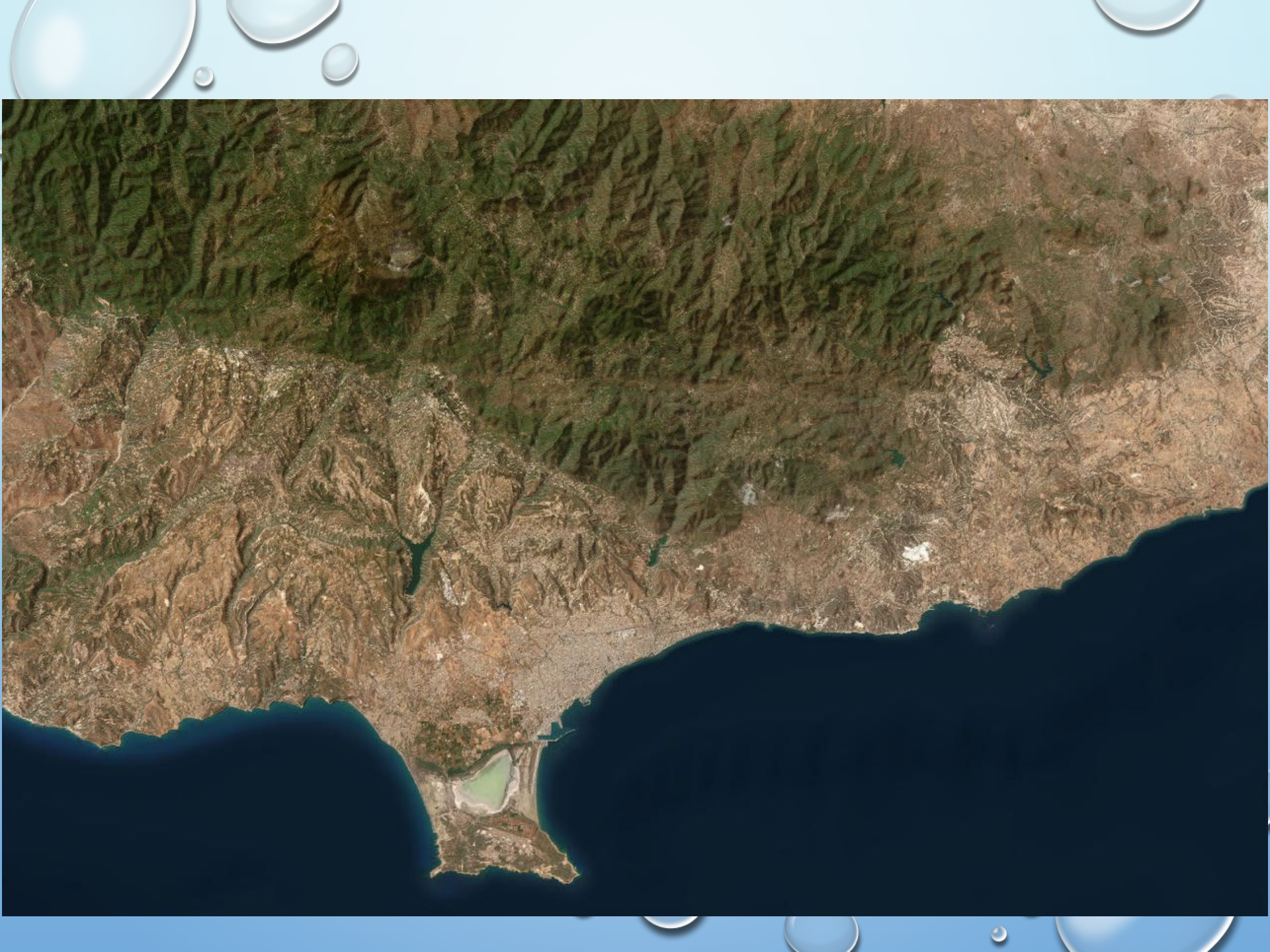
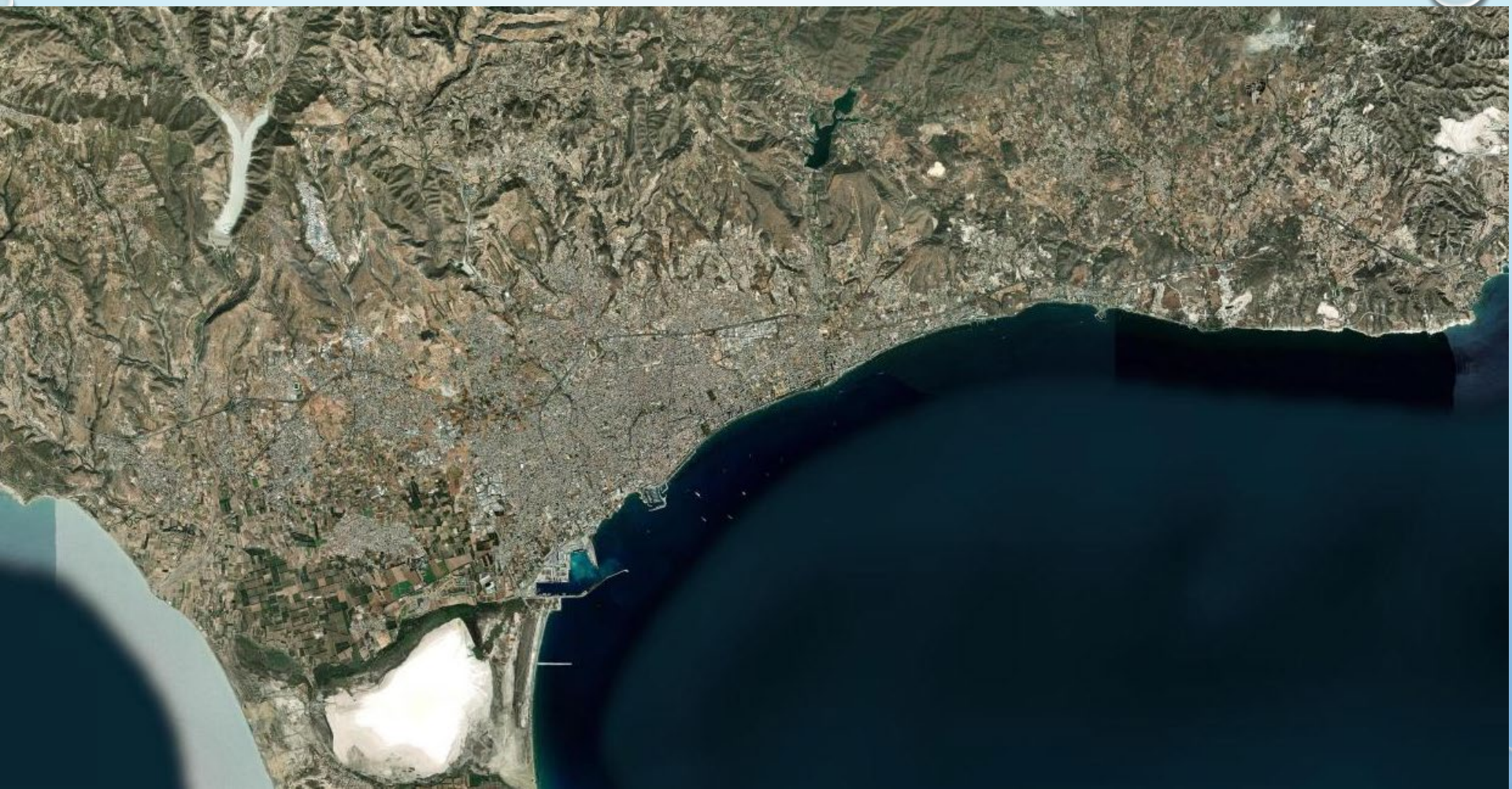


