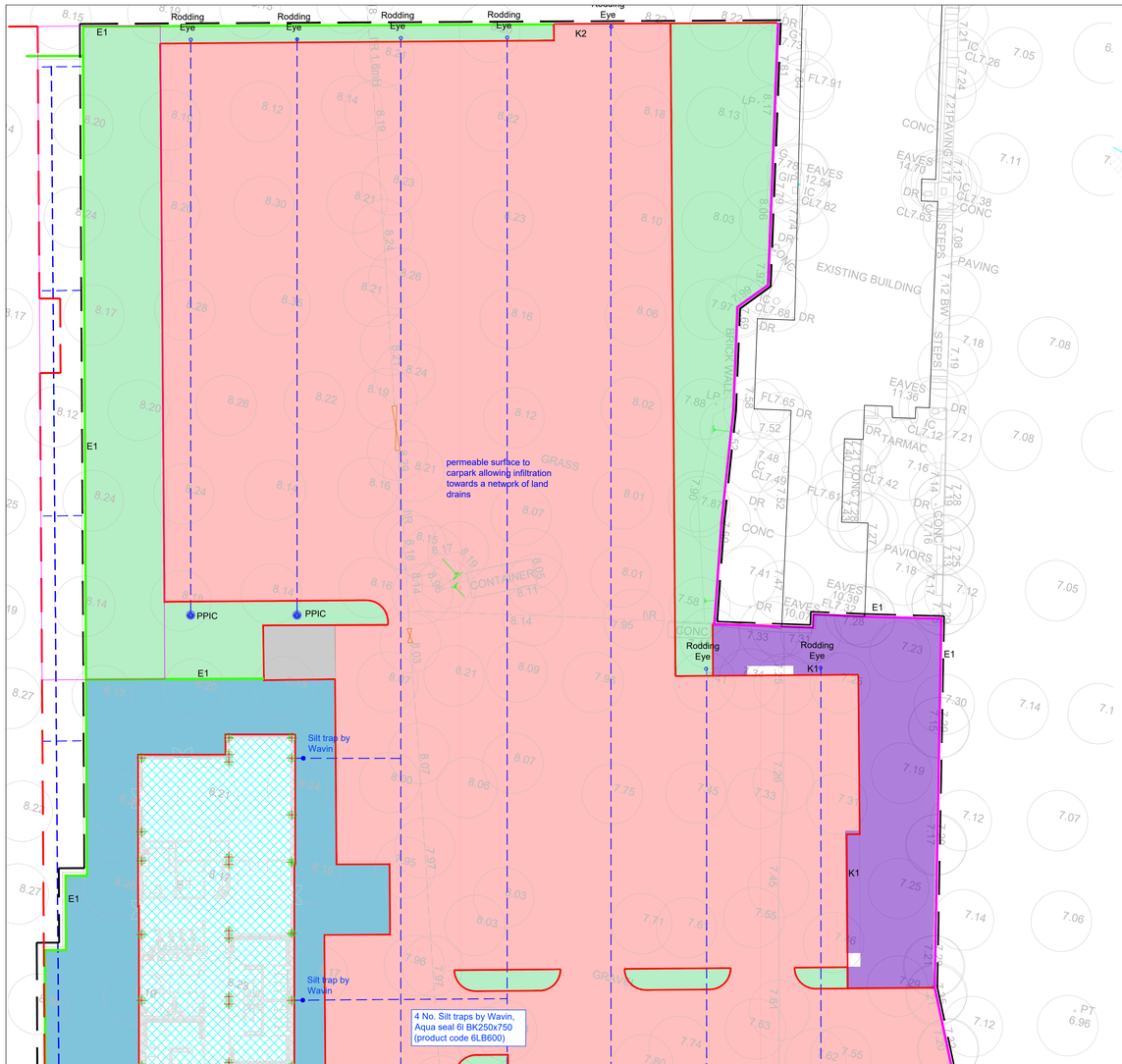
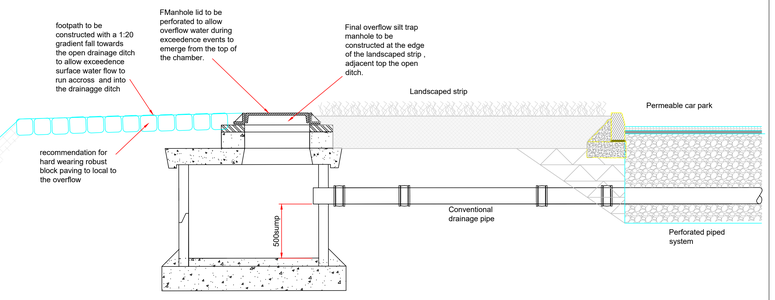


Note: the car park is designed to store rainfall for all storm events up to and including the worst case 1:100 return with climate change. Provided the overflow is at or above car park level then we anticipate no flow during any design storm event. Flows during exceedance events will vary depending on the storm return period in question. consequently it is impossible to give specific information regarding overflow rates/ volumes. As designers we are not required to provide specific design results for exceedance storm events other than to ensure that the site remains as safe as it can possibly be during these events, the details provided here ensure overland flood flow has a route to the drainage ditch.This will minimise the period which the car park can become inundated during an exceedance event.

