#### ALDI STORE AND FOOD VILLAGE - LAND AT PONTFAEN ROAD, LAMPETER

#### FLOOD CONSEQUENCES STATEMENT & DRAINAGE STRATEGY

#### **Site Summary**

It is proposed to build an ALDI retail food store and a 'Food Village' outdoor event/exhibition space with associated access road, parking and drainage alongside an existing sports pitch and pavilion, on a brownfield site at Pontfaen, Lampeter SA48 7BJ. Refer to appendix A for the site location plan.

The full site has an area of approximately 3.02Ha, with 0.87Ha comprising the ALDI site and a further 0.45ha to be modified to accommodate the Food Village, which will be owned and operated by the University of Wales Trinity St David. The area currently consists of a relatively flat piece of land, falling from east to west and north to south. The land falls from around 121.0m in the most north easterly corner to roughly 117.9m AOD in the most south westerly. The site is bounded by the A475 (Pontfaen Road) to the north, Lampeter Leisure Centre to the south and the Hafan Deg old peoples home to the east. Refer to appendix B for the existing site plan.

The site is currently used as a college playing field comprising a football pitch, rugby pitch and pavilion. As a result the vast majority of the site is currently composed of soft landscape.

It is proposed to construct the ALDI food store and associated car park on the eastern half of the site, with the servicing yard to the south and further car parking to the north of the food store. Access is to be provided to the site by a new junction off Pontfaen road to the north, with pedestrian access alongside. The proposed Food Village will be accessed via the ALDI car park and consists of a number of small event and exhibition pods along with associated parking, and a community recreation space. Refer to Appendix C for the proposed site plan.

The only existing drain within the site is a 100mm dia. foul pipe running from the pavilion to an existing sewer south of the site. The map from Welsh Water also shows an existing combined sewer passing across Pontfaen road to the north before circling the site to the west and south. Refer to appendix D for the Welsh Water asset map.

### **Flood Consequences Statement**

The following considers the flood risk associated with the site in accordance with Planning Policy Wales Technical Advice Note 15 (TAN 15). The assessment is based on the new edition of TAN 15 which is to come into force on 1<sup>st</sup> December 2021, along with associated updated flood mapping.

According to Natural Resources Wales's (NRW) online Flood Map for Planning (FMP), the site is located predominately within Flood Zone 1, defined as having less than 1 in 1000 (0.1%) chance of flooding in a given year, including climate change.

Parts of the site are located within Flood Zones 2 and 3, shown to be at relatively high risk of flood from rivers. The area shown to be at risk of flooding from rivers, the western part of the site, is to remain as a grassed sports pitch. However the proposed development areas of the ALDI store, car park and service yard as well as the Food Village are all located within Flood Zone 1. Refer to appendix E for the TAN 15 FMP, and other flood information from NRW.

TAN 15 Figure 1 gives the flood risk requirements for proposed developments in Zone 1, whereby the justification test is not applicable and there is no need to consider flood risk further, beyond a requirement to not worsen flood risk elsewhere.

Since the total proposed hardstanding area is less than 1.0Ha and the surface water drainage system will be designed to discharge via infiltration features located onsite (discussed in later sections), the surface water generated by the development is unlikely to have a significant impact upon flooding within the site locality. Other issues considered in assessing the flood risks associated with developing the site were:

- a) Overall loss of flood storage volume during the design event
- b) Obstruction to the flow of water during a flood event
- c) Increase in rate of runoff that might worsen flooding elsewhere

- d) Obstruction to existing watercourses or access to them
- e) Situations that may be dangerous during flooding.
- f) Flooding from fluvial sources.
- g) Flooding from tidal sources.
- h) Flooding from pluvial sources and overland flows
- i) Flooding from ground water
- j) Flooding from sewers
- k) Flooding from reservoirs or canals.
- I) Flooding from other sources.

Item a), b), d), e), f) and g) are satisfied since the developed ALDI site does not lie within an area at risk of flooding during the design events. The area at risk of flooding will remain soft landscape and so also satisfies these items.

Item c). Any potential increased runoff will result from the proposed ALDI development and Food Village. The drainage system will be designed to discharge to an infiltration feature onsite. As such it is anticipated that the development will not worsen flood risk elsewhere.

Item h). Flooding from overland flows. The NRW risk of flooding from surface water mapping shows the site is not at risk of flooding from overland flows.