TAIEX TSI
ENHANCING DISASTER RISK
MANAGEMENT AND CLIMATE
CHANGE ADAPTATION IN CYPRUS

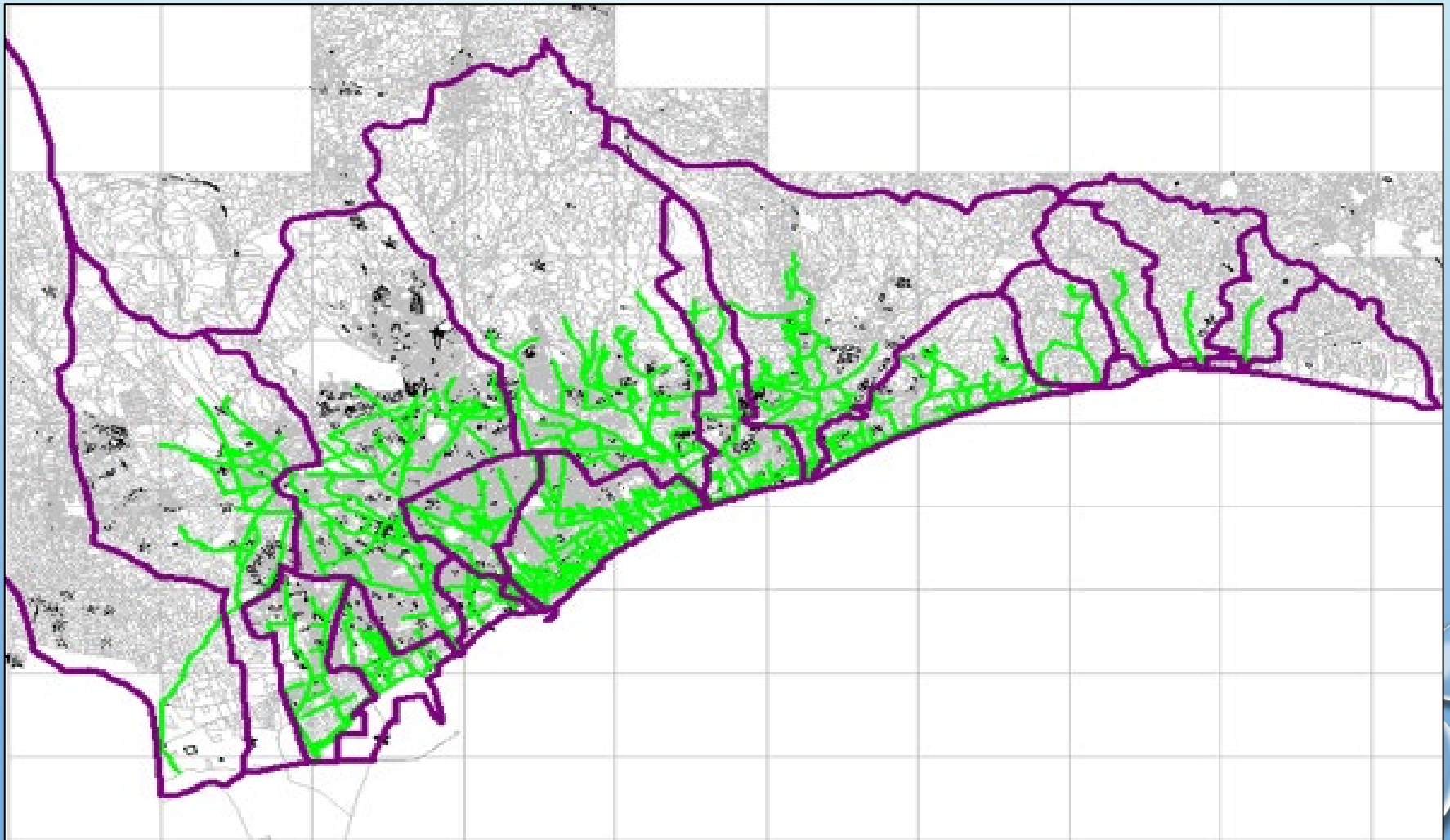




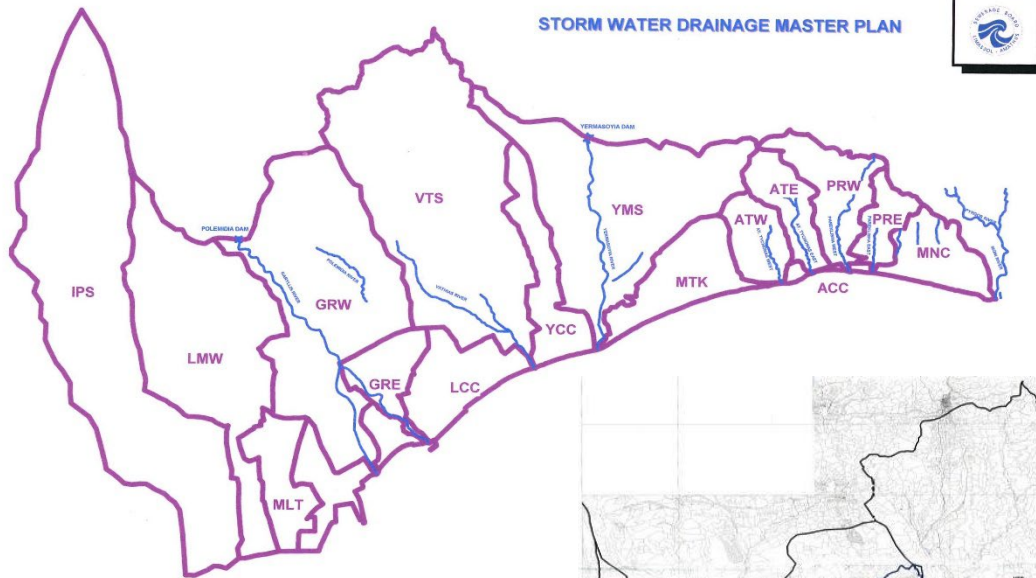
DRAINAGE PLAN (STORMWATER MASTERPLAN)

