

Flood Risk Assessment for Station Farm Camping

Introduction

This document is for use by the Mendip Planning Authority as part of a Prior Approval application being made by Karl and Bethan Dyga to operate a Pop-up campsite at Station Farm for the extended period of 60 days. Prior approval is required as the location of Station Farm is within a designated Level 3 flood plain.

Development Site

The proposed camping field (site location ST 42320 41436, what3words:punctured.binder.proofread. See Figures 2&5) is a 1-hectare field situated within the grounds of Station Farm, Shapwick Road, Westhay, Glastonbury BA6 9TT (See Figure 1. Map of Site). The field is currently used for winter grazing of sheep and horses and for an annual hay cut. It has been used as a pop-up campsite under the 28-day rule since 2021. It is bordered by temporary fencing and ditches. Access from Shapwick Road to the camping field is via an existing driveway leading to an existing stoned areas of farmyard which will be used as a temporary car park (Figure 4) when the campsite is open. The camping field is accessible via an existing footbridge. The location of the field lies within Flood Zone 3 (benefiting from local flood defences) and therefore a Flood Risk Assessment is required as part of the Prior Approval application.



Figure 1. Map of Station Farm Camping site



Figure 2. Photograph of proposed camping field. The field is tree lined and bordered by ditches along 3 sides.



Figure 3. Photograph of portable toilets and showers and wash-up area (note signs including flood evacuation plan and emergency contacts)



Figure 4. Existing hard-standing area of farmyard to be used as parking area.



Figure 5. Camping field, access across bridge from parking area.

Development Proposals

Karl and Bethan Dyga are seeking prior approval to operate a small pop-up campsite (maximum 20 tents) for no more than 60 days within the period of May to September each year. The campsite will make use of existing farm facilities including 2 portable toilet/shower units (see Figure 3), wash up area, access driveway from Shapwick Road and hard standing area of farmyard for parking (see Figure 4). Drainage is into an existing septic tank and soak away. No development is required and, during the period of October to April, the area will revert to sole agricultural use.

Sequential Test

As it is a temporary, minor development with no changes required to existing infrastructure the application is not required to be subjected to a sequential test.

Exception Test

As it is a temporary, minor development with no changes required to existing infrastructure the application is not required to be subjected to an exception test.

Site Specific Flood Hazards

Attached below are the detailed flood risk assessment map (Figure 6) and associated modelling data for each node. Flood levels of each node are demonstrated in Table 1. Also included is the flood defence map (Figure 7) and associated data of the condition of each defence (Table 2). The site is assessed as not being at risk of tidal flooding and benefiting from flood defences located on the nearby South Drain (Figure 7).

The camping field is surrounded by ditches which are regularly maintained. The water level of the South Drain is checked daily by Bethan and/or Karl Dyga and the specific Flood Evacuation Plan for Station Farm Camping (see Appendix 2) will be implemented when the predetermined trigger point is reached (South Drain water level nearing top of bank flood defence).