Item i). There is no known history of flooding from ground water for the development site. An intrusive site investigation has been undertaken, including groundwater monitoring, which found groundwater to lie at least 2.0m below ground level. The groundwater table is not considered to be tidally influenced. As such the risk of groundwater flooding is considered to be low. Refer to Appendix F for relevant extracts from the site investigation.

Item j). Flooding from sewers. There is no known history of flooding from sewers within the vicinity of the development. The only existing sewer follows the western perimeter of the site. Due to the existing levels any flooding it causes would run into the watercourse that runs parallel to it. The sewer does also run along Pontfaen road to the north of the site but the levels of the road are lower than that of the site so any flooding from the sewer is not expected to enter the site.

Item k). The NRW risk of flooding from reservoirs map indicates that the site is not in an area at risk of reservoir flooding.

Item I). No other natural or artificial sources of flooding have been identified for this development.

**Conclusion:** This development is deemed appropriate in this location, is at minimal risk of flooding and its undertaking will not increase the risk of flooding to the neighbouring area.

#### **Surface Water Drainage Strategy**

Following the implementation of Schedule 3 of the Flood Water Management Act 2010 in Wales, developments with a construction area greater than 100m² are required to incorporate Sustainable Drainage Systems (SuDS). All such systems are required to be approved by the SuDS Approval Body (SAB) under an approval application, and required to be adopted by the SAB where they serve more than a single property. As such, surface water drainage for the proposed ALDI site and the Food Village will be developed and approved under SAB applications separate to the planning process.

The disposal of surface water generated by the development is proposed to be via infiltration into the ground. BRE 365 soil percolation testing has been undertaken with the site investigation, this found drainage conditions to be good with underlying silty, gravely sand and sandy clay. As mentioned above, groundwater was found

to be at sufficient depth beneath the site to allow for a combination of near surface (e.g., permeable paving) and below ground (e.g., soakaways) infiltration features. It is currently anticipated that all surface water generated by the proposed development will be disposed of to ground.

The surface water drainage design for the ALDI site is to be agreed under the SAB approval process. The system will be designed to have enough storage capacity to prevent flooding for all storm durations up to and including the 1 in 30-year return period event, plus a 20% increase in rainfall intensity as allowance for climate change. MicroDrainage System 1 software will be used to size the pipes and MicroDrainage Simulation and Source Control software will be used to model the integrated below ground drainage system.

The drainage system will also be checked for the 1 in 100-year return period events plus 40%. Any surface water flooding will be retained on the site during these storm events, via ponding on the car park and lorry ramp. Any ponding will not affect the proposed building or access/egress routes.

In the event of drainage system failure or exceedance (beyond 1 in 100-year events), flow routes will be away from the proposed and existing buildings which will not be affected.

The surface water drainage system for the ALDI site will remain separate and will only serve the ALDI property, therefore will not be offered for adoption to the SAB.

Surface water drainage from the Food Village will similarly be disposed of via infiltration to the ground and subject to a separate SAB application.

The design of the private drainage will be developed in accordance with the requisite standards, including current Building Regulations Approved Document Part H.

#### **ALDI Store Foul Water Drainage Strategy**

It is proposed to discharge the foul water from the proposed ALDI store development to the existing DCWW foul sewerage network. Four potential options for discharge routes from the site are available:

- To the combined sewer located on Pontfaen road to the north of the site.
- To the same sewer, downstream of the first option, to a manhole within the site boundary, on the western end of the site.
- To another existing sewer located on Pontfaen Road but running in the opposite direction from the one noted above.
- To the existing drainage system in place by the existing pavilion.

All foul drainage options may require pumping, subject to the proposed site levels. The option most practical would be an onsite gravity pump to a lateral drain, which would then discharge to the combined sewer mentioned in option 1. The options are illustrated in appendix G.

The connection to the foul drainage will be subject to a Section 104 drain adoption and 106 direct connection agreement with Dŵr Cymru Welsh Water. Further discussion with DCWW is required to confirm the final arrangements.