Prepared in 1992 and revised in 2003

Basic guide in the construction of stormwater projects



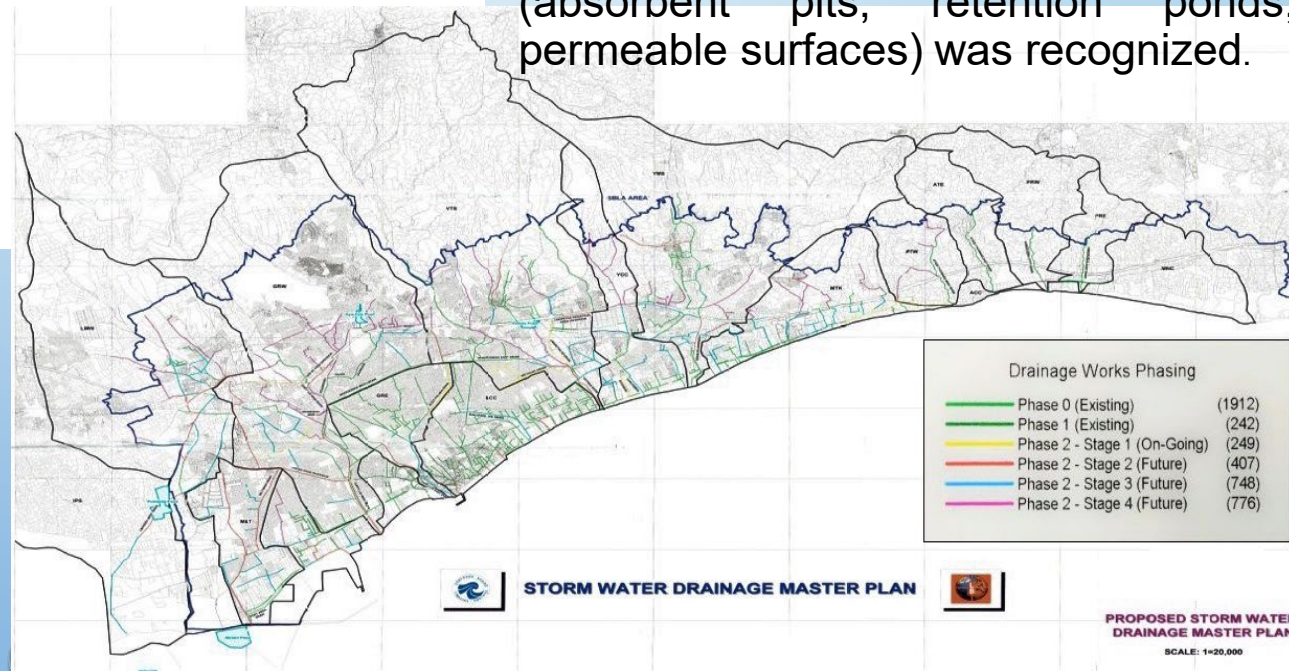
INTEGRATED RAINWATER DRAINAGE PLAN- (STORMWATER MASTERPLAN)



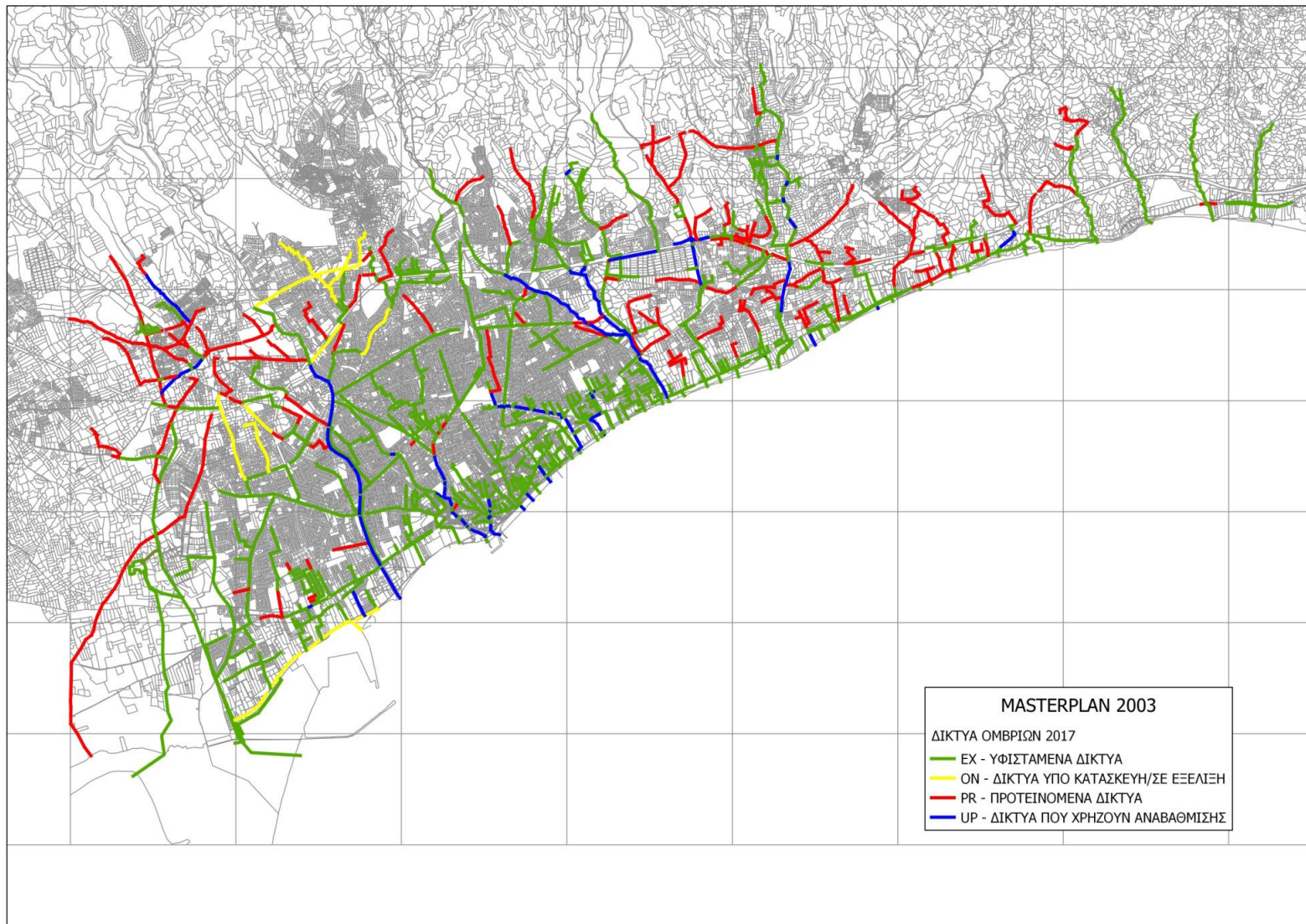
It was prepared in 1992 (Montgomery Watson, 42km²) and revised in 2003 (Louis Berger & M.G. Iordanou, 80km²). - Total Catchment Area: 130km².)