Existing drainage ditch



TYPICAL OVERFLOW SECTION

- Indicates Site Boundary
- Indicates proposed land drainage from rigid twin wall 1500 pipe system laid at a typ gradient of 1:380
- Indicates existing SW culvert
- Indicates existing open S.W swales

EZ Sports Surface Water Drainage strategy

The surface water drainage proposals for this site are to utilise infiltration directly to ground, in line with the NPPF, the Blackpool SFRA and the normally accepted EA hierarchy.

In general we propose to surface all areas with permeable materials to enable filtration at source directly down to the water table below. This strategy also meets the requirements of the geotechnical site investigation with regards to the underlying Peat layer whereby the hydraulic and loading conditions for the peat stratum should remain unchanged. This strategy will minimise the magnitude and risk of excessive differential settlement of the surface.

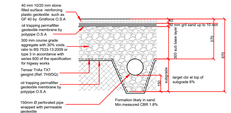
The only location where this form of drainage is limited is the club house itself and immediate surroundings and also possibly the entry roadway. In these locations surface water will be directed to adjacent car parking, playing surfaces or landscape areas where infiltration is possible.

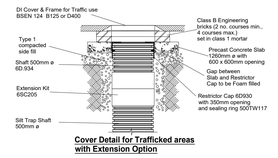
The current geotechnical SI report gives very little advice in relation to a design infiltration rate. A location specific investigation is proposed where soakaway/ head drop testing will be carried out so that detailed drainage design can be carried out. In order to prepare a scheme design we have selected an infiltration rate of 0.036 m/hr based on the type of underlying material which is described as a gravelly,silty medium SAND.

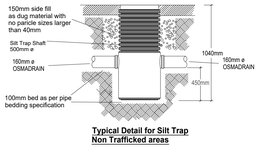
With an infiltration rate of 0.036 m/hr we can determine that the car park will require circ 500 to 600 m3 of surface water storage. This will be accommodated within the circa 300 mm thick DOT type 3 sub base material which will have circa 30% voids. This will ensure that the worst case 1:100 year +30% climate change storm event is retained on site.

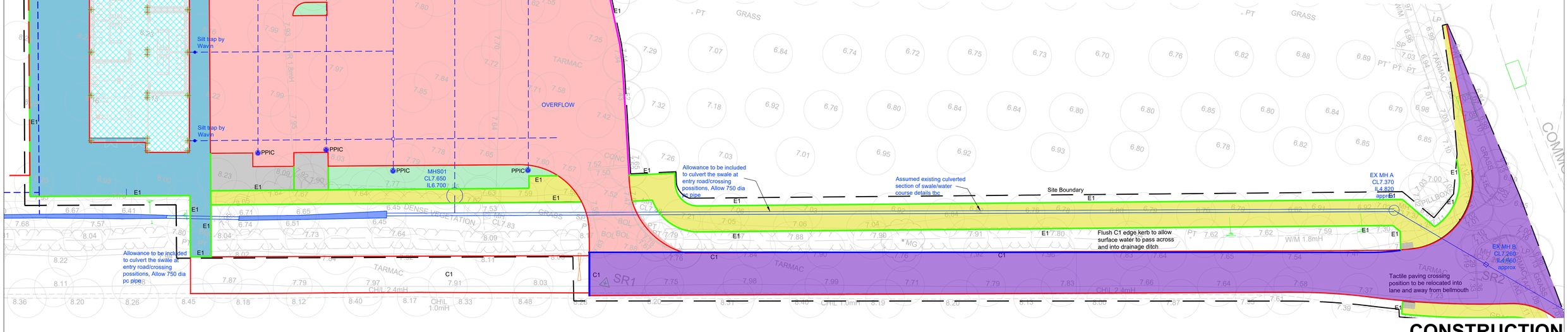
In order to deal with oil spillage we would propose to wrap the DOT type 3 sub base in an oil trapping filter membrane. This will have the dual function of excluding fines from the sub base material and also will trap any oil spillage and allow the Spillage to be dealt with via biodegradation.

The current site has a number of swales and culverts to the west and southern boundaries. We would propose to overflow the car park area into these features to deal with severe and exceedance rainfall events.









CONSTRUCTION

NOTES

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REV	DATE	REVISION DETAILS	INITIALS
P1	16.07.20	PRELIMINARY ISSUE	I.E
T1	06.10.20	STAGE 1 TENDER ISSUE	R.G
T2	06.11.20	TENDER ISSUE	R.G
T3	12.07.20	GF40 DETAIL UPDATED WITH TRIAX	R.G
T4	26.07.20	SILT TRAPS ADDED	J.L
C1	30.07.21	CONSTRUCTION ISSUE	J.L
C2	26.08.21	permeable paving drainage pipework ammended, overflow detail added	IE

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PROJECT:
EZ Sport
Blackpool

TITLE:
GA Surface Water Drainage

SCALE @ A0:	DRAWN:	DATE:
1:200	IE	06/07/20
JOB No:	DRAWING No:	REVISION:
13819	500	C2