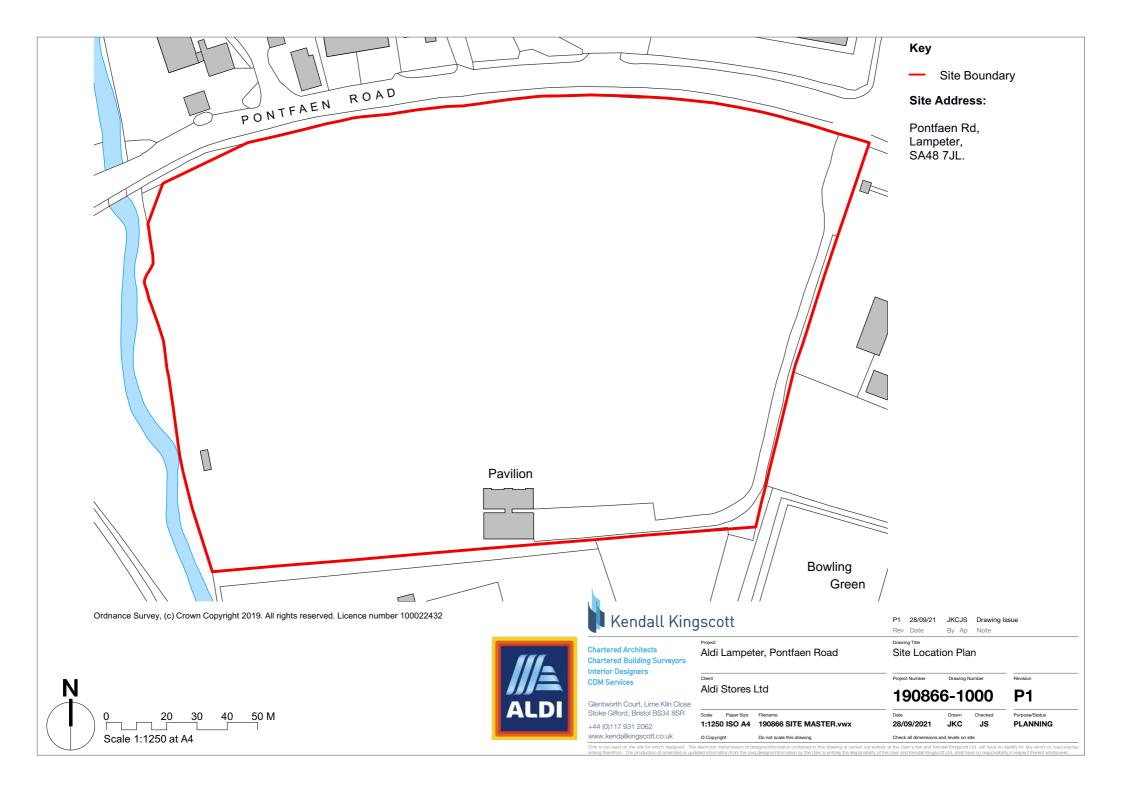
The design of the private foul drainage will be developed in accordance with Building Regulations Approved Document H. The design of the adoptable drainage will be developed in accordance with Sewers for Adoption / The Design and Construction Guidance for Adoptable Sewers, and Welsh Ministers Standards.

#### **Ownership and Maintenance**

All the ALDI private foul and surface water drainage will be maintained by ALDI Stores Ltd. Drainage features serving the Food Village will be maintained by the University of Wales Trinity St David. Specific maintenance requirements for the new surface water drainage systems (including SuDS) will be agreed with the SAB. Offsite drainage offered and accepted for adoption will be maintained by DCWW.