The need to take other measures beyond the construction of culverts (absorbent pits, retention ponds, permeable surfaces) was recognized.

The Master Plan indicated the need of Construction for 3 Retention Ponds



PLAN IMPLEMENTATION – WHAT HAS TO BE DONE



Stormwater Masterplan

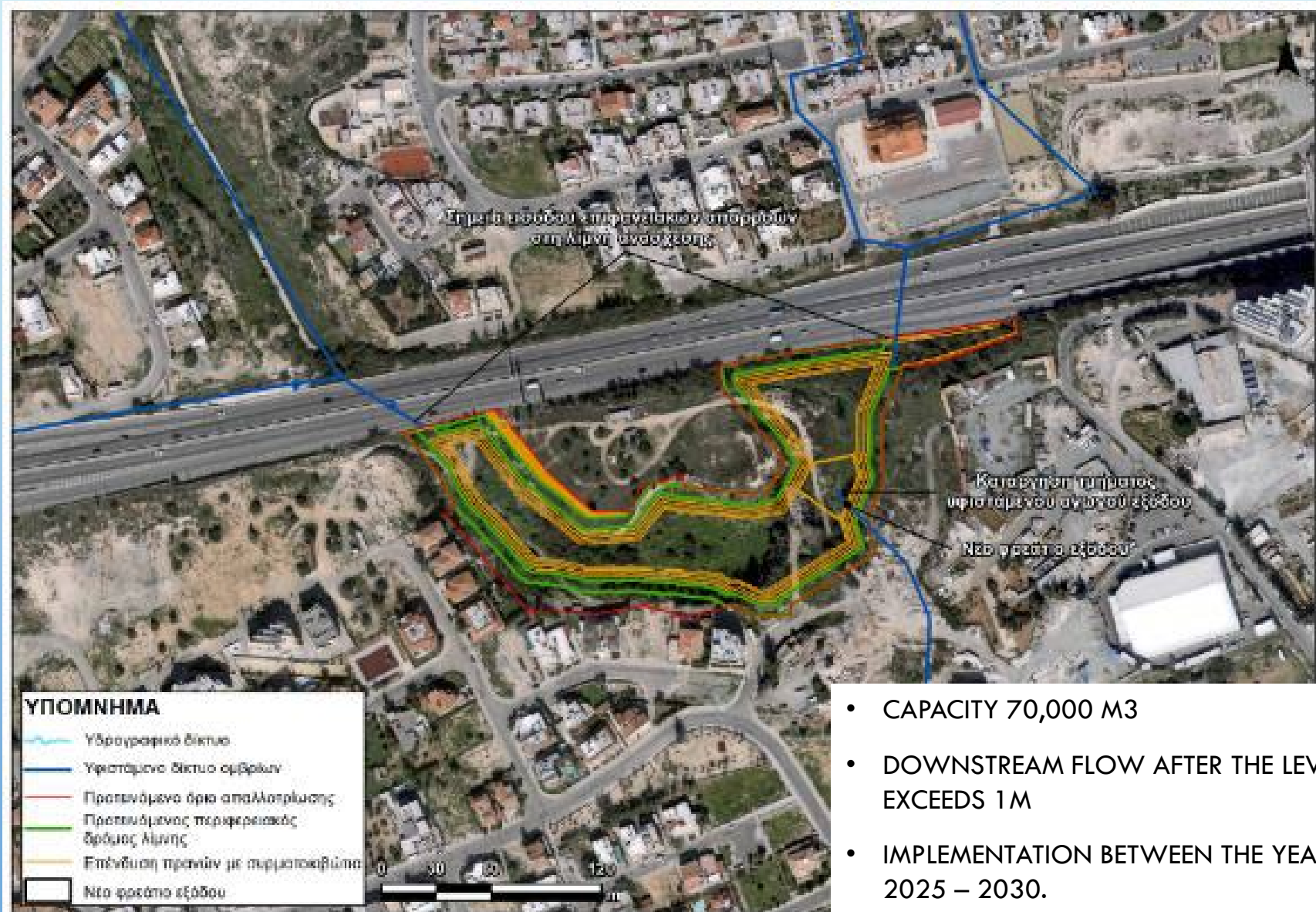
- IMPLEMENTATION OF SUSTAINABLE STORMWATER MANAGEMENT SYSTEMS
- CONSTRUCTION OF PONDS/RETENTION TANKS WHERE POSSIBLE
- AVOIDING WATERPROOFING OF OPEN SPACES (PERMEABLE SURFACES)
- CONVERSION OF ABSORBENT SEWAGE PITS INTO ABSORBENT RAINWATER PITS
- IMPLEMENTATION OF SUSTAINABLE STORMWATER DRAINAGE SYSTEMS IN COORDINATION WITH LOCAL AUTHORITIES
- PROMOTION OF A COMMON POLICY WHEN ISSUING PERMITS FOR NEW DEVELOPMENTS AND BUILDINGS