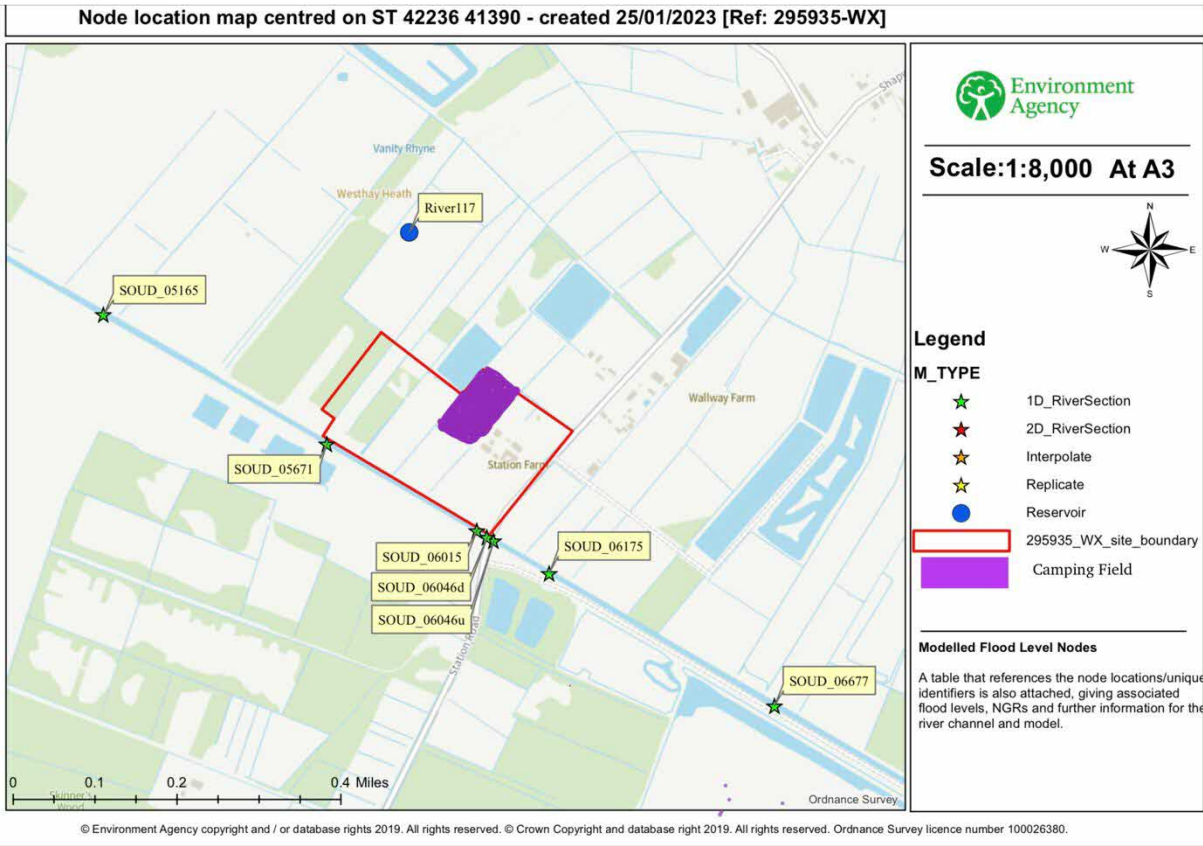


Figure 6. Node Location on Map

295935-WX selected nodes data extract

TITLE Somerset Levels and Moors - Brue
 MODEL DATE 01/12/2015
 SOFTWARE Flood Modeller Pro