### Appendix A **Site Location Plan**





# Appendix B **Existing Site Plan**





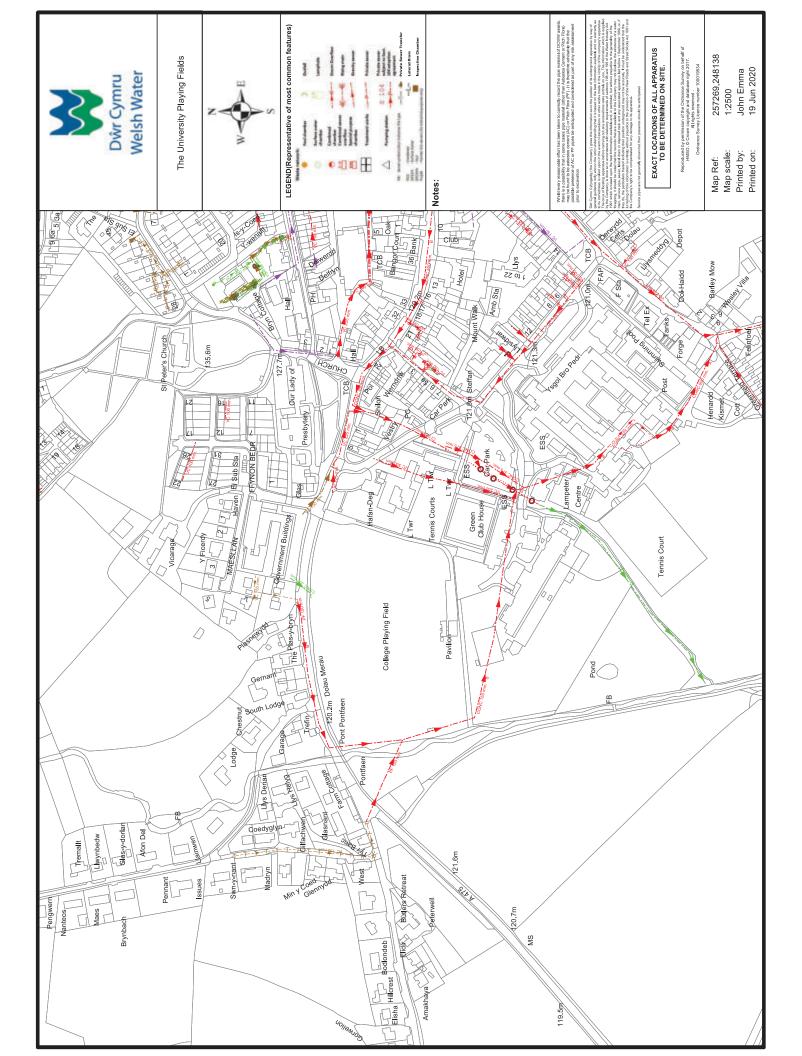
# Appendix C Proposed Site Plan





### Appendix D Welsh Water Asset Maps





# Appendix E NRW Flood Risk Maps



26/10/2021 14:08

https://check-your-flood-risk.naturalresources.wales Flood risk report for the area within 10 metres of:

### HAFAN DEG OLD PEOPLES HOME, TEMPLE TERRACE, LAMPETER, SA48 7BJ

Very low risk	Flooding from rivers					
	Risk less than 0.1% chance each year					
Very low risk	Flooding from the sea  Risk less than 0.1% chance each year					
Medium risk	Flooding from surface water and small watercourses					
	Risk between 1% and 3.3% chance each year					

The risk levels are: High, Medium, Low and Very low.

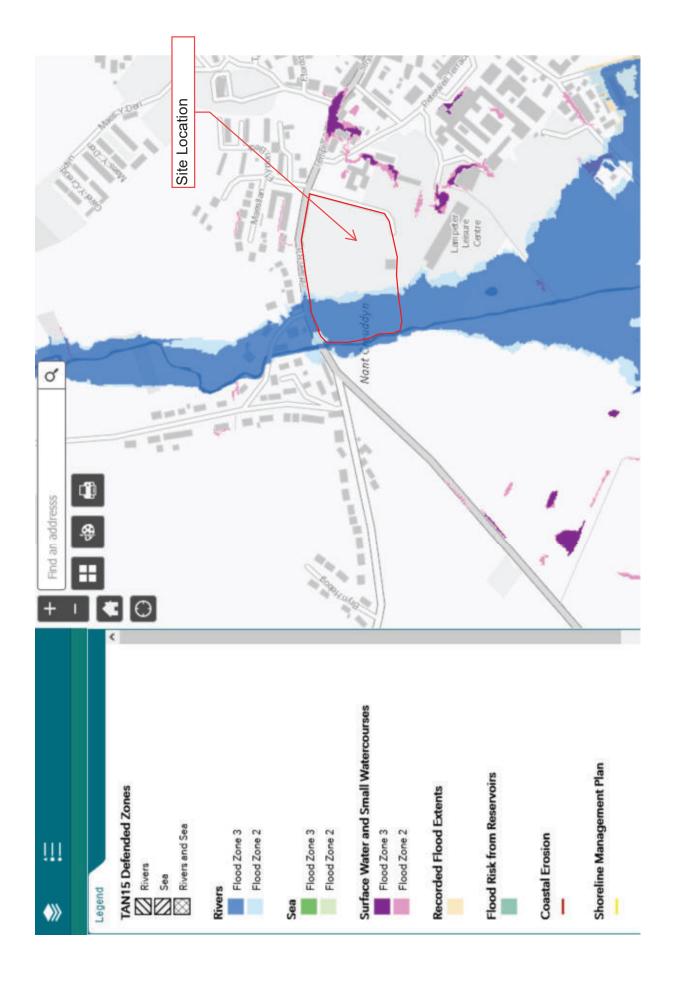
### This area:

- · Does not benefit from flood defences
- · Has no recorded flooding

This risk level takes into account the effect of any flood defences that may be in this area. Flood defences reduce, but do not completely stop the chance of flooding as they can be overtopped or fail.

