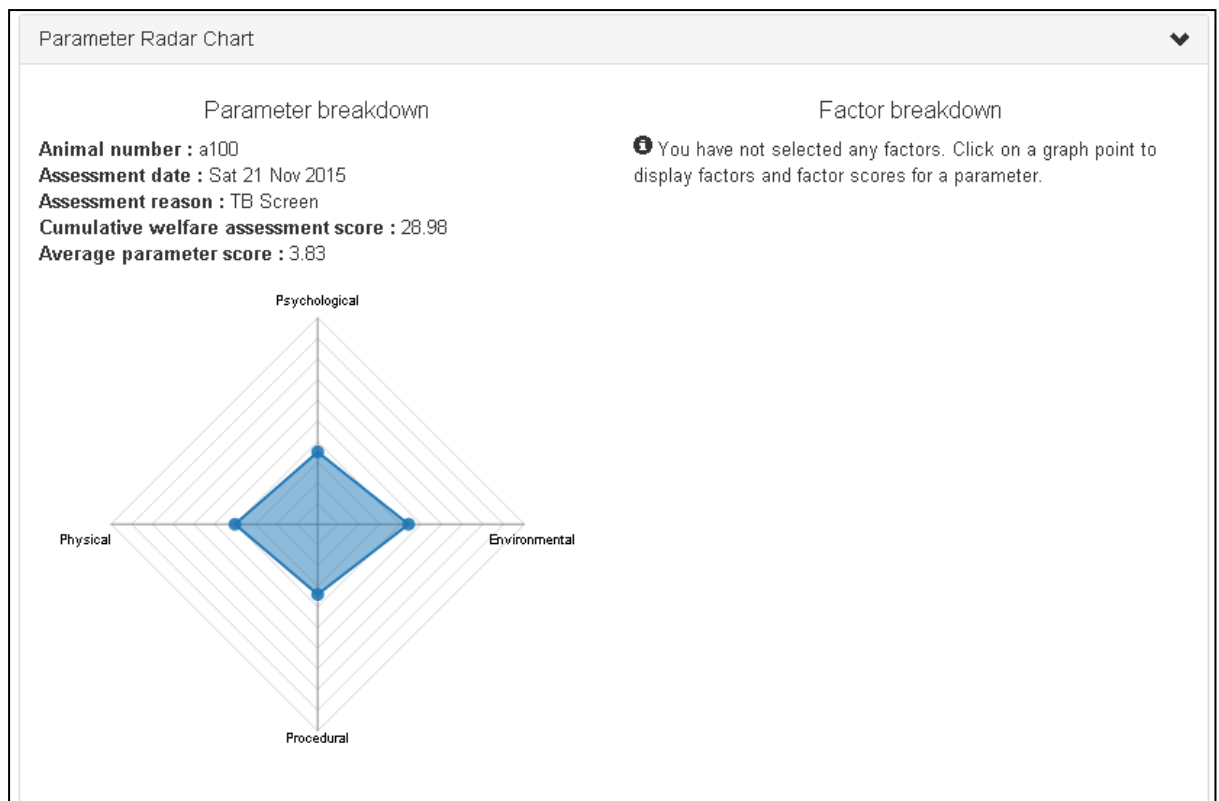
A screenshot of the 'Graphs' section in a web application. The title 'Graphs' is at the top. Below it is a 'Data Selection' section with a dropdown arrow. Inside this section, there are three input fields: 'Animal number:' with a value of 'A100', 'Date from:' with a value of '01-02-2016', and 'Date to:' with a value of '26-02-2016'. Each date field has a calendar icon. Below these fields are two buttons: 'Submit' (green) and 'Clear' (red). At the bottom of the 'Data Selection' section, there are two expandable sections: 'Assessment Timeline' and 'Parameter Radar Chart', each with a right-pointing arrow.

3. A graph will appear showing the cumulative welfare assessment score for each assessment stored for the animal between the two dates.  
You can drill down to view the assessment data by clicking on any point on the graph and scrolling down.




4. To drill down to view the factor scores for each parameter in an assessment; select one or more of the points on the radar chart.






## User management

User management is available only when database authentication is being used. If you are not using database authentication you will need to speak to your IT administrator who will be able to add users for you. You will see the following message when that is the case.

 Contact your IT administrator who can configure LDAP users for you.

Users can only be added by an admin user. If you are not an admin user you will see the following message.

 You must be an administrator in order to manage users.

If you are an admin user you can add/update and remove users by filling out the form and pressing the relevant buttons.

**Note:** Passwords must be at least 8 characters long.

**Note:** The admin user cannot be deleted or their role changed to an assessment user.

### User management

Username:

Password

Retype password

Assessment user

Create

Update

Clear

Delete

## User activity tracking

The system will log actions that change the state of data (create, update and delete).