CONSTRUCTION OF PONDS/RETENTION TANKS WHERE POSSIBLE

RETENTION POND OF KATO POLEMIDIA



RETENTION POND IN AYIOS ATHANASIOS



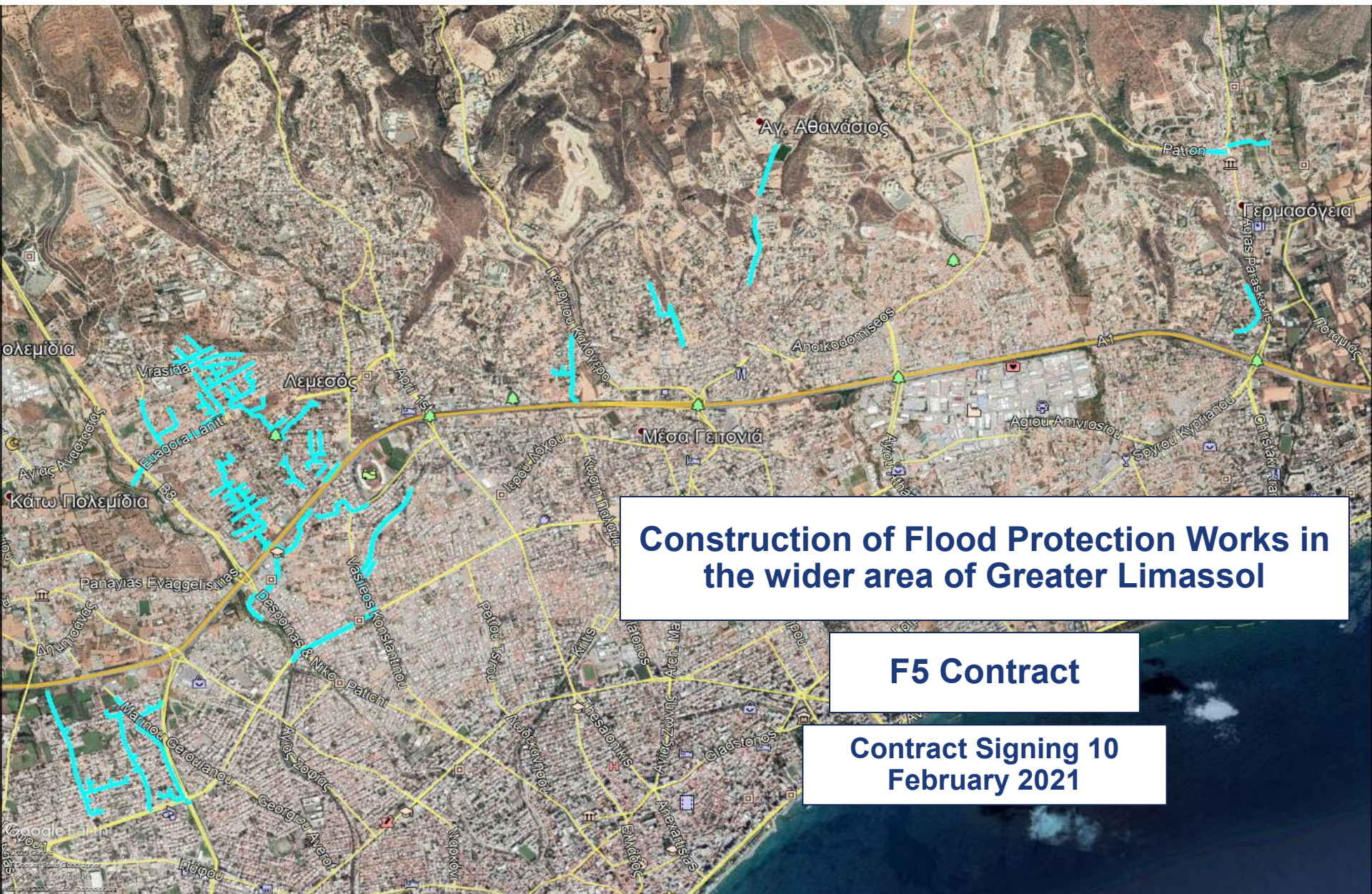
- CAPACITY 70,000 M3
- DOWNSTREAM FLOW AFTER THE LEVEL EXCEEDS 1 M
- IMPLEMENTATION BETWEEN THE YEARS 2025 – 2030.

PROPOSED RETENTION POND IN AYIA PHYLA



RETENTION LAKE WEST OF THE NEW PORT OF LIMASSOL





Construction of Flood Protection Works in the wider area of Greater Limassol

F5 Contract

**Contract Signing 10
February 2021**







IMPLEMENTATION OF PROJECTS BY THE DEPARTMENT OF PUBLIC WORKS

- LIMASSOL NEW PORT
BYPASS ROAD (VERTICAL
ROAD)
- COST: €30 MILLION.
APPROXIMATELY
- CONSTRUCTION OF THE
RETENTION POND IN
KATO POLEMIDIA





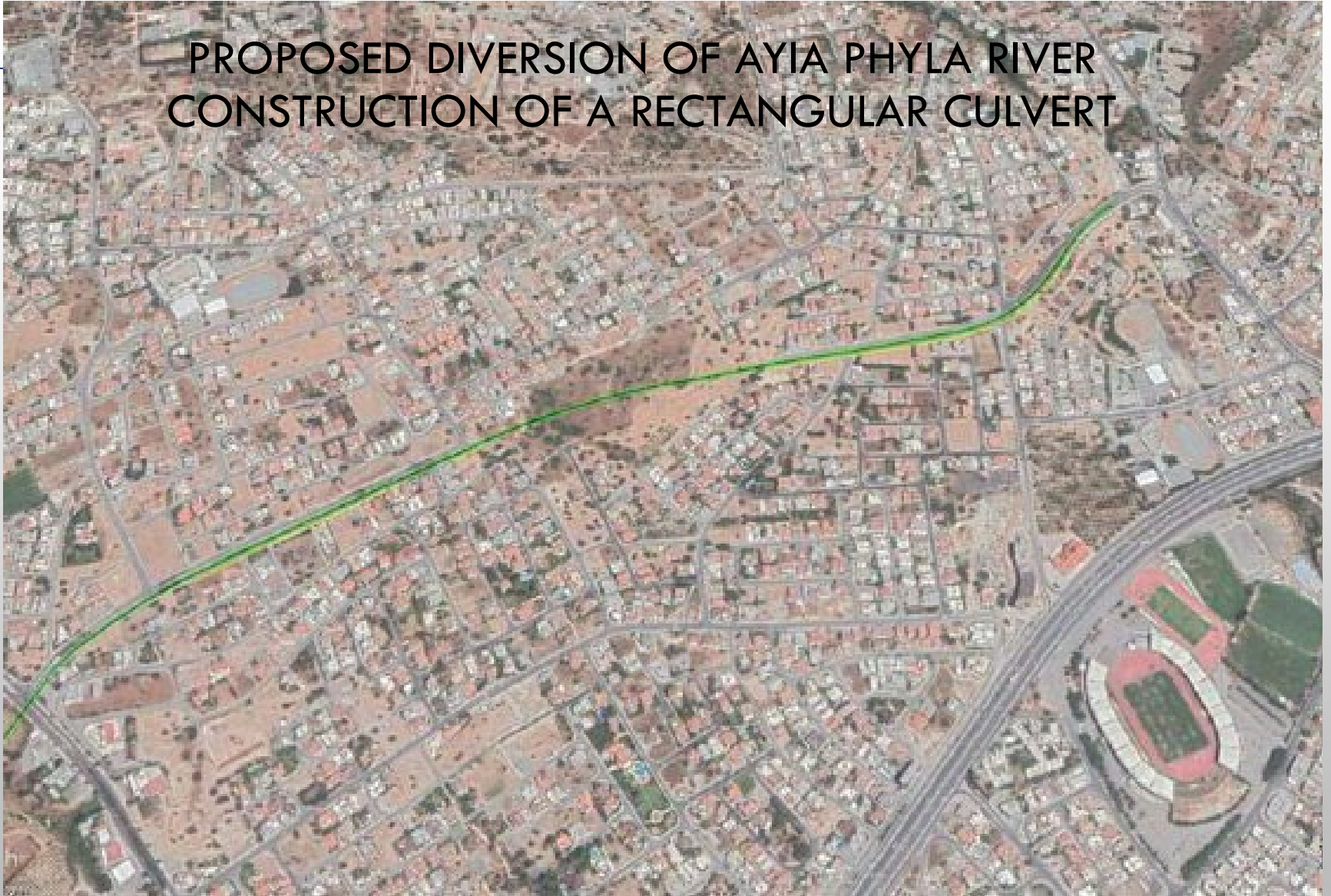
Drainage Works By the Limassol District
Local Organization