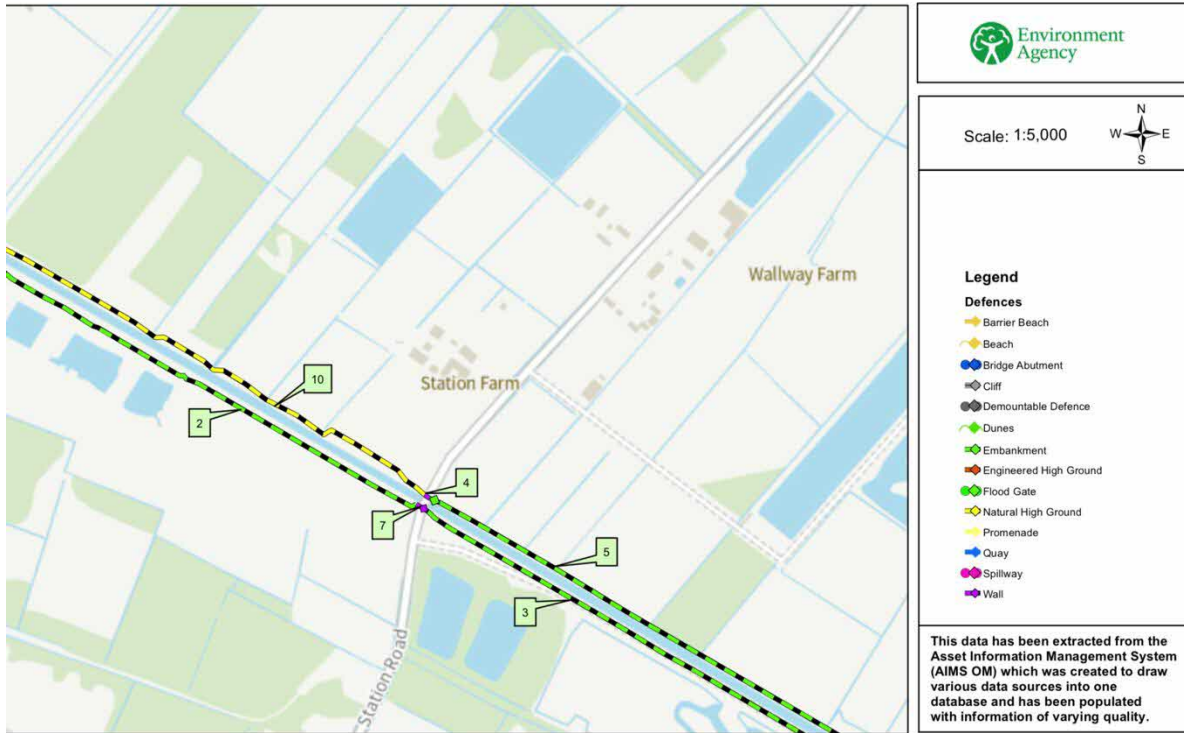
SCENARIO Defended

NODE	River117 Brue	SODU_05165 South Drain	SODU_05671 South Drain	SODU_06015 South Drain	SODU_06046d South Drain	SODU_06046u South Drain	SODU_06175 South Drain	SODU_06677 South Drain
WATERCOURSE	Floodplain	South Drain	South Drain	South Drain	South Drain	South Drain	South Drain	South Drain
2YR Level	1.74	1.68	1.69	1.70	1.70	1.70	1.70	1.72
2YR Flow	NMD	6.08	6.05	6.00	6.01	6.01	5.74	5.71
5YR Level	2.23	1.72	1.73	1.74	1.75	1.75	1.75	1.77
5YR Flow	NMD	7.00	6.99	6.97	6.99	6.99	6.72	6.71
10YR Level	2.38	1.74	1.75	1.77	1.77	1.77	1.78	1.80
10YR Flow	NMD	7.59	7.58	7.56	7.56	7.56	7.31	7.28
20YR Level	2.43	2.05	2.08	2.09	2.09	2.09	2.09	2.11
20YR Flow	NMD	10.03	7.75	7.76	7.76	7.76	7.76	7.77
20YR 20%CC Level	NMD	NMD	NMD	NMD	NMD	NMD	NMD	NMD
20YR 20%CC Flow	NMD	NMD	NMD	NMD	NMD	NMD	NMD	NMD
25YR Level	NMD	NMD	NMD	NMD	NMD	NMD	NMD	NMD
25YR Flow	NMD	NMD	NMD	NMD	NMD	NMD	NMD	NMD
30YR Level	2.44	2.21	2.23	2.24	2.24	2.24	2.25	2.27
30YR Flow	NMD	11.76	8.16	8.17	8.17	8.17	8.17	8.18
50YR Level	2.45	2.26	2.28	2.29	2.29	2.29	2.29	2.31
50YR Flow	NMD	12.31	8.72	8.72	8.72	8.72	8.73	8.74
75YR Level	2.45	2.31	2.34	2.34	2.34	2.35	2.35	2.36
75YR Flow	NMD	12.31	9.13	9.13	9.13	9.13	9.14	9.15
100YR Level	2.46	2.35	2.38	2.39	2.39	2.39	2.39	2.40
100YR Flow	NMD	12.64	9.36	9.37	9.37	9.37	9.37	9.38
100YR 20%CC Level	2.49	2.48	2.50	2.50	2.50	2.51	2.51	2.52
100YR 20%CC Flow	NMD	13.28	9.73	9.73	9.73	9.73	9.73	9.74
100YR 30%CC Level	2.55	2.55	2.55	2.56	2.56	2.56	2.57	2.57
100YR 30%CC Flow	NMD	13.41	9.75	9.75	9.75	9.75	9.75	9.76
100YR 40%CC Level	NMD	NMD	NMD	NMD	NMD	NMD	NMD	NMD

