



**DRAINAGE DESIGN CRITERIA:-**

**MAIN WORKS AREA**

THE EXISTING AREA WHERE THE PROPOSED DEVELOPMENT IS BEING LOCATED IS CURRENTLY A TRAILER PARKING AREA. THIS AREA IS A MIXTURE OF CONCRETE HARDSTANDINGS, BITMAC SURFACING, COMPACTED HARDCORE AREAS AND ROOF AREAS THAT CURRENTLY DISCHARGE **UNATTENUATED AND UNTREATED** TO THE LOCAL AUTHORITY SEWER.

THE EXISTING CONTRIBUTING AREA OF THE CURRENT ARRANGEMENT IS 10,600m² AND BASED ON A 50mm / hr RAINFALL INTENSITY GENERATES A SURFACE WATER DISCHARGE TO THE EXISTING LOCAL AUTHORITY SEWER OF 147 L/s. **THIS DISCHARGE DOES NOT INCLUDE ANY TREATMENT OR ATTENUATION MEASURES TO THE SURFACE WATER.**

WE PROPOSE TO INCORPORATE A SUDS DESIGN THAT REDUCES THE QUANTITY OF WATER AND IMPROVES THE WATER QUALITY DISCHARGING TO THIS SEWER.

THE SURFACE WATER NETWORK SHOWN OPPOSITE HAS BEEN DESIGNED TO CONVEY THE RUN OFF DISCHARGE FROM ROOFS AND HARD SURFACED AREAS AND CONNECTED INTO THE LOCAL AUTHORITY SEWER WITH FLOWS RESTRICTED TO AGREED RUN OFF LIMITS. WE PROPOSE TO REDUCE THE FLOW OF SURFACE WATER TO THE LOCAL AUTHORITY SURFACE WATER DRAIN TO A LIMITED FLOW OF 10 L/S. THIS IS THE EQUIVALENT OF THE GREENFIELD RUN OFF FOR AN AREA OF THIS SIZE. WE REQUIRE TO INTRODUCE A PUMPING CHAMBER, AS GRAVITY FLOWS ARE NOT AVAILABLE DUE TO EXISTING MANHOLE LEVELS. THIS PUMPING CHAMBER SHALL BE SPECIFIED WITH A MAXIMUM OUTPUT FLOW OF 10l/s TO REPLICATE THE DESIGN FLOW REQUIRED.

ANY SURPLUS STORAGE VOLUMES SHALL BE TEMPORARILY STORED WITHIN A BURIED MODULAR ATTENUATION SYSTEM PROVIDING 455m³.

THE ABOVE MEASURES **REDUCE THE QUANTITY** OF WATER DISCHARGING TO THE LOCAL AUTHORITY SEWER IN ACCORDANCE WITH SUDS PRINCIPLES.

WE HAVE INTRODUCED A SEPARATE SURFACE WATER SYSTEM TO KEEP RUN OFF FROM ROOFS AND YARD AREAS SEPARATE. ROOF AREAS DO NOT REQUIRE TO BE TREATED AND CAN BE ROUTED TO THE LOCAL AUTHORITY DRAIN.

YARD AREAS REQUIRE TO BE PROVIDED WITH A METHOD OF TREATING THE SURFACE WATER DISCHARGING FROM THE TRAILER PARKING AREA.

WE PROPOSE TO INTRODUCE THE USE OF A PROPRIETARY SILT TRAP / OIL SEPARATOR e.g. ACO V SEPARATOR TO PROVIDE THE TREATMENT REQUIRED TO REMOVE SUSPENDED PARTICLES AND ANY HYDROCARBONS FROM OUR SURFACE WATER RUN OFF. THIS UNIT SHALL BE SUITABLY SIZED TO ACCOMMODATE THE AREA OF YARD BEING CONSTRUCTED.

WE PROPOSE THE USE OF A ACO V SEPARATOR 1200 AS THIS HAS THE CAPACITY TO PROVIDE TREATMENT TO AN AREA OF CIRCA 7,000m². OUR NEW CONCRETE HARDSTANDING AREA IS 5,750m²

THE INTRODUCTION OF THIS TREATMENT DEVICE **IMPROVES THE QUALITY** OF WATER DISCHARGING TO THE LOCAL AUTHORITY SEWER IN ACCORDANCE WITH SUDS PRINCIPLES.