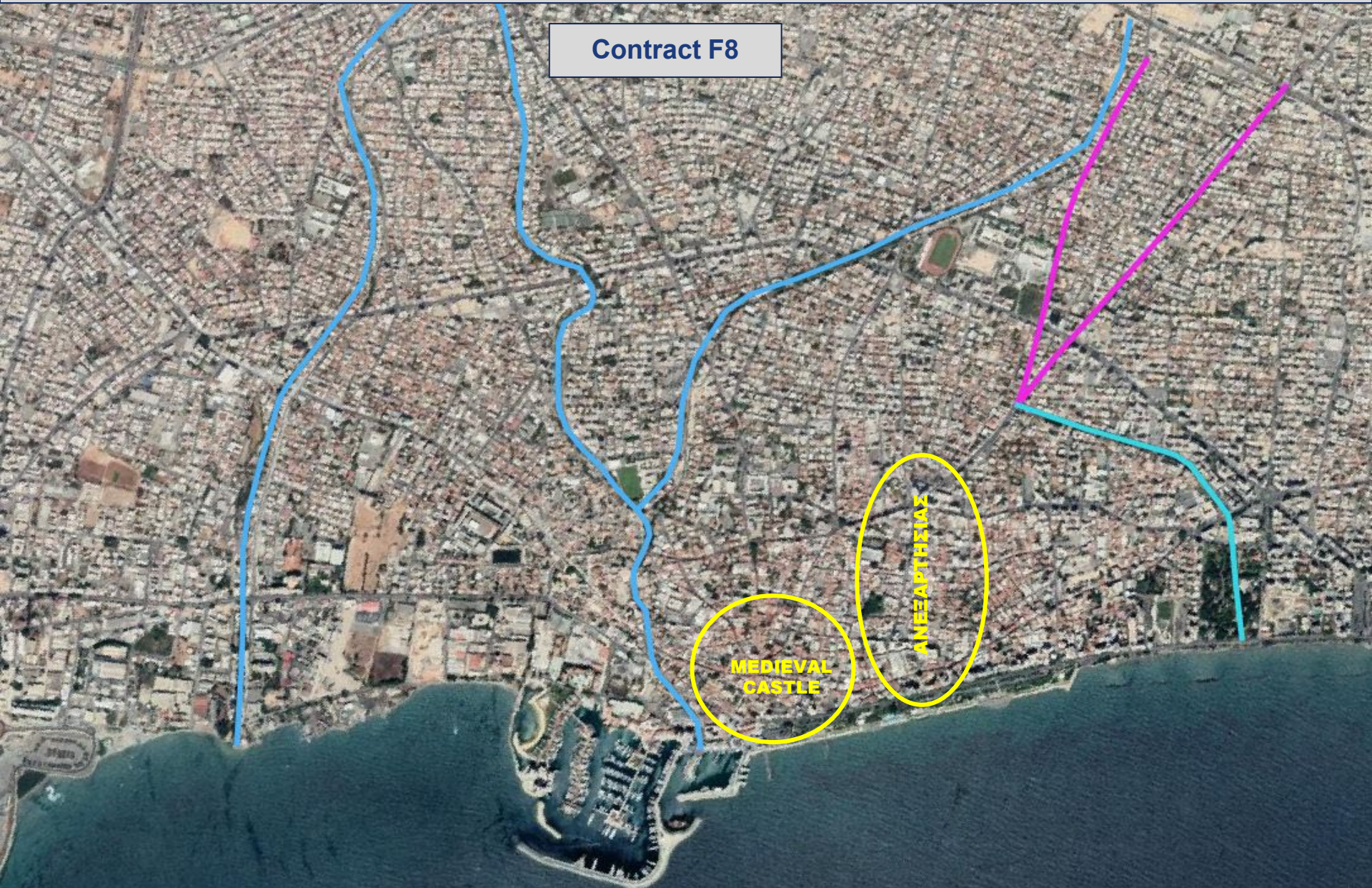


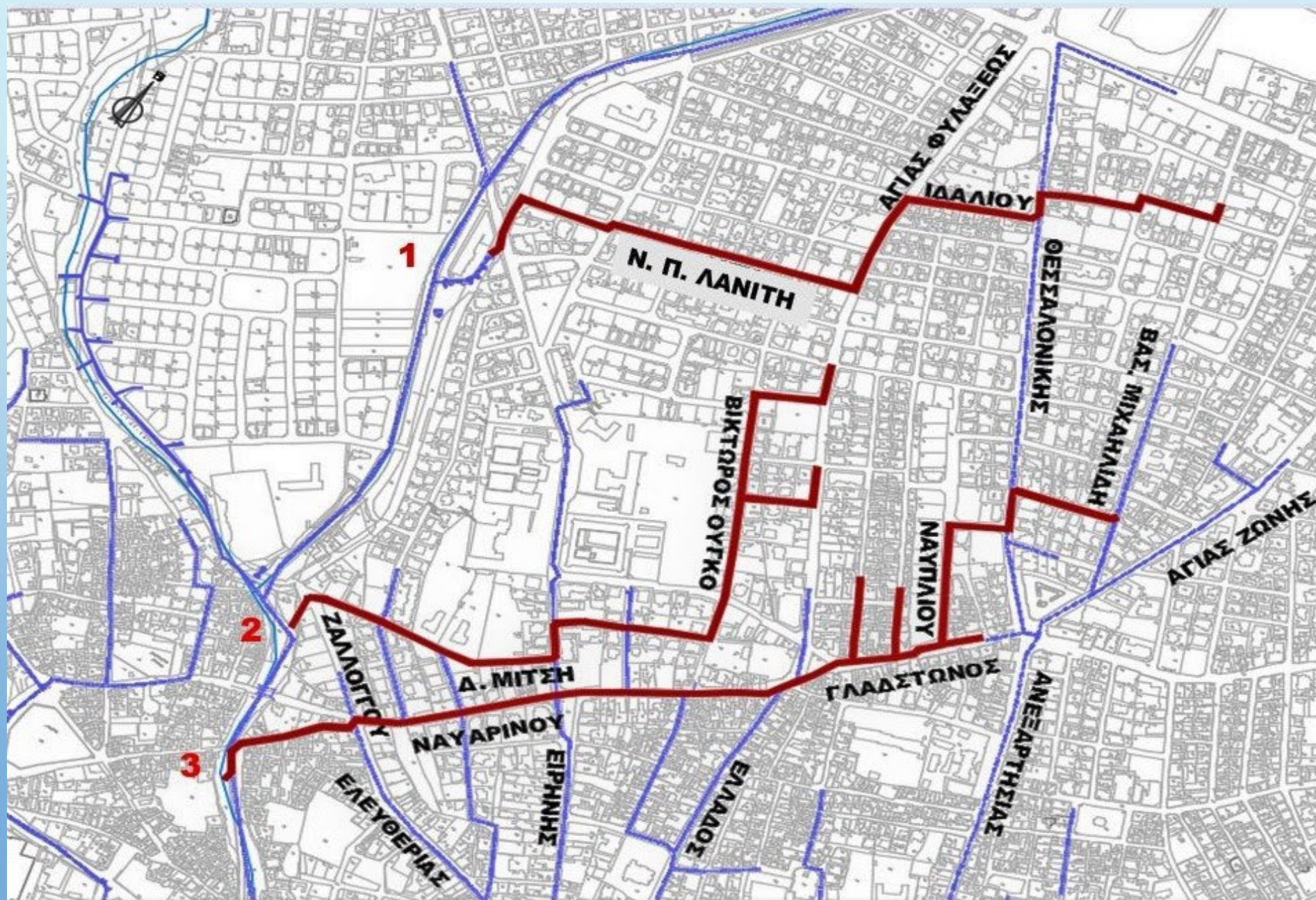


PROPOSED DIVERSION OF AYIA PHYLA RIVER
CONSTRUCTION OF A RECTANGULAR CULVERT



Construction of Flood Protection Works in the Limassol Center





Drainage Works in the City Centre



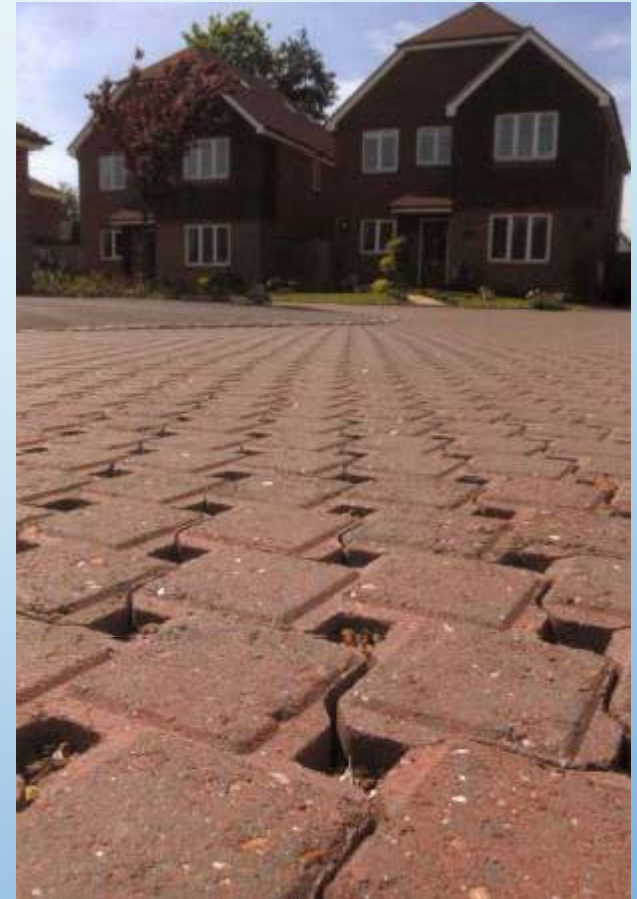