295935-WX selected nodes data extract

100YR 40%CC Flow	NMD	NMD	NMD	NMD	NMD	NMD	NMD	NMD
100YR 85%CC Level	NMD	NMD	NMD	NMD	NMD	NMD	NMD	NMD
100YR 85%CC Flow	NMD	NMD	NMD	NMD	NMD	NMD	NMD	NMD
200YR Level	2.46	2.42	2.45	2.45	2.45	2.45	2.45	2.46
200YR Flow	NMD	13.17	9.69	9.69	9.69	9.69	9.70	9.70
200YR 20%CC Level	NMD	NMD	NMD	NMD	NMD	NMD	NMD	NMD
200YR 20%CC Flow	NMD	NMD	NMD	NMD	NMD	NMD	NMD	NMD
500YR Level	NMD	NMD	NMD	NMD	NMD	NMD	NMD	NMD
500YR Flow	NMD	NMD	NMD	NMD	NMD	NMD	NMD	NMD
1000YR Level	2.63	2.64	2.64	2.64	2.64	2.64	2.65	2.65
1000YR Flow	NMD	13.20	11.95	12.02	11.98	11.98	11.69	11.69
1000YR 20%CC Level	NMD	NMD	NMD	NMD	NMD	NMD	NMD	NMD
1000YR 20%CC Flow	NMD	NMD	NMD	NMD	NMD	NMD	NMD	NMD
TIDE 200YR	NMD	NMD	NMD	NMD	NMD	NMD	NMD	NMD
TIDE 1000YR	NMD	NMD	NMD	NMD	NMD	NMD	NMD	NMD
Easting	342168	341568	342006	342301	342321	342334	342443	342885
Northings	141795	141633	141380	141210	141197	141190	141127	140867

Table 1. Flood Level Node Data extracted from Environment Agency flood modelling.



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Figure 7. Map of flood defences affecting proposed development

295935-WX - AIMS data

Product 4 - AIMS Information 295935-WX Date: 24/01/2023

Map Ref	Asset ID	Asset Type	Right or left bank	Asset Description	Approx length (m)	Actual fluvial downstream crest level (mAOD)	Actual fluvial downstream crest level accuracy	Actual fluvial upstream crest level (mAOD)	Actual fluvial upstream crest level accuracy	Actual fluvial coastal crest level (mAOD)	Actual fluvial coastal crest level accuracy	NGR	Most recent inspection	Overall condition
2	163511	Embankment	Left	Embankment	1324.21	4.23	1 - +/- 0.01m to 0.05m vertical accuracy (Typically on site survey)	4.69	1 - +/- 0.01m to 0.05m vertical accuracy (Typically on site survey)	DNR	DNR	ST41864144	08/11/2021	3 - Fair
3	163512	Embankment	Left	Embankment	2007.59	4.42	1 - +/- 0.01m to 0.05m vertical accuracy (Typically on site survey)	3.62	1 - +/- 0.01m to 0.05m vertical accuracy (Typically on site survey)	DNR	DNR	ST43164069	08/11/2021	2 - Good
4	2865	Wall	Right	Abutment	8.05	4.53	1 - +/- 0.01m to 0.05m vertical accuracy (Typically on site survey)	4.37	1 - +/- 0.01m to 0.05m vertical accuracy (Typically on site survey)	DNR	DNR	ST42324120	08/11/2021	2 - Good
5	2866	Embankment	Right	Embankment	2013.19	4.31	1 - +/- 0.01m to 0.05m vertical accuracy (Typically on site survey)	3.71	1 - +/- 0.01m to 0.05m vertical accuracy (Typically on site survey)	DNR	DNR	ST43058077	08/11/2021	3 - Fair
7	3161	Wall	Left	Abutment	17.12	4.77	1 - +/- 0.01m to 0.05m vertical accuracy (Typically on site survey)	4.52	1 - +/- 0.01m to 0.05m vertical accuracy (Typically on site survey)	DNR	DNR	ST42324118	08/11/2021	2 - Good
10	57137	Natural High Ground	Right	Natural bank	1338.55	2.17	1 - +/- 0.01m to 0.05m vertical accuracy (Typically on site survey)	4.46	1 - +/- 0.01m to 0.05m vertical accuracy (Typically on site survey)	DNR	DNR	ST41864146	08/11/2021	3 - Fair