**TRAILER PARKING AREAS**

THE DEVELOPMENT ALSO INCLUDES THE PROVISION OF TWO NEW AREAS OF TRAILER PARKING TO PROVIDE PARKING AREA FOR TRAILERS BEING DISPLACED BY THE NEW CASED GOODS WAREHOUSE.

IT IS HIGHLIGHTED THAT THESE AREAS ARE FOR THE TEMPORARY PARKING OF TRAILERS. IT IS **NOT BEING PROVIDED FOR PARKING OF THE TRACTOR UNITS.**

THESE TWO NEW TRAILER PARKING AREAS ARE 2525m² AND 5,400m². THESE AREAS HAVE BEEN RESTRICTED TO GREENFIELD RUN OFF VALUES OF 4l/s AND 6.4l/s HAVE BEEN INTRODUCED TO REDUCE FLOWS FROM THESE AREAS.

WE HAVE INTRODUCED BURIED MODULAR ATTENUATION STORAGE BOXES 100m³ AND 160m³ TO ACCOMMODATE THE RESTRICTED FLOWS

AGAIN, THESE MEASURES **REDUCE THE QUANTITY** OF WATER DISCHARGING TO THE LOCAL AUTHORITY SEWER IN ACCORDANCE WITH SUDS PRINCIPLES

THESE YARD AREAS ALSO REQUIRE TO BE PROVIDED WITH A METHOD OF TREATING THE SURFACE WATER DISCHARGING FROM THE TRAILER PARKING AREA.

WE PROPOSE TO INTRODUCE THE USE OF ANOTHER TWO PROPRIETARY SILT TRAP / OIL SEPARATOR e.g. ACO V SEPARATOR TO PROVIDE THE TREATMENT REQUIRED TO REMOVE SUSPENDED PARTICLES AND ANY HYDROCARBONS FROM OUR SURFACE WATER RUN OFF. THIS UNIT SHALL BE SUITABLY SIZED TO ACCOMMODATE THE AREA OF YARD BEING CONSTRUCTED.

WE PROPOSE THE USE OF A ACO V SEPARATOR 1200 TO BOTH THESE AREAS AS THESE HAVE SUFFICIENT CAPACITY TO TREAT BOTH AREAS

THE INTRODUCTION OF THIS TREATMENT DEVICE **IMPROVES THE QUALITY** OF WATER DISCHARGING TO THE LOCAL AUTHORITY SEWER IN ACCORDANCE WITH SUDS PRINCIPLES.

**OVERALL REDUCTION IN CONTRIBUTING FLOWS TO LOCAL AUTHORITY SEWER AS FOLLOWS:-**

EXISTING CONTRIBUTING FLOW	=	147 l/s
RESTRICTED FLOW FROM MAIN AREA OF THE WORKS	=	10 l/s
RESTRICTED FLOWS FROM LORRY PARKING AREAS	=	10.4 l/s
<b>REDUCED FLOW TO LOCAL AUTHORITY SEWER</b>	=	<b>147 - (10 + 10.4) = 126.6 l/s</b>

**Legend:-**

- Surface Water Roof Drainage Pipework / Manhole
- Surface Water Yard Drainage Pipework / Manhole
- Buried Modular Attenuation System
- Slot Drainage Channel / Access Chambers

Rev.	Description	Date	Initials	Checked
Status: <b>PLANNING</b>				
Client				
Location	<b>SHIELDHALL</b> <b>NEW CASED GOODS WAREHOUSE</b>			
Drawing Title	<b>PROPOSED SITE LAYOUT</b> <b>CASED GOODS WAREHOUSE AREA</b> <b>DRAINAGE LAYOUT</b>			
Date	Drawn by	Checked by	Date	Scale
SEP 23	B.M.	T.S.	SEP 23	1:250
Project Ref.	Dwg. No.	Rev.		
9313	C021			

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