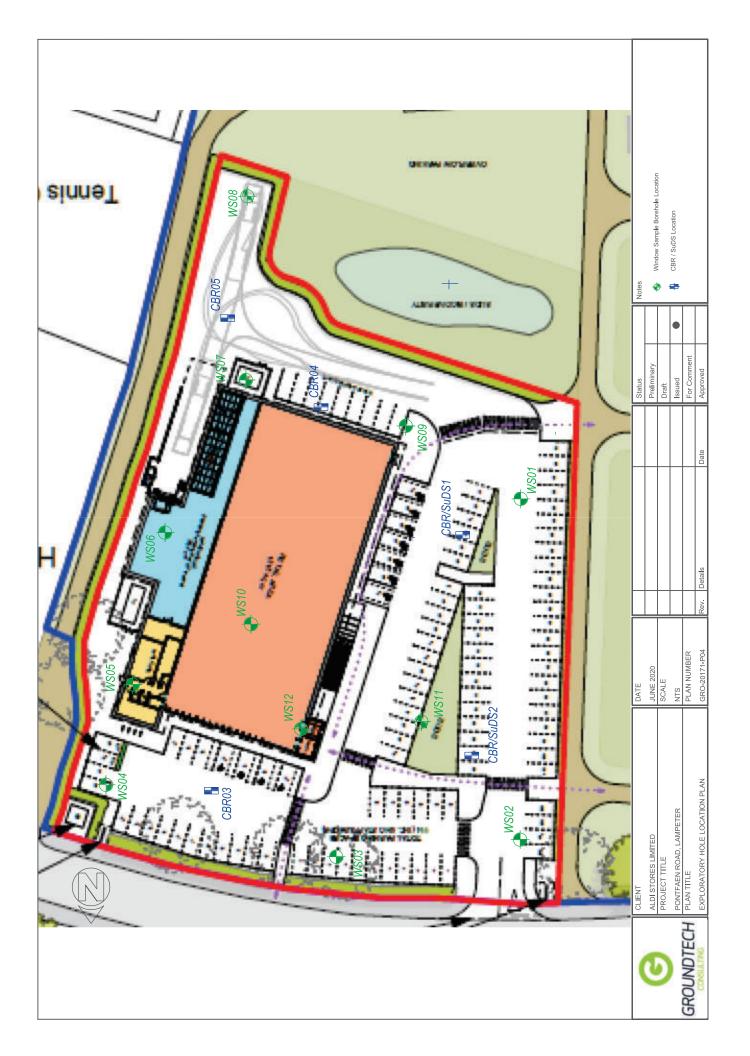
### Please note

We cannot give the flood risk for individual buildings because this depends on building features and other local factors like drainage conditions.



# Appendix F **Extracts from Site Investigation**





						Borehole No.  WS04  Sheet 1 of 1				
					Project No. GRO-20171		Co-ords:	-	Hole Type WS	
Location: LAMPETER							Level:		Scale 1:25	
Client:		ALDI STO	RES L	IMITED			Dates:	25/06/2020 -	Logged By SM	
Well	Water	-	s and	In Situ Testing	Depth	Level	Legend	Stratum Description	ı	
SVI - 1555	Strikes	Depth (m)	Туре	Results	(m)	(m)	g			
		0.20	ES		0.30			Grass over dark brown slightly clayer sandy TOPSOIL.  Medium dense brown slightly clayer SAND with a low cobble content. Graubangular to subrounded fine to co	y gravelly ravel is	-
30 - 30	ii	0.70	D					mixed lithologies. Cobbles are suba subrounded.	ngular to	1 —
		1.20 1.20	D	N=21 (3,3/3,3,5,10						
	•	2.00 2.00 2.30 - 2.70	D B	N=16 (2,3/3,4,4,5)	2.00			Firm grey brown slightly gravelly san CLAY. Gravel is subangular to subrot to coarse of mixed lithologies includ and quartzite.	ounded fine	2 –
		3.00 3.00	D	N=40 (5,6/10,13,9,8	2.80			Very weak grey SILTSTONE residua weathered recovered as sand and g	ally gravel.	3 —
					3.50			End of borehole at 3.50 m		4

Remarks

1. Hand dug pit to 1.2m bgl. 2. Groundwater encountered at 2.1m bgl. 3. Installation to 3.5m bgl, 1.0m plain and 2.5m slotted.