Notes

* Overall Condition has been taken from the most recent inspection

* Inspections are of a purely visual nature and do not necessarily reflect the true condition of the asset

* Condition: 1 = very good, Condition 2 = good, Condition 3 = fair, Condition 4 = poor, Condition 5 = very poor

* Crest level accuracy: 1 = ± 0.01 to 0.05m, 2 = ± 0.05 to 0.15m, 3 = ± 0.15 to 0.75m, 4 = ± 0.75 or greater

* DNR = data not recorded

Table 2. Environment Agency assessment of condition of flood defences, all graded as either good or fair.

Start Date	End Date	Name	Source of Flooding	Cause of Flooding	Data Source	Data Provider
28/10/1960	02/11/1960	EA112_Upper Brue_Glastonbury Area	main river	channel capacity exceeded (no raised defences)	Aerial Photography	
26/03/2009	26/03/2009	North Wessex Brue Parrett Yeo 2009	main river	overtopping of defences	Aerial Photography	
26/03/2009	26/03/2009	North Wessex Brue Parrett Yeo 2009	main river	overtopping of defences	Aerial Photography	
26/03/2009	26/03/2009	North Wessex Brue Parrett Yeo 2009	main river	overtopping of defences	Aerial Photography	
26/03/2009	26/03/2009	North Wessex Brue Parrett Yeo 2009	main river	overtopping of defences	Aerial Photography	
20/11/2012	23/11/2012	Nov 2012 Floods	main river	overtopping of defences	Aerial Photography	
09/01/2014	27/02/2014	Flood Extents_Winter 2013 to 2014	main river	overtopping of defences	Aerial Photography	
09/01/2014	27/02/2014	Flood Extents_Winter 2013 to 2014	main river	overtopping of defences	Aerial Photography	

Table 3. Details of historic flooding events, data provided by Environment Agency

Flood Risk Management

As this is a temporary development that will only be open between the months of April and September and there will only be a maximum of 20 tents in a 1-hectare area, it is very unlikely that this will impact any surface water drainage. The site is classed as medium risk to flooding from rivers and sea and of very low risk of flooding from surface water. Again, as camping will only be taking place during May to September, this will further reduce the risks of flooding (see Table 3 – Historical flooding events indicate that previous events recorded have been during winter months)

As part of the risk assessments for the campsite, the Environment Agency document ‘Flooding – Minimising the Risk’ has been completed and relevant sections outlining the Flood Evacuation Plan are attached at the end of this document Appendix 2). Flood warning information signs will be displayed at various locations around the campsite including the toilet and wash-up area and parking area (Appendix 1). Signs warning of deep water are displayed around the edge of the camping field. The campsite will be signed up to receive Floodline warnings/alerts and these will be acted on immediately following procedures outlined in Appendix 2. Karl and Bethan Dyga live on site and so will be able to promptly act on any warnings received.

Conclusions

The campsite, due to its small size and requirement for no extra infrastructure, will do little to impact the surface water drainage in the area and will not pose a risk to any other buildings. All defences have been graded by the Environment Agency as being in either good or fair condition (Table 2.). Camping will only ever take place in the summer months (dates submitted in Prior Approval application form) and any risks posed by potential tidal or fluvial flooding be carefully considered, risk-assessed and relevant action plans devised in accordance with the most recent Environment Agency guidelines.

Appendix



The sign is a vertical rectangular poster with a white background and a black border. At the bottom, there is a blue wavy graphic representing water. The sign contains several sections, each with an icon on the left and text on the right. The first section has a red exclamation mark in a circle. The second has a green icon of a person running. The third has a green checkmark in a circle. The fourth has a red triangle with the word 'Flood' inside. The fifth has a green icon of a telephone handset. At the bottom right, there is a logo for the Environment Agency, which consists of a green stylized figure with arms raised, next to the text 'Environment Agency'.