SUSTAINABLE URBAN DRAINAGE

SYSTEMS - SuDS

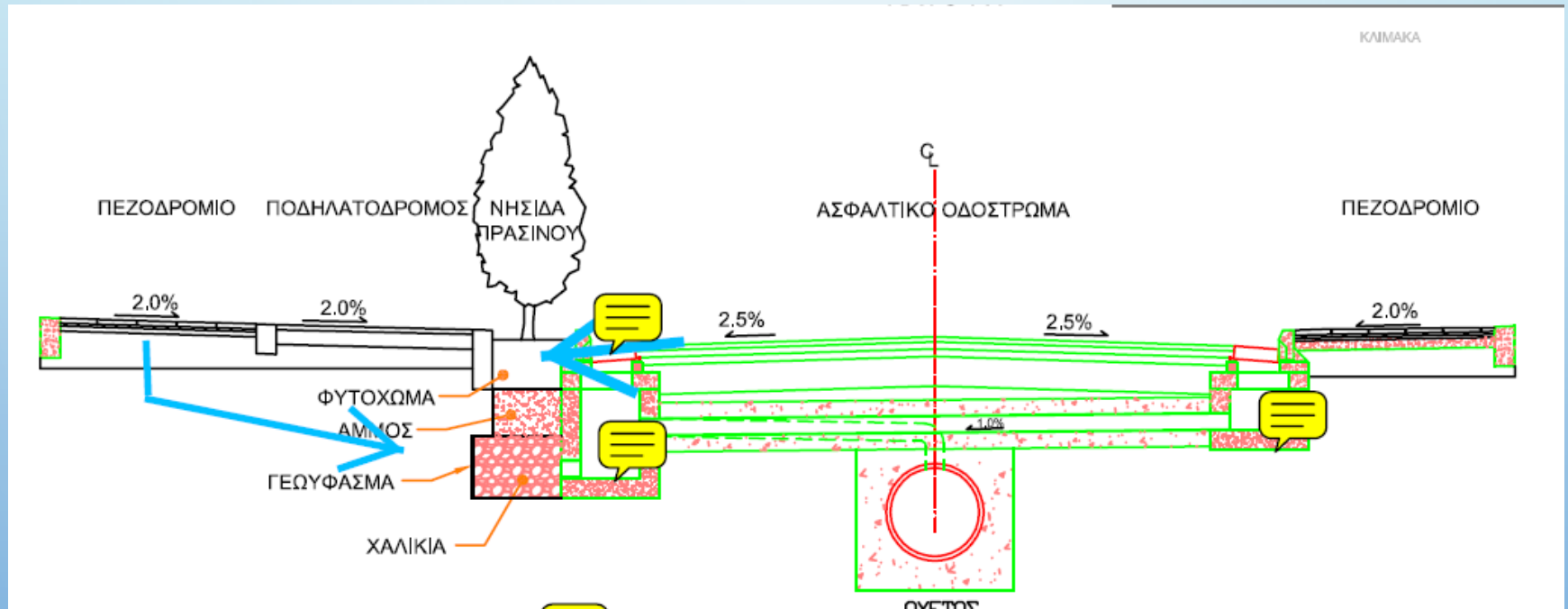
THE SUDS PHILOSOPHY

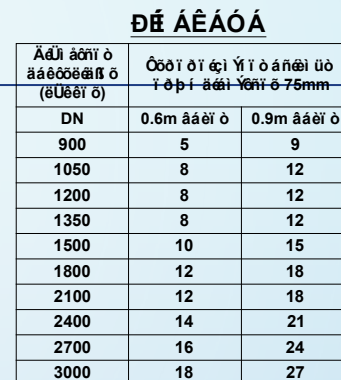
- • REDUCE RUNOFF RATES
- • REDUCE ADDITIONAL RUNOFF VOLUMES AND FREQUENCIES
- • ENCOURAGE NATURAL GROUNDWATER RECHARGE
- • REDUCE POLLUTION AND PROTECT QUALITY OF RECEIVING WATERS

Use of permeable surfaces
and voided stone for
treatment and storage



SUDS ON STREETS





Ծնագի ազատ "ԱՍեր օ" ԷՄԵՐԻ օ ԱՌԻ ռևյուզոցո՞ւ օճԻ Yռն՝ (աճ ԷՄԵՐԻ +ս ռևյու+աճեմ)						
"Aաճօ Yրձօ:" Aօ օ Մի աճ ԷՄԵՐԻ օց օժօ Աի Մօ օճի օժօ	Aօս ճանքթ Aմլ ճանդ օ ԷՄԵՐԻ օ ԱՌԻ ռևյուզոցո՞ւ i ձևով DN					
	1.00m	1.25m	1.50m	1.75m	2.00m	
	2.60	1.80	1.30	1.00	0.80	
	200 m ²	5.20	3.60	2.60	2.00	1.60
	300 m ²		5.40	3.90	3.00	2.40
	400 m ²		7.20	5.20	4.00	3.20
	500 m ²			6.50	5.00	4.00
	600 m ²				6.00	4.80
700 m ²				7.00	5.60	
800 m ²					6.40	

ΔΕ ΑΕΑΟΑ					
Θηααί αάαα "ΑΔετ ο" ΕΥΕθί ο Αόί ηηυόοόοό οάι Υηά (άέ ΕΥέθί ι ά+άέη)					
"Αάάο Υηάο" Αόθ Υί άά ΕΥέοοόό όόό Αί Υόόί όό	Αού άηηθ Αάι άηη ο ΕΥέθι ο Αόί ηηυόοόόό ι άηηη DN				
	1.00m	1.25m	1.50m	1.75m	2.00m
100 m ²	6.00	4.10	3.00	2.40	1.90
200 m ²			6.00	4.80	3.80
300 m ²					5.70



ÓŌĬ ÂĬ ŌĚĚ ÁĐĬ ×ÂÔÂŌÓÀÙĬ
ÈÀĬ ÂŬ ŌÀĬ ÁÈĬ ŎĬ ÔÁÓ

ÓÇÌ ÅÊÛ ÓÅË:

SUDS:

Sustainable Urban Drainage Systems P Ááö üñá ÓóôPi ááá Áôï ÷áááóóòï ì áññü í. (ÁÓÁÍ)

Óêĵ ò ũò:

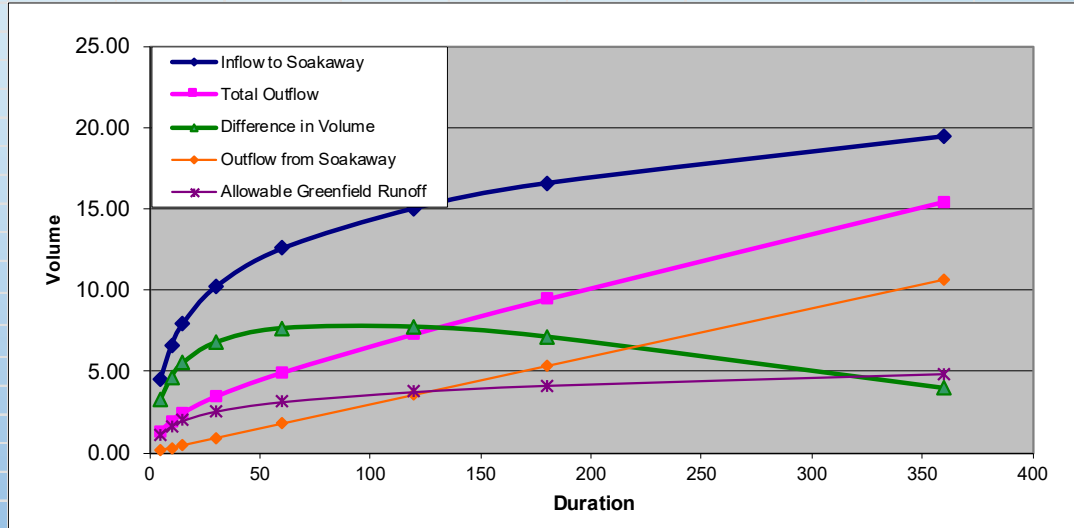
Ç ää ÷ Ýááóç óäí Ýááóí ò òù í
í í âññí í í âññí üóí óé éí í öü
óäí í âññ÷éü ÷ þ ñí öçò âññí ÷ þò.

Ôõố ềì ò äáêồểế ò ì ả ônỗở ảò Ö50 P 75mm

rev	Date	DESCRIPTION	
Ο_Α_Ε_Α			
Ο_Ο_Ο_Ο_Ο_Ι_Α_Ο_Α_Α_Ε_Δ_Ι_Ν_Ι_Ο_Α_Ε_Α_Α_Β_Ι_Σ_Ο_Ο_Ο_Ο_Ι_Ι_Α_Ν_Ε_Ι_Ι_			
Ο_Ο_Δ_Ε_Α_Ο_Ε_Α_Δ_Ο_Ι_Ι_Α_Ν_Α_Ε_Α_Ο_Α_Ε_Α_Ε_Ε_Ι_Ε_Α_Δ_Ι_Ν_Ν_Ι_Ι_Ο_Ο_Ο_Ο_Ο_Ι_Ι_Α_Ν_Ε_Ι_Ι_			
			Ο_Α_Α_Ε_Α
DESIGNED	DRAWN	CHECKED	FOR CONST. DATE
SCALE	NTS		S1
Dwg. No. 01/2010/S1			

Soakway design – BRE 365

			Duration	Rainfall M10-D	Inflow to Soakaway	As50	Outflow from Soakaway	Allowable outflow (1)	Total Outflow	Difference	
Plot/Development Details			minutes	(mm)	I (m ³)		Os (m ³)	Og (m ³)	O=Os+Og (m ³)	I-O (m ³)	
Total Plot Area	500	m ²	5	11.40	4.56	26.376	0.15	1.14	1.29	3.27	
Allowable Runoff (existing)	20	%	10	16.53	6.61	26.376	0.29	1.65	1.95	4.67	
			15	19.80	7.92	26.376	0.44	1.98	2.42	5.50	
Built/Paved Area	400	m ²	30	25.52	10.21	26.376	0.88	2.55	3.43	6.77	
Roads	0	m ²	60	31.38	12.55	26.376	1.77	3.14	4.90	7.65	
Total	400	m ²	120	37.56	15.02	26.376	3.53	3.76	7.29	7.74	
			180	41.41	16.57	26.376	5.30	4.14	9.44	7.13	
			360	48.58	19.43	26.376	10.60	4.86	15.46	3.98	
Circular Soakaway Dimensions											
number of circular soakaways	1	m									
diameter	1.2	m									
effective depth	7	m									
f	0.0000186	m/s									
void ratio	1										
Results											
Max Storage	7.74	m ³									
Available Storage	7.91	m ³									
Remaining Storage	-0.18	m ³									
SUDS OK?	YES										
Time to Half Empty	2.24	hours									
Time to Half Empty OK?	YES										



THANK YOU FOR YOUR ATTENTION!