GROUNDTECH					Borehole Log				Borehole No. WS07 Sheet 1 of 1	
					Project No. GRO-20171		Co-ords:	-	Hole Type WS	
Location: LAMPETER					0110 2011 1		Level:		Scale 1:25	
Client:		ALDI STO	RES L	IMITED			Dates: 25/06/2020 -		Logged By SM	
Well	Water Strikes			n Situ Testing	Depth	Level	Legend	Stratum Description	1	
X(X)	Surkes	Depth (m) 0.10	Type	Results	(m)	(m)		Grass over dark brown slightly clay	ey slightly	
		0.50	ES		0.20			sandy TOPSOIL with roots and root Very dense brown slightly clayey gr with a low cobble content. Gravel is to subrounded fine to coarse of mix Cobbles are subangular to subroun	avelly SAND subangular ed lithologies.	
		1.20 1.20	D	N=50 (8,16/15,13,11,11)						1
		2.00 2.00	D	N=10 (3,2/2,3,3,2)	2.00			Firm grey mottled brown slightly sar gravelly CLAY. Gravel is subangular subrounded fine to medium of mixe	· to	2 —
	•	3.00 3.00	D	N=11 (2,2/3,3,3,2)						3 -
		4.00		N=9 (1,1/2,2,3,2)	4.45			End of borehole at 4.45 m		4 -
										5 —

Remarks

1. Hand dug pit to 1.2m bgl. 2. Groundwater encountered at 2.8m bgl. 3. Borehole backfilled.



					Borehole Log				Borehole No. WS11 Sheet 1 of 1	
					Project No. GRO-20171		Co-ords:	-	Hole Type WS	
Location: LAMPETER							Level:		Scale 1:25	
Client:		ALDI STO	RES L	IMITED			Dates:	26/06/2020 -	Logged B	у
Well	Water			In Situ Testing	Depth	Level	Legend	Stratum Description		
	Strikes	Depth (m)	Туре	Results	(m)	(m)		Grass over dark brown slightly clay		_
		0.10	ES		0.20			sandy TOPSOIL.  Dense brown slightly clayey gravel SAND. Gravel is subangular to sub to coarse of mixed lithologies included and quartzite. Cobbles are subangular subrounded.	rounded fine ding siltstone	
		1.00	D							1 =
		1.20		N=49 (7,10/11,12,13,13)						
		2.00 2.00	D	N=41 (12,10/11,10,11,9)						2
	•	3.00 3.00	D	N=18 (8,10/8,5,2,3)	3.45			becoming medium dense from 3.0m bgl  End of borehole at 3.45 m		3 —
										4
Rema										5 —

Remarks

1. Hand dug pit to 1.2m bgl. 2. Groundwater encountered. at 3.3m bgl. 3. Borehole backfilled.



### Appendix G Foul Drainage Connection Options

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### Kendall Kingscott Proposed Aldi foodstore and associated parking Parking bays to the north of the site to have permeable paving Electric charging points for community and visitor use -New pedestrian access in south-east corner linking to leisure centre. (No vehicular access) Existing site entrance converted to shared pedestrian footpath and cycle way. (No vehicular access) Existing bellmouth removed and footpath raised Shared site access to foodstore, multi-purpose pavilion and sports pitch, recreation space and Food Village WIIIIIIIIIIIII Total alalala Paking Paking 100 m PONTER ROAD WILLIAMS COMMUNITY RECREATION SPACE 75 Primary pedestrian access Possible Foul Drainage Connectons Scale 1:1000 at A3 PROPOSED MASTERPLAN Informal routes delineated by short cut grass Event and exhibition pods linked with the food and nutrition industry to showcase Welsh produce to coincide with associated academic activities Improved multi-purpose grassed pitch to accommodate rugby and football DRAFT Option 4 190866-0604 06/09/21 Existing Listed pavilion to be extensively refurbished to form a community hub for the Food Village and sport/recreation uses. 119no. (INC. 7no STAFF SPACES) PARKING PROVISION Foodstore