Flood action!
In the event of a flood warning

 Gather your family and leave the caravan

 Report to your assembly point at
Toilet/shower block

 Do not walk or drive through floodwater
Six inches can knock you off your feet, two feet can float your car

 In an emergency call 999

Site manager: Karl Dyga 07875 914068
Behan Dyga 07969 003420

For flood advice phone
the Environment Agency's
Floodline **0845 988 1188**


 **Environment
Agency**

Appendix 1 – Flood Warning Sign displayed around campsite.

Appendix 2- Flood Evacuation Plan for Station Farm Camping

Person responsible for activating evacuation plan **KARL BYGA**

Emergency contact number [REDACTED]



flood evacuation plan

For caravan and camping sites

Site name **STATION FARM CAMPING** Address **STATION FARM, SHAPWICK ROAD, WESTHAY, GLASTONBURY, SOM BA6 9TT** Tel: [REDACTED]

Floodline quickdial number **03145 9881188** Which Environment Agency flood warnings are you registered to receive? **SOMERSET FLOOD ALERTS**

Local flood warning trigger i.e. when water reaches bottom of the bridge, sound siren **WHEN WATER LEVEL OF SOUTH BRAM IS NEARING TOP OF DEFENCE BANK**

Evacuation Assembly Point **OUTSIDE TOILET / SHOWER BLOCK** **Be prepared for flooding. Act now**

1 Actions to be taken during a flood **A** When to activate your flood evacuation plan

The following information should be put into action when your trigger is reached. This trigger would be a flood warning from the Environment Agency or the trigger you have set yourself.

Identify the actions you will take before activating your flood evacuation plan

	Action	Trigger	Refer to Section	Action completed
1	REVIEW DETAILS OF FLOODLINE ALERT, PHONE FLOODLINE FOR FURTHER DETAILS	FLOODLINE ALERT FOR SOUTH BRAM VISUAL CHECK SHOWS RISING LEVELS		
2	ENSURE THAT BOTH BETHAN + KARL BYGA (OWNERS) ARE ON SITE. MAKE CONTACT	RISING LEVELS OF SOUTH BRAM / FLOODLINE ALERT		
3	CHECK DETAILS OF CAMPER'S BOOKED ONTO SITE USING BOOKING SYSTEM / FOLDER	"		
4	WALK AROUND CAMPSITE TO CONFIRM HOW MANY TENTS, TALK TO ANY CAMPER'S PRESENT	"		
5	PHONE ANY CAMPER'S NOT PRESENT TO INDICATE THAT FLOOD EVACUATION PLAN TO BE IMPLEMENTED	"		
6	REQUEST THAT CAMPER'S PACK UP VALUABLES + REMOVE VEHICLES + THEMSELVES TO HIGHER GROUND	"		
7	SWITCH OFF ELECTRICAL SUPPLY TO ALL CONNECTED AREAS OF CAMPSITE	"		

1 Actions to be taken during a flood B Evacuate staff and visitors

Identify the actions you will take to safely evacuate staff and visitors during a flood.

	Action	Trigger	Refer to Section	Action completed
1	CONTACT ABSENT CAMPER BY PHONE (CALL + MESSAGE - USE DETAILS IN BOOKINGS)	ADVISE OF EVACUATION		
2	FIND CAMPER PRESENT + ADVISE EVACUATION	RISING LEVELS SOUTH BRAN - FLOODLINE ALERT REVIEWED		
3	ASSIST ANY CAMPER NEEDING EXTRA HELP IE. DISABLED, SINGLE PARENTS, ELDERLY	"		
4	ENSURE ALL CAMPER BOOKERS IN ARE ACCOUNTED FOR / SHOWN TO	"		
5	ADVISE ALL LEAVE BY VEHICLE / ON FOOT IN DIRECTION OF WESTWAY (CLOSEST HIGH GROUND)	"		
6	ENSURE 2nd DRIVEWAY IS OPENED IN CASE CAMPSITE ENTRANCE BECOMES IMPASSABLE	"		
7	CALL + BEMAN TO REMAIN ON-SITE TO ASSIST / ADVISE ALL CAMPER	"		
8		"		
9	CHECK NO HAZARDOUS MATERIALS WILL BE IN FLOOD WATER, TO MOVE TO HIGHER STORAGE	"		
10				

1 Actions to be taken during a flood C Locations at risk and flood actions

Look at the flood risk map of your site. Divide the flood risk area of your site into different uses, such as camping area, tourers and statics, site office and shower block etc. Identify the flood actions for each use. Consider the risk to visitors on site and to where they will be evacuated. Indicate on the map where an Evacuation Assembly Point will be.

Priority	Use	Action by site staff / volunteers	Equipment required	Time required	Risk to life	Evacuation action
1	CAMPING FIELD	EVACUATE CAMPER + HAZARDOUS MATERIALS		30 min to 1 hour		
2	SHOWER / TOILET BLOCK	SWITCH OFF ELECTRIC + WATER SUPPLIES		10 min		MOVE ANY CLEANING REAGENTS TO HIGHER PLACE
3	PARKING AREAS	ASSIST CAMPER IN MOVING VEHICLES TO HIGHER GROUND		30 min to 1 hour		
4	DRIVEWAY	OPEN 2nd DRIVEWAY IF THIS IS IMPASSABLE		10 min		OPEN YARD GATES
5						
6						
7						
8						

1 Actions to be taken during a flood **D** Key locations

Service cut-off	Description of location
Electricity	CONSUMER UNIT IN SHED ADJACENT TO WASH-UP AREA
Gas	NOT APPLICABLE - NO GAS SUPPLY
Water	ORCHARD STOP-TAP CHAMBER ON INCOMING SUPPLY

1 Actions to be taken during a flood **E** Protective actions / Hazardous materials

Hazardous materials on site which should be considered during a flood - Answer the following if applicable.

Materials	Description of location	How to protect from a flood (i.e. move, cover, tie down)
Chemicals (including cleaning products)	ALL STORED IN LOCKABLE, ELEVATED CLIPBOARDS	MOVE HIGHER IF NEEDED
Oil based products (gasoline, oil, cooking oil etc.)	NONE PROVIDED	ENSURE CAMPERS TAKE OWN SUPPLIES WITH THEM WHEN EVACUATING
Gas cylinders	NONE PROVIDED	"

1 Actions to be taken during a flood **F** Protective actions / Important items

Identify stock, equipment and possessions that may need special protective measures, and describe the actions you will take to prevent their damage in the event of a flood. We have suggested items and ways to protect them, but make sure you follow through on your plans.

Items to consider

- | | | | |
|------------------|------------------|------------------------|----------------|
| Static caravans | Touring caravans | Chairs/stools | Paper files |
| Machinery | Food | Tables/heavy furniture | Databases |
| Vehicles | Fittings | Soft furnishings | Computers |
| Electrical items | Movable goods | Staff files | Computer files |

Ways to protect items

- Move to safer location
- Buy flood protection products
- Raise above ground level
- Make a copy and store in safe location
- Buy new flood-resistant item

Item	Protective action	New location (if applicable)	Done
MACHINERY	MOVE TO SAFER LOCATION	HIGHER AREA OF YARD	
VEHICLES	MOVE SAFER LOCATION	PARK ON ROAD	
MOVABLE GOODS	MOVE TO ABOVE GROUND LEVEL	HIGHER AREA OF FARMYARD	
TENTS	TAKE DOWN + PACK AWAY	STORE PACKED TENTS OFF GROUND	
PAPER FILES	ALL KEPT ON FIRST FLOOR OF FARMHOUSE		
COMPUTER FILES	ALL KEPT ON FIRST FLOOR OF FARMHOUSE	BACKED UP	
FOOD	MOVE TO SAFER LOCATION	MOVE ABOVE GROUND LEVEL	
ELECTRICAL TAP	DISCONNECT + MOVE	STORE ABOVE GROUND LEVEL	