The format of a log entry is as follows:

Date and time	Action	Username
2016-02-17T14:58:15.128Z	UPDATE ASSESSMENT TEMPLATE:SUCCESS	John Smith

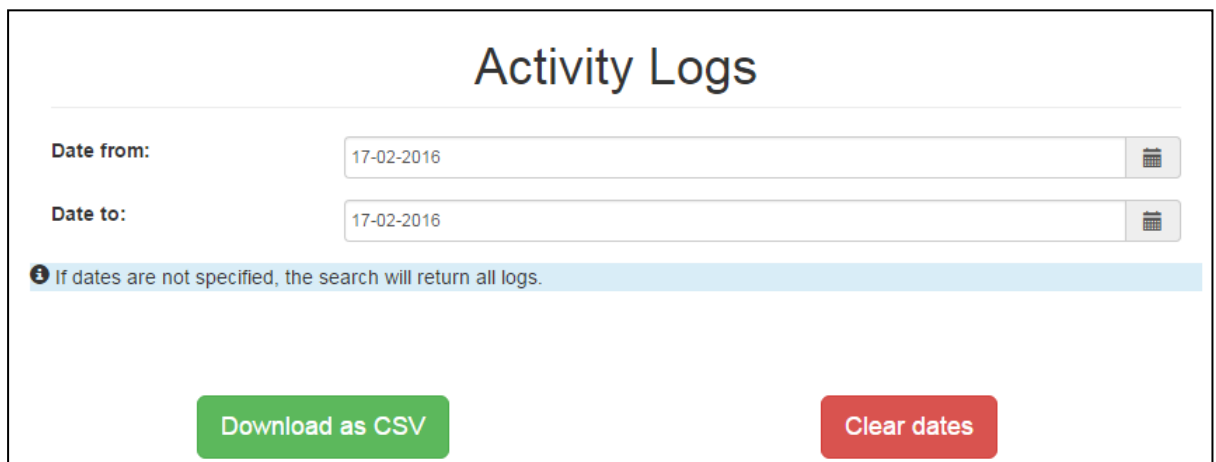
Username is the name used to log into the system.

Actions that were unsuccessful are also tracked. These may result for example because of incorrect data being entered.

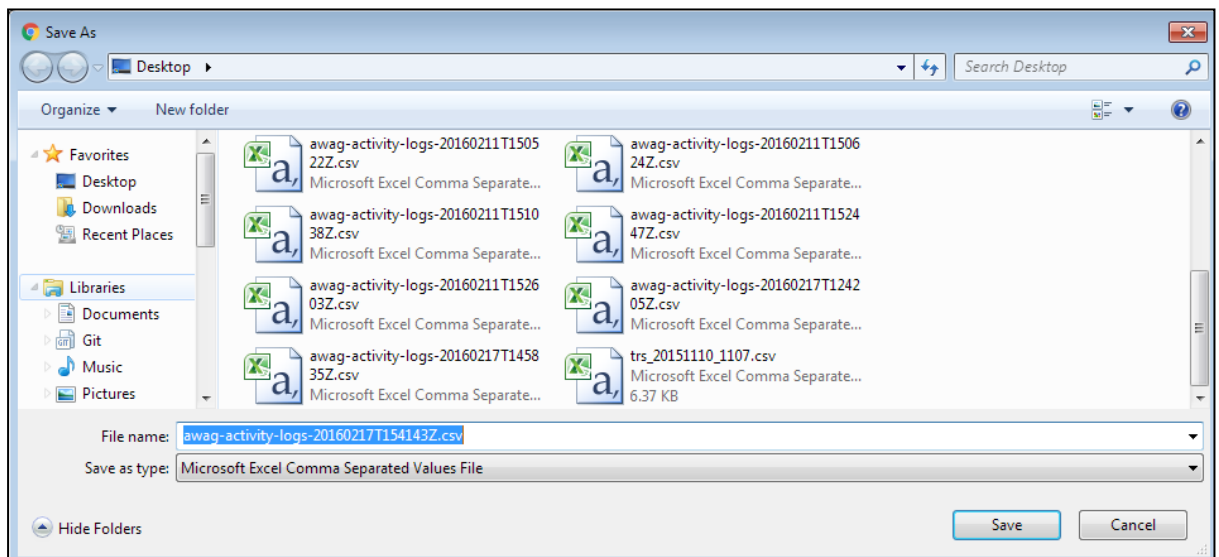
Logs can be downloaded in Comma Separated Values (CSV) format.

To download activity logs:

1. Select 'Activity logs' from the main navigation panel.
2. You have the option to specify a date range to download only part of the logs.



3. Click 'Download logs'.
4. Wait until a window appears asking you to save the logs on your computer.



5. Save the logs. You can analyse them later using text or spreadsheet editor.



## Appendix 1

The table below lists the recommended parameters and factors for the Assessment Template as described in the publication: *Wolfensohn SE, Sharpe S, Hall I, Lawrence S, Kitchen S, Dennis M. (2015) 'Refinement of welfare through development of a quantitative system for assessment of lifetime experience'. Animal Welfare, 24, pp. 139-149.*

Parameters	Factors
Physical	General condition (weight-loss, condition score)
	Clinical assessment
	Activity level, mobility
	Presence of injury
	Not eating/ drinking
Behavioural/psychological	Stereotypy, self-harming, unusual grooming
	Response to catching event
	Hierarchy upset/ dispute, aggression/ bullying
	Alopecia score
	Use of enrichment
	Aversion to 'normal' events
Environmental	Housing
	Group size
	Provision of 3D enrichment
	Provision of manipulable enrichment
	Contingent events
Experimental/clinical event	Restraint
	Sedation
	Planned Licensed procedure
	Veterinary/ Husbandry procedure
	Change in